A Sojourn of Engineering Identity Conflict: Exploring Identity Interference Through a Performative Lens

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Abstract—Rather than disowning one identity and its respective culture for the sake of assimilating into another, how does a person navigate the various identities and reconcile potentially conflicting cultural beliefs, values, and assumptions? Further, as co-creators of the culture that is engineering, how can we, as engineering educators, recognize and use these moments of identity interference to pinpoint opportunities to reshape what it means to be an engineer into something more inclusive? To answer these questions, we engaged in performative autoethnographic journeys to explore how we have navigated and sought to reconcile the apparent values conflicts among our multiple roles and identities, respectively. Prompted by Barbara Tedlock and inspired by Augusto Boal, Amanda Gorman, Brené Brown and David Drake, we have attempted to engage in performative action to present our findings, revealing insight into our own experiences with identity interference, values conflict, and how we navigated our multiple roles and identities and reconciled our competing values.

Introduction

How does a person navigate the various identities and reconcile potentially conflicting cultural beliefs, values, and assumptions? Further, as co-creators of the culture that is engineering, how can we, as engineering educators, recognize and use these moments of identity interference to pinpoint opportunities to reshape what it means to be an engineer into something more inclusive? Exploring identity interference particularly between women's identities and other identities, [1] and studied the centrality of woman and scientist identities as a predictor of interference and [2] studied the effects of identity interference between woman and scientist identities on psychological well-being. Exploring identity interference between engineering identities and other identities, [3] explored the potential identity interference between engineering identities and leadership identities.

However, [4] emboldens researchers to engage in performative action declaring, "Now is the time for passionate ethnographic memoir, a blend of magical realism and a hard-driving narrative line in which a performer 'is telling it like it is'" (loc. 14122). Therefore, to answer the questions posed earlier, we attempted to engage in performative autoethnographic journeys to explore how we have navigated and sought to reconcile the apparent values conflicts among our multiple roles and identities, respectively. According to [5], "

> Performative autoethnography is a critically reflexive methodology resulting in a narrative of the researcher's engagement with others in particular sociocultural contexts. Performative autoethnography views the personal as inherently political, focuses on bodies-in-context as co-performative agents in interpreting knowledge, and holds aesthetic crafting of research as an ethical imperative of representation. (loc. 21019)

Developed by Victor and Edith Turner, and Edward Bruner in the 1980s, performance ethnography (and by extension, performance autoethnography) is an inquiry strategy that has political purposes for inciting others to action and strengthening commitment to performative citizenship, a kind of civic-minded discourse [6]. Performance brings with it a way of knowing in an embodied act of interpretation [6], the active part of the performance being the author [4].

Ethnography, according to [6], "involves an ongoing attempt to place specific encounters, events, and understandings into a fuller, more meaningful context" (loc. 10478).

We pursued performative autoethnography as the inquiry strategy for this endeavor for the following reasons. First, it is an effective analytical, political, and representational tool for situating our experiences within engineering education while looking both backward and forward [7]. Second, it is a new and especially innovative form of scholarly representation, a sort of intellectual rebellion [7], which challenges the positivist and objectivist assumptions underlying engineering. Third, it is, by nature, relational as are its practices [7] and helps people to transcend the personal and individual to find themselves connected to others in sociocultural contexts [5].

Within this performative context, we are able to observe the Yin and Yang relationship between narrative, the performance of one's identity [8], and identity, one's ability to maintain a specific narrative [9]. Reference [10] describes this dynamic relationship as "an *ongoing dance* between identity, narrative and performance that is both personal and collective in nature" (emphasis added, p. 284). Inspired by [10] to perceive identities as contextual performances with recognizable plot lines used to narrate experiences, we looked to Amanda Gorman's poetic creativity and Brené Brown's disarming vulnerability to inspire new ways of knowing and being. Finally, following [11]'s lead to draw the audience into the experience, we stepped, well beyond our comfort zone, into the unknown and its possibilities to bare our souls to our community. What follows are only a part of the outcomes of that fearful yet determined step. We had intended to perform our respective narratives; however, due to the Coronavirus Disease 2019 (COVID-19) pandemic, that is not feasible at this time. Therefore, as you read through our respective narratives, we ask that you attempt to fully enter into the experience by exercising your imagination. Try to imagine the countenance of each subject. Try to hear their voices. Try to visualize their movements. Are they uncertain or forceful, elegant or awkward? What might they be feeling? What might they be seeing? What might they be hearing? Can you see yourself in the subjects or do you see someone distinctly different from you? Can you hear your own voice narrating or the voice of someone you know? Can you feel what they are feeling or are you challenged by the unfamiliarity of the narratives?

