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Unpacking Shame as Experienced by Three White Male Engineering Students:

An Interpretative Phenomenological Analysis Study

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Abstract

The following is a cross-sectional examination of an ongoing investigation of shame in the context of engineering education. White male junior level engineering students were recruited to participate in individual interviews centered around their experiences and expectations as undergraduates. The study sought to investigate how these students experienced shame within the context of engineering education using interpretative phenomenological analysis (IPA) as the research method. As the current results and finding only represent three fully analyzed cases out of five total, broad and definitive conclusions about the study group will be withheld. Instead, I will give each of the three represented cases high-level discussion on their own merit. The findings, represented in a table of themes for each participant, reveal keen insights into the propensity for engineering cultures to cultivate shameful experiences and the manner in which individuals make sense of and cope with them.

Keywords: shame, interpretative phenomenological analysis, identity

Unpacking Shame as Experienced by Three White Male Engineering Students

The current literature reveals an upward trend in investigations looking at the role of emotions in educational contexts. More specifically, there has been an increasing number of studies looking into the professional identity formation of engineers. Various studies including one conducted by Matusovich et al. (2010) have sought to examine factors affecting student motivation within the context of engineering education.

Tangney and Dearing (2002) define shame as a moral emotion characterized by a global devaluation of the self which arises from the felt failure to meet or adhere to perceived social expectations. Work done by Scheff (2003) goes so far as to assert that the impact of shame is so pervasive that it exists as the premier social emotion. The Achievement Emotions Questionnaire (AEQ) is an instrument created by Pekrun et al. (2011) used to examine the impact of shame and other related emotions have student academic outcomes. Their findings indicate that while high levels of shame may lead to greater external pressure and therefore motivation the emotion tends to have a detrimental effect on the overall performance of students. Prior research by Huff et al. (2018) also sheds light on how individuals link their experience of shame in connection with their core sense of self as they emerge as engineering professionals. It has been shown that even high performing individuals report striking experiences of shame, especially when there is a conflict between expectations, whether internal or external, and an individual's core identity i.e. desiring to maintain social connection with peers versus achieving academic excellence. This investigation continues along the same lines diving deep into the experiences of White male engineering students and eliciting moments of shame from their accounts. More specifically, this investigation was guided by the following overarching research question: How do White male students experience shame in the context of engineering education?

Method

Overview

This investigation sought to gain a rich and contextualized understanding of shame as experienced by three White male undergraduates majoring in one of five available engineering disciplines (mechanical, civil, electrical, computer, or biomedical). To facilitate this, we employed interpretative phenomenological analysis (IPA) in conducting this study. IPA is a qualitative research method rooted in phenomenology (the study of phenomena) and in hermeneutics (the study of interpretation). Using IPA, a researcher can examine how participants experience certain phenomena and how they make sense of/ascribe meaning to these phenomena while adhering to the participant's own words thereby retaining the necessary context from which their responses were generated (Smith et al., 2009).

Procedure

Recruitment for the study was conducted via an email questionnaire sent to all junior level engineering majors in the middle of the fall 2017 semester. The questionnaire asked general demographic information and included an open-ended response question regarding the topic of expectations in the engineering department. Participants were selected based on the richness of their answers in response to this last item. A follow-up email invited each of the selected participants to be interviewed one at a time over the following weeks. Dr. James Huff and I co-interviewed each participant in his office on weeknights. The interviews were each approximately eighty minutes in length and were largely unstructured in nature. The recordings of each interview were sent to an online service for raw audio transcription. These documents were then authenticated to make sure they accurately reflected the interview. Transcript authentication involved reading through the text while listening to the audio recording and

adding in missed elements of the conversation i.e. noting things such as stuttering, hesitation, and laughter. The authenticated transcripts were then de-identified for the protection of the participant. Altered identifiable statements and names in the transcripts were logged and preserved in a separate file for each participant.

Analysis

IPA analysis takes the form of multiple rounds of iterative annotations. In each round of analysis, I focused on a different aspect of the transcript with each iteration yielding a deeper level of analysis. The first pass through the transcript consisted of reading the text while making descriptive comments in the right-hand margin. These comments were intended to capture the play by play of what the participant said in response to the interviewers. The second round of annotation focused on the linguistics employed by the participants. The linguistic commentary also in the right-hand margin unpacked the way in which the participants gave their account. This ranged from keywords or phrases they used to notable or visceral metaphors they used to illustrate how they felt. The third pass through the transcript recorded questions that naturally arose from rereading the words of the participant. This constituted the conceptual commentary. The fourth pass through the transcript allowed for a greater level of connection between the words of the participant and the psychological construct under investigation i.e. shame. These emerging themes were recorded in the left margin of the page and used to form a thematic map from which the findings were ultimately organized.