The Circle Dance
On a round stage, circling the point of engineering identity,
    I fix my eyes on the identity I aspire to.
Circling and circling my eyes stay fixed on the goal.
        All of me committed to an idea,
            my education, my career, my thoughts, my values, my sense of worth, my ego,
        my paradigm… me.
        I am going to be an engineer.

Standing, tightly circling in place, on the point of engineering identity,
        eyes fixed, looking downward at my feet, where I am now standing, circling.
        Doing what I had trained my eyes to do for so long,
            I saw only the goal, what I thought was everything I needed.
Climbing my mountain, reaching the peak,
        I have meaning, purpose, security.

And with so much to lose, I did not, perhaps could not, see beyond the point where I was standing, circling;
I was unable, perhaps unwilling, to look within,
to risk what I had worked so hard to find, ...externally.

Still standing, tightly circling in place, on the point of engineering identity,
a spiritual awakening disrupts the status quo.
I heard a voice, long silent and for a moment I was aware of something beyond what is,
beyond what I have achieved,
beyond the identity I worked so hard to create.
I wrestle away from the momentary distraction and quickly return my focus to what now is,
the professional responsibilities that require me,
perhaps, in my longing for meaning and purpose, the responsibilities I required.
And the first cracks in my creation appeared;
the beginning of a crisis, as the still, small voice continued to call to me.

Wavering, loosely circling in place, on the point of engineering identity,
discontent and disillusionment bare their ugly heads.
Where is the joy I once had? What is different? How is this possible? What if I have been wrong all along?
Shaking off these unproductive thoughts, I know what will fix all this!
Tightly circling in place, a new job, a larger corporation, a larger paycheck,
simply a larger ego.
And the discontent and disillusionment? Wavering, loosely circling in place, worse than before.
Things I once valued so highly, the things that made me who I am,
no longer satisfy my need for meaning, purpose and security.

Circling, drifting away from the point of engineering identity.
My focus still returns to what is, what requires me, but what *I* no longer require,
Because, though I am still there, *I* am no longer there.
A truer identity emerges from a spiritual reality *hidden within a material reality*.
Deeper meaning is found in buried values,
repressed by the dominant narrative of an external identity.
Meanwhile, objectivity rejects subjectivity,
quantifiable clashes with qualifiable,
and reason discredits feeling.
The rift is irreconcilable and leaving is the only option…*or so I thought*.

Moving on, divorced from the point of engineering identity.
I am no longer tethered to an external identity,
I have walked away from it entirely.
Free to circle, I begin a new journey,
new thoughts, new sense of worth, new paradigm… *new me*,
living with new purpose.
A truer me, able look outward, beyond,
able, and willing, to see the possibilities that surround me,

and along with them…beauty.

Circling a new role, now not who I am but what I do,
    yet more than that.
A minister, literally, to be a servant, one who serves,
    reflecting my values unveiled and embraced.
Circling fluidly between identities and roles grounded in who I am,
    a leader, a husband, a father, a teacher, a student, *still…a servant.*
My eyes gazing outward, not on a goal nor an identity, external or internal,
    but anchored to a purpose found within myself yet beyond myself,
        to live for others, to serve humanity,
            particularly the "least of these."

Crashing into labels and stereotypes,
    Slowly circling, while negotiating the turbulent identity crises that emerge from within.
Gales of awareness as personal encounters with racism resurface,
    half-Korean but raised "American" *and never fully accepted by either.*
    An identity forced upon me by my appearance, *my slanted eyes,*
        but without the cultural or community connection and pride of those blessed with
        belonging.
Storms of depression and anxiety from years of battling mental illness,
    labeled weak for needing the crutch of medication,
        yet strong enough to carry the stigma.

Coming full circle, but not to a point of engineering identity,
    rather, multidimensional engineering possibility.
I find the same values that I hold close to my heart,
    always here but simply buried,
    repressed by a dominant narrative,
        mindsets and ideologies that neglect the fullness of what ontologically is
            and the realm of what could be.
Humanistic values revealed in a growing narrative,
    of engineering for people, with people, and as people,
    of engineering as a socially just profession,
        serving humanity.

Circling around I do not assume an engineering identity,
    rather, engineering accommodates me,
        my thoughts, my values, my sense of worth, my paradigm…me.
Meanwhile, objectivity is viewed through subjectivity,
    quantifiable is elaborated by qualifiable,
    and reason is influenced by feeling.
        The irreconcilable rift no longer has only one option.
And in this dance of possibilities,
    The dance has taught me how I want to live my life rather than what I want to do with my
    life.

The dance has brought reconciliation.

The Ribbon Dance
A child sits on the floor smiling gleefully at family members showering love on their firstborn. "She's beautiful" they exclaim, and tie a beautiful pink bow in her hair, doing otherwise would never have occurred to any of them. She was their daughter. A proud member of the young family learning to live on their own, independent and at times estranged from extended family who could support them. As the child grew, her parents took great care to shield her from the pain in the world and foster a sense of love, creativity, independence, and leadership. "Be a leader, not a follower" they encouraged. In that home where love, logic, and, sometimes, legalism reigned, her parents educated her and instilled a foundation based on faith. She thrived! She believed she could do anything. Be anything. Each lesson learned and identity taken on, in this protected world, made sense. Each one like a ribbon, tied to your arms and pulled up to the sky, helped that child that was once sitting on the floor, learn to stand.

She dances.

But the shield could not hold forever, neither should it, and it began to crack. "She's little miss perfect" they mocked and teased, jokingly handing her a bumper sticker for her first car that reminded her, "next time you think you're perfect, try walking on water." "She's not allowed!" she heard when she, her mother, and other women in her church sought to serve and lead in ways reserved for men. "She shouldn't be dancing in church!" they argued, even though she loved performing and poured her heart into what her team thought would be an honoring and beautiful performance. "Oh, maybe I can't," she worried, taken aback by their responses. And suddenly, these ribbons that had held her up began to droop.

She stops.

Feeling a bit frantic and yet secretly defiant, because heaven forbid a woman makes a scene, she went searching for what she can do. "I'm smart! I can teach!" she thought, grasping for a new ribbon to pull herself back up. "You can teach!" they confirmed, silently acknowledging her alignment with expectations. Fine, then. She will learn all the things and become the best at each of them. Oooo…what is this new shiny ribbon? What is this thing called engineering? Grandpa was an engineer, you say? "I can learn anything, and I'm good at math and science. I like a challenge. So, maybe I can learn to teach that?"

She collects.

Now the shield has cracked even more as she moved further from home to pursue a shiny new ribbon at a private, faith-based university. In fact, now, rather than trying to patch the growing cracks, she began chipping at the cracks, gently widening them, wondering what was being held at bay. But WHAT!? "Women aren't engineers either?!" They yelled. Fine. "I'll suppress my femininity. I'll be the best. I'll be on the hardest projects. I'll hide my emotions and ignore my creativity. I'll only rely on my logic and I won't fail," She whispered back, a bit defeated but determined. And she did, she got her BS in engineering. But she didn't stop. Already exhausted, she then completed her MS and PhD at a top-tier school completely outside the shield and faith

bubble she'd grown up under. "But I hate the color pink," she tells everyone, pulling the ribbon from her hair. Each of her interests and each of her degrees a new ribbon, some pulling her up closer to her lofty goals. Others pulling her down and holding her back. All the while, she's trying to weave them together into a comprehensible story of who she is.

She weaves.

By now, she was actively pushing at the shield trying to pop the bubble she'd grown up under. She had to learn for herself and explore the world. She traveled. She listened to others' stories and saw the pains people experienced that had only ever been pages in a book, pages that were often whitewashed to rationalize and justify the pain. How could she help? She wanted to help. But she was exhausted. Maybe she could find a partner, someone to work with, shoulder to shoulder, who could hold her up when the load is too much. Everyone else is getting married. Maybe I should? "No, no. That's not the role of a wife. You're too much. You're too smart and intimidating. Who would marry you? Hmm… but, why aren't you married yet?" they replied. "Fine, I'll do it alone then," she thought, pushing through the exhaustion to find a place to serve. Engineering itself, based on her own experience and the stories she had heard from others, was broken. Perhaps that was a place she could serve? She'd always wanted to be a teacher. Time to find a faculty position and start changing engineering from the inside out, one student and faculty member at a time.

She climbs.

And she does! She is an assistant professor of engineering helping develop a one-of-a-kind program and having measurable impact. She has made it and is inches away from tenure. But she is exhausted. The country is exhausted and in chaos. She is now married, and grateful to have a real partner. For all appearances, she has arrived and should be living the dream. But she has been pulling herself up on unsteady ribbons and pulling against the forces that hold her down. But still, the constant anxiety and striving, all she can think is, "I'm too much, and yet, still not enough." Even with all the evidence the world cares about indicating otherwise, she still does not feel like she is good enough. At anything. So, she pulls harder. Ignoring all the warning signs and the concern from family.

She falls.

The ribbons that she had so delicately woven into a seemingly perfect image of support and strength give way. But unlike a ribbon dancer, whose intricate lacing of ribbon around themselves can produce a shocking but controlled descent, landing inches from the ground, she hits. She is in the hospital mere hours before she is supposed to give a final exam. She is forced to trust. To trust that other people are capable of caring for her. And trust that failure is ok. Trust that caring for herself first and throwing off the expectations that people have of her is ok. Trust that she can reweave the ribbons into a unit of strength, rejecting those that held her down and cling to those that give her life.