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Discussion

</div>

Overview

All three participants evidenced both commonalities and differences in the descriptions of their journeys as engineering majors. While each of them exhibited relatable elements in the way

they saw, experienced, and reflected upon moments of shame, each of them illustrated unique

and nuanced narratives of their experiences and a variety of coping methods. Once more, I will

omit conclusive claims about the group as the information presented here does not represent

information from the entire data set (three out of five cases fully analyzed). However, I will

make tentative claims regarding the experiences of the three participants in question (Martin,

Daniel, and Roger). All three of them followed the same general pattern in describing their

journey through the engineering department. Broadly speaking, each of them opened the

interview by discussing their core identity and what constitutes the most important things to them

and about them. Then they transitioned into describing their identities as engineers and their

experiences navigating the expectations that accompanied them. Lastly, they all provided

personal anecdotes of failures and bad classroom experiences before talking about how they

coped with and moved on from these occurrences. Each of them possessed a unique way of

viewing and talking about the overarching themes that appear in their accounts.

Martin

Martin demonstrated a complex relationship between his own status as an engineering

student and his conception of what an engineer is like.

> I wouldn't say it drew me. It was something I was just like, "Oh, I'll probably have
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> to be more cold hard facts sort of person as I move forward," but as I've learned,
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> it's not exactly like that. But, I would say that it was something that I wasn't sure I
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> could be like, 'I'm not sure if I can just operate on facts alone, like on numbers
>
> alone." I wasn't sure if I could do that.

He goes on to describe, in greater detail, engineers as individuals that exhibit a certain

degree of emotional detachment. He thought that to be an engineer one had to be reliant on

objective rational and less susceptible to making emotional judgments than other professionals. Martin states that this view has gradually changed during his time in school which can largely be linked to his own experiences. Martin characterized himself as a fact-based person who hesitates to form an opinion about something before knowing the objective facts. Yet at no point did he describe his affinity for the facts as something that would make him suitable for engineering despite that same trait being a necessary characteristic in his view. Martin felt unsure about whether he could live up to the supposed ideal of being able to operate on facts alone as he indicated an engineer should. As such, he describes his journey to becoming an engineering major not as an outright decision but more like a gradual realization. Furthermore, he desires to be recognized as more than an engineer citing his ongoing passion and interest in the performing arts namely theatre.

Martin displayed an uncomfortable relationship with the word "smart." Martin describes his older brother, whom he regards, as one of the smartest people he knows. His initial view of what constituted intelligence was rooted in the perception he developed growing up with his brother. Having grown up comparing himself to his brother, Martin became accustomed to evaluating himself and his performances against the standards of those around him. Martin states that when people label him smart his mind conjures an image of a miniature version of himself holding up a measuring stick of "smartness" and evaluating him to another's stick only to find himself lacking. This metaphor effectively illustrates how shame is a function of the perceived set of expectations. Martin's view of his intelligence was a function of how he felt he compared to the people that he considers smart. Thus, whenever someone calls him smart rather than making Martin feel good the compliment effectively induces a sense of shame as he is forced to think of himself and the people he compares himself to.

Daniel

Daniel's interaction with shame was particularly distinct from that of the other two reported participants. Daniel's account is marked by the large degree of externalization of shame he exhibits. He describes his experience working on a semester-long Introduction to Engineering project and his difficulty working with one partner.

> The other person I was paired with was not, in any way, shape or form, fit to be
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> an engineer from day one, in my opinion, but just would not take care of anything.
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> Would not do any of the work. Would not do anything. So ultimately, I did the
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> entire project by myself, and it wasn't necessarily a project I didn't want to do, but
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> I wasn't motivated to do it past that point.

In this salient episode, Daniel externalizes shame through his devaluation of his group member. According to him, this group member failed to exhibit fundamental behaviors consistent with his expectations for an engineering student namely, putting forth the necessary effort and generating feasible ideas to advance the project. He relates the experience of presenting the final product at the end of the semester alongside this partner as one he readily sought to forget.