She reweaves.

It takes years, but she breaks down the religious system she grew up under and pulled out the ribbon of faith has remained true. She rips apart the braid of what it means to be an engineer, putting back in her femininity and creativity. She learns to trust and listen to her own mental and physical needs, seeking healing. She leans into the relationships with her spouse, family, friends, and colleagues, who have remained steady. She has hobbies and interests again that help give her energy for her love of teaching engineering. She embraces the causes and needs she holds dear, finding new places to serve.

And that shield, the bubble, and the cast aside old ribbons are now a foundation. Once failures, they are now the experiences upon which I stand as I climb up and dance in the ribbons that make me who I am.

Finally, again, she hesitantly dances.

Discussion
Prompted by [4] and inspired by [10], Amanda Gorman, Brené Brown and [11], we experimented with performative action to reveal insight into our own experiences with identity interference, values conflict, and how we navigated our multiple roles and identities and reconciled our competing values. Our experiences have highlighted the importance of identifying and understanding student values conflicts associated with navigating their multiple roles and identities in order to help students to reconcile their competing values.

While our stories may resonate with many, our goal was not self-promotion or to paint ourselves as oppressed, as there are ample examples of engineers from minoritized/marginalized populations who have faced much harsher realities. Our experimentation with this inquiry strategy originated as a desire to explore novel approaches seldom encountered by the engineering education research audience in hopes of pushing the boundaries of what has been considered engineering education research. These two performative pieces provide examples of performative autoethnography as a potential tool for engineering education researchers to create a space for participants to safely communicate their stories in new and effective ways as they make sense of their diverse identities and experience. This tool has empowered us, as individuals, to communicate our own experiences in personally meaningful ways—particularly in moments of identity interference, where the values and norms of one identity conflict with another—and challenged us, as researchers, "to represent these interactions to make meaningful interventions: those that produce new understanding and insist that this understanding generate more just circumstances" ([7], loc. 13531).

By approaching our experiences in this way, we note distinct advantages for our students. First, crafting these performative pieces heightens the ability of the storyteller to convey more than facts, by also eliciting an emotional response from the audience from whom the facts differ and may not resonate. Second, and related, this enables the storyteller to preserve a measure of privacy—we felt empowered to share our stories knowing we could withhold certain detailed events while still conveying the overall impact of our lived experiences. Therefore, this approach to identity exploration may prove a worthwhile avenue for supporting diverse populations in their identity formation, while giving them the agency and power to control their personal narratives.

In navigating moments of identity interference in engineering specifically, studies have documented experiences where individuals felt that they had to let go of or suppress one of their identities (e.g., race/ethnicity, gender) to be taken seriously as engineers. This was evident in the *Ribbon Dance* where the pink ribbon representing her gender identity as a woman was removed to be accepted in engineering. Others have left engineering altogether, as was done for a time in the *Circle Dance*. But in considering both of our stories, we noted how, ultimately, we each deconstructed the identity of an engineer, rejecting the pieces that did not align with our values informed by our other identities, and reconstructed it into something that distinctly resonated for each of us. Our stories also illustrate the power of one's environment or context on identity formation and interferences. In the *Circle Dance* it was racism and in the *Ribbon Dace* it was sexism, and the structures around us perpetuated them. Once removed from the unhealthy environments, coping with those "-isms" became more manageable and reconciliation was feasible. But leaving unhealthy environments is not always possible for our students. Further, when our goal is educating the next generation of engineers and our very programs are unhealthy environments, having our students leave our programs is counterproductive.

In future work related to identity interference in engineering, we hope to further explore this process of navigating identity interference and identify factors that perpetuate identity interference for engineering students, particularly from underrepresented populations. By doing so, as co-creators of the culture that is engineering, we hope to identify mechanism that we as engineering educators can use to support our students through moments of identity interference and ultimately reshape what it means to be an engineer into something more inclusive, minimizing and eliminating moments of identity interference altogether.

Conclusion

Our intent was to illustrate our own experiences with identity interference, values conflict, and how we navigated our multiple roles and identities and reconciled our competing values through a performative lens (see [4]–[7]). Through using a performative autoethnography approach to exploring our own development as engineers, this process has proved enlightening, helping us better understand our own experiences while uncovering the benefits of using performative action. Namely, it enables the storyteller to share their experiences as more than data points by evoking an emotional response while maintaining control over the details and depth of their story. Further, our experiences have highlighted the importance of identifying and understanding student values conflicts associated with navigating their multiple roles and identities in order to support students in reconciling their competing values.

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