Much of Daniel's shameful experiences revolved around difficulties working with other students. In another instance, he describes a tension inherent in all his group experiences. On one hand he wants to meet the expectation of producing high-quality work, however, this goal is at times contested by the expectation that he will share the work equally with his group members. After his experience in Intro to Engineering, Daniel adopted a policy of tentatively allowing his partners to contribute to the assignment as he observed them. He highlights an episode in which the professor assigned Daniel to work on a circuitry related project with a person that, according

to him, made no secret of his poor standing in the class. Upon not being impressed with his partner's productivity and work ethic, he elected to forgo the notion of receiving substantive help from his partner and proceeded to complete the by project himself. He also kept a record of his partner's sporadic contributions intending to report back to the professor. Once more, Daniel expressed contempt towards a partner looking at them as not a co-worker or asset but akin to a weight he must drag along with him.

Roger

Roger highlighted his religious faith (Church of Christ) more so than the others; this was evidenced further in the way he spoke of his negative academic experiences. Throughout his interview, he gave anecdotes regarding experiences of being frustrated with his work and having a difficult time working with others on homework and projects.

In one subtle, yet extremely powerful moment, Roger describes his experience in a course that met for a weekly lab assignment. He describes sitting in the classroom trying to understand his lab assignment while he perceived the people around him to be making steady progress on their own. Despite being stuck, Roger elected to not ask for help for fear of being seen as not understanding the assignment as much as everyone else did. He confirmed feeling a strong sense of inadequacy as he continued to struggle while he thinking his classmates understood what they were doing since he did not observe them asking the professor or consulting each other for help. This episode strikingly highlights the role of individuals in cultivating shame-filled environments. Roger felt as if he failed to meet the general expectation of knowing what to do on his lab assignment because he perceived his classmates were making progress with their own assignments unaided. Because he did not want to show his lack of understanding or confidence to an audience, he refrained from asking for assistance despite

becoming more certain of his need for it. However, by not asking for help, he himself contributed to the unspoken expectation in the room that everyone has a complete understanding of what they were doing. Furthermore, this anecdote illustrates how individuals receive social expectations and use them to evaluate themselves. Roger felt as if he did not measure up to his perceived standard competency with the assignment, therefore he experienced shame. His decision to not reach out for assistance served to reinforce the expectation for others who may have been in the exact same position, thereby creating a perpetual cycle of judgment and shame.

Roger saw all his problems and shame-inducing moments through the lens of personal growth and perhaps demonstrated the largest volume of reparative behaviors in response to shame. He saw nearly all of his negative shame-filled experiences as requiring a moral/spiritual remedy. Roger cites selfishness, laziness, pride, and stubbornness as the principal agents "keeping him in class longer than he should be." He narrates instances in which he felt frustrated with both his professor and himself when struggling with an assignment. At the time, he elected to blame the professor for not catering to his needs and blame himself for not paying enough attention. In hindsight, he reframed his struggle as not coming from a lack of capability, a lack of understanding of the material, or a lack of competence in the teacher but rooted in a certain lack of humility realized in the mindset of not wanting to approach others for help.

Findings

The following tables provide the expanded findings for all three participants surveyed above. Each table contains overarching themes related to each participant and a sample of the quotes used to generate them.

Table 1: Summary of Themes for Martin's Experience of Shame

Theme	Example Quotes
1. Feeling pulled into becoming the image of an engineer	<u>Lines 222-230</u>: "I wouldn't say it drew me. It was something I was just like, "Oh, I'll probably have to be more cold hard facts sort of person as I move forward," but as I've learned, it's not exactly like that. But, I would say that it was something that I wasn't sure I could be like, "I'm not sure if I can just operate on facts alone, like on numbers alone." I wasn't sure if I could do that." <u>Lines 139-148</u>: "It wasn't like a, I wanted to be an engineering major from the very beginning. It was more like a gradual realization. I mean it's part of who I am, just being factual and trying to figure out different ways to solve things. I always do that, even at home. I'm always looking for ways to best put things together. But, it's not exactly me being an engineering student or an engineering major. It's just me having that curiosity I guess is the right word to use."
2. Finding importance in being seen as an engineer—and beyond	<u>Lines 57-64</u>: "I guess (brief pause) in order to be me it'd be important— I would say it's important to— I don't know. Be right. It's important for me to know what's right and what's incorrect, in my opinion. Just because, I don't know. I like to keep my facts in order. If I don't know if something's right, I can't put it in an order. So it's important to know what's right, and to be right." <u>Lines 199-203</u>: "Just not letting— I don't want to say, people, because I kind of knew engineers serve people, but it's more like not letting what others' personal anecdotes sway you away from the facts. Like saying, "Oh, well I thought this was the best way to do it." "No, the facts say it's actually this," like that kind of person."
3. The "measuring stick of smartness": Desiring to be seen as an engineer while fearing exposure.	<u>Lines 493-497</u>: "I guess it's just more like little Martin inside my brain holding up a measuring stick of my smartness, and holding up someone else's measuring stick of smartness and going, 'That doesn't match.'" <u>Lines 574-581</u>: "I guess he usually pops up after tests, and we talk about how we did on our tests. I'm like, "Oh, yeah. You're right, I wasn't as measured up I guess as much as you were on that question," or, "I was measured up as you on that question." I

	guess I kind of evaluate where I am compared to my peers using the measuring stick."
4. Rejecting the "smart" label in favor of the "stubborn" image: Achieving intellectual performance through valuing work ethic	Lines 498-512: "It's just kind of a feeling of, "Oh no. They're going to have expectations of me to be much smarter than I am," because I don't catch on to things as quickly sometimes as people think I might. So, I'm like, "Oh no. They're going to expect me to be smarter than I feel sometimes." That's just kind of like a— I don't like to set high expectations, I guess. That sounds pretty bad, but— I don't like to set high expectations because I don't like causing people to feel disappointment. I like people to be happy, you know? And disappointment is like the opposite of happy. That's why I make jokes, is because it makes people happy." Lines 531-542: "Immediately try to lower their expectations. Like, "I'm not that smart." I tell them I guess, "You don't have to be smart to be an engineering student. You've just got to work at it." I tell them, "There's a lot of classes where I barely understand what's going on, but I just keep working at it and working at it until I have a slightly better idea of what's going on." I think I convey, I'm not sure, I don't use these exact words, but I try and convey that it's more my stubbornness to not be wrong that gets me through than being smart."
5. Cycling between anxiety, avoidance, and adaptive behaviors in overcoming low academic performance.	Lines 89-96: "Well I'm not right a lot in classes. I learn mostly by failing at something. I find all the ways to fail at something, and then I can do it. That's why homework's pretty important for me because I fail on the homework a lot, and then I figure out how to do it. That's kind of an example of me being wrong, just because I'm not right, but then I learn from not being right I guess." Lines 944-951: "I don't know. I just kind of close my shoulders off, I guess. I kind of pay more attention in the class for a couple days more. Of course, I'll drift off. I'm not perfect (laughs). But, I guess when I'm sitting I'll slouch down a little bit more, and I'll close off my shoulders a little bit more, just because I want to avoid his attention for a couple days." Lines 1202-1216: "Oh, man. It was a lot of— I don't know. Some nights I would stay up a little bit, just lying in bed just thinking, 'What could I have done to do better? What could I have done? How would that've affected everything else?" Other

	nights I just didn't. I just threw it out of my mind, just because I didn't want to think about it. There were some days where I just refused to think about [math course], and there were some days that I reviewed [high school math class] for [math course], just because I was like, something did not translate very well going into [math course]. It was just kind of like a back and forth of, "I don't want to think about it," and, "I need to figure this out.'"

Table 2: Summary of Themes for Daniel's Experience of Shame

Theme	Example Quotes
1. Keeping balanced – Maintaining an engineering identity amid intentional pursuit of a robust non-professional core identity	Lines 1446-1464: "Yeah, balancing different things, things like that. Like going from [sport] to engineering to— because my freshman year, I ultimately did [sport], engineering, was in [musical group], did a club, and was balancing all of those different things. It was funny, because my fall semester, I was just in chorus, pledged a club and played [sport], and an engineering major. Second semester I topped on [a play], and I had a better GPA during [the play], and got on the Dean's List, balancing all that other stuff, than I did the first semester. Which didn't make any sense to me, but it made me learn something. The busier I make myself and the more I try to balance, the better I am at balancing those things, and I'm able to handle them a lot more. Like, I handled my engineering work a lot better. I was able to produce better work in that semester than when I wasn't." Lines 1220-1235: Depressing. I would lose a big sense of joy in my life because it's something very— it's entertaining, obviously. I love it. I would lose that family of [sport], being able to see them Monday through Thursday, being able to eat with them every night, being able to go to tournaments three or four times a semester. I would lose that, plus I would lose working out every day. I wouldn't be in shape. I wouldn't be healthy anymore. I would— not to say people who don't do that aren't healthy, but like athletics and working out and playing soccer and things like that has always been a part of my life and losing that— I wouldn't want to. It's a good sense of like release because you can forget about school. You can forget about life at home. You can just go out, go throw a disc or whatever and do something different to ease your mind. If I had to drop that, I would kind of lose that."
2. Sharing the shame: Globally devaluing self and peers amid perceived failure.	Lines 1021-1038: "I would say maybe there was a time where I considered, "Maybe I should just let him do part of the project since that is technically the requirement. It is a two—person project." But I couldn't— I was kind of failing to meet my expectations if I did that and failing to meet my expectations of turning in something that I was satisfied with. There were plenty of other people who actually did their project with two people successfully, and were able to get it working fantastically. There were also people that did it one by one, but they would have one person come in and take care of it, and then when they would leave, they would carry off and pick up. So, they were able to at least continue their success, and mine was more of— not

	necessarily carrying a dead weight, but trying to drag someone along with me, rather than someone assisting me." Lines 479-486: "The other person I was paired with was not, in any way, shape or form, fit to be an engineer from day one, in my opinion, but just would not take care of anything. Would not do any of the work. Would not do anything. So ultimately, I did the entire project by myself, and it wasn't necessarily a project I didn't want to do, but I wasn't motivated to do it past that point."
3. "Fit to be an engineer" – Responding to shame by questioning the fit of others as engineers and accepting his own fit.	Lines 1541-1561: "I think that there's kind of a defining moment that everyone probably realizes, when they're in their major, whatever their major may be, where they feel— they may feel a moment of shame, they may not, but there is always a turning point or a moment of doubt where they're like, "Is this really it? Is this — should I do this or should I not?" Some people build up from it. Some people change majors. Some people are like, "Oh, well, I'm just going to drop out of school entirely," or whatever. There's always a moment, and I've seen it through many people. I know people who have just straight—up dropped. I know people who have dropped things. I know people who have changed majors because they couldn't handle it or things like that. And it was because, whether it be an experience they had or just a class or just a sense of, "Yeah, there's no way I can do this," but there's— Sometimes that moment of shame can be the turning point."
4. Motivating future actions while avoiding past memories.	Lines 1531-1537: "Umm, I would say yes, there are moments that you could categorize as shame, but it kind of depends on how you handle it. Like, I was ashamed of the project that I put forth in that design project, but I was able to turn it around into something that motivated me instead of just giving up at that point." Lines 722-736: "Second of all— not necessarily like repaying him the favor but repaying him the favor in the sense that I'm going to motivate myself now to do something better. The next project I tackle, it's going to be better. I'm going to put forth more effort. If my partners aren't willing to do something, I'm going to speak up sooner or something, or I'm going to find a way to produce something that is not going to ultimately look down as a disappointment, that at least I can improve on and give them somewhere to start, and then be able to talk to them and better understand certain things and create a better just overall solution for them."

Table 3: Summary of Themes for Roger's Experience of Shame

Theme	Example Quotes
1. "Doing my best": Expressing an identity as an engineer through the faith-laden valued of conscientiousness.	<u>Lines 31-37</u>: "For me specifically, with how I was raised and Harding probably spiritually speaking, relationship with God. What I think about God is the most important thing about me. Personally, and I think that carries into everything that I do based off of scripture and everything that comes in that." <u>Lines 78-84</u>: "Yeah. I would connect that to that. Scripture says like do everything that you do as if you're working for the Lord, and I think that carries into our classes and into engineering as a Christian. So that means even if you're not the best at that subject, it means giving your best that you can do to it."
2. Feeling personal value in the perceived expectation of conscientiousness in engineering while also fearing the failure to meet this expectation.	<u>Lines 673-683</u>: "I think as an engineering student more than — I mean, you're never going to be a master at every subject in engineering. I think one of the most important things you can do is give your classmates and the people who you're interacting with confidence. I think is a huge factor, not just whether or not you can solve it because you might have a lot of problems and have a complete misunderstanding of what the problem has to say, but if you have confidence that you can do it and if you can't solve this one that you'll be able to in the future if you work at it. I think that's a very important factor." <u>Lines 584-604</u>: "It's just this expectation that I'm a master at the homework that we're working through or the concept that we're dealing with. This idea that I have a very solid understanding, almost to the level of professor kind of understanding, of what we're talking about when a lot of times, I'm working through the problem just as much. I've just gone through it before but I'm still having the same questions and having to overcome the same barriers and problem-solving. In that respect, when it comes to working on homework and projects that have to do with the math or the physics, that's an expectation. I also think among friends in a more social setting, there's an expectation that you won't have as much time to spend as an engineering major, which is true in a lot of ways, I think. You don't want that to be the stereotype. You want to be a friend who's dedicated to them despite everything that you have going on. That's an expectation that you want to exceed, surpass."

3. Desiring and contending with interpersonal trust in relationships through his engineering student role.	Lines 205-226: "I was definitely very passive a lot of times, not saying what I needed to say or letting something go by whether it was a misprint in a project. Well, that was their job. They should be the ones to fix it and I just won't tell them about it." Sometimes just anger at sometimes, I think, but I think overall, it's a part of the team building experience, learning those skills just to work with other people. I think a lot of engineering majors get a bad rap for being introverts, which I don't think all of us are. I think we're very socially capable, but it's definitely a larger step especially coming in that first year and learning how to work with a team. For a lot of us, we're very independent and like to get things done ourselves so distributing roles to other people and trusting other people with those roles could be a challenge. So, in that sense, I failed to meet standards that I thought I should have with trusting other people with getting something done. Instead, maybe taking too much on myself."
4. Internalizing a strong sense of failure through difficulty in academic performance.	Lines 984-1000: "That was definitely the class that was the make or break for me of whether or not that I wanted to do mechanical engineering. I remember one night trying to complete this assignment before midnight, and I was frustrated because I'd been working at it for hours and I felt I put in the time that needed to be put into this assignment. I didn't procrastinate on it. I had worked on some of it the day before, some on it the day of and was still having to crunch it in. At that point, I had definitely put blame on my professor for not teaching it well, or my friends for not explaining it well because I felt I gave my part. That was definitely make or break time. I remember just praying. I was like Lord, please help it to make sense." Lines 967-977: "Definitely more so myself than other people. Blaming myself for not having paid attention well, or not being smart enough to grasp the subject. Sometimes it comes out in anger against — Anger is a strong word — Frustration internally with professors or of friends because there's just this desire for them to cater to you and to what your learning style is. It can be frustrating and that's not the case and you have to do what everyone else is doing and adjust."

5. Avoiding pride and pursuing humility in order to enact reparative behaviors in meeting goals.	<u>Lines 735-744</u>: "Not knowing where to go from there, and a complete willingness to let him take on the homework for the rest of the time and even learn from him. Very humbling, and not just for projects like that, but I guess that's how a lot of situations in life work. It takes feeling confident and pridefully sticking to your own way of doing things only for it to be proven wrong and learning from somebody who you're supposed to be teaching." <u>Lines 1144-1157</u>: "It's something that I need to work on. I recognize that I need to get better at is trusting other people with the work and that they are competent to do it, and that it's a humility thing to ask for help. And so, it's something that I recognize that I need to work on a lot and hope to get better at by the time senior design comes around for sure. I definitely appreciate when people come and ask me what I think about something if I've gotten past the "Oh, I don't want to stay long helping them out" but I appreciate when people are willing to humble themselves and ask for help. I think that's something I could do a lot better at."
6. Contending with the call to be an engineer: Questioning competence and intrinsic motivation.	<u>Lines 1226-1248</u>: "I would add to that the conflict of whether or not you want to do engineering. I think a lot of engineers can fairly say that they've thought about changing majors. Not just because of how hard it is, but because they have passion for other things. I think I would say that at times there is almost a shame in switching majors, that I wasn't able to do this task so even though I have a passion for this other major or this other discipline, I've committed myself to engineering and I would feel a shame to deviate from that. I think that there are definitely some students in the discipline who feel that way. I don't think I would put myself into that category. I have in the past for certain, whether it was switching to a Bible major or a history major, or other things that I'm very, very passionate about, but this idea of I've already committed to engineering and don't want to seem like I've chickened out in any way. Almost a — I think for some people it shouldn't exist, but a shame from just not being passionate about the discipline."

Conclusion

The findings stemming from analysis of the three participants highlighted above provide keen insight into the culture of engineering programs and how students experience shame within them. Each of the three participants was given high-level discussion on their own terms to avoid making conclusive claims about the whole. However, I will proceed with the analysis of the remaining two cases in the study after which we will be able to justify holistic claims over the sample.

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