Chapter 2: Finding Access Points to Carework for Coding Literacy

> What makes code frustration so particularly maddening is that you don't know how long it's going to last. Maybe you'll figure out the bug in a few minutes. Maybe it'll take an hour or two. Or maybe it'll be *weeks* or *months* later and you still won't have figured out the bug, so you'll just bungee-cord it down with a nest of exception-handlers and pray to god it doesn't surprise you with a new one. Either way, this is what I tell people who ask, hey, could I learn programming? Sure, I say. Almost anyone can. So long as you're okay with unceasing, Sisyphean frustration.
>
> – Clive Thompson, "Programming Isn't Hard—but It's Frustrating"

> Love is an action, never simply a feeling.
>
> – bell hooks

In Fall 2016, I took an undergraduate course in Python. Because Python resembles English syntax, the computer science department considered it a "gateway" computer programming language into coding for beginners. The instructor gave a 50-minute lecture every Monday, Wednesday, and Friday morning to about 300 students and assigned weekly programming projects on Fridays that were due the following Thursday. We also had three in-person mid-term exams that the instructor administered during that 50-minute class time. The weighted grades were fifty-fifty: 50% weekly assignments and 50% mid-term exams. I was excited to dig into a new programming language at the start of the semester in anticipation of starting my research at Clearwater Academy.

Three weeks later I was an anxious mess.

My life that semester revolved around computer programming. I gave little attention to my other courses, teaching, tutoring, hanging out with friends, and even worshipping at my church. Every other hour, every other minute, between Friday and the following Thursday, I coded, and I used every support the class gave me to survive that semester. I went to Monday lab where I could do pair programming and get help from a graduate teaching assistant. I visited

my instructor's office hours where I sometimes stood in a line with other students outside her door; I went to another office hours with a graduate teaching assistant (some days I would go to my TA and then a few hours later go to my instructor's office hours). I sometimes called my friend who was a computer science major to find bugs in my code. Every Sunday afternoon tutoring with undergraduate computer science majors started at 2:30p.m. in the computer science building, where I would join other undergraduates, some taking JavaScript, all of us grinding code, asking for help, tutors jumping from table to table. I remember the stress I felt when I saw a student complete their assignment and leave early to enjoy what was left of their weekend. Between one-on-one tutoring, I grinded code and consulted Stack Overflow, the premier online discussion website for getting advice on solving sticky coding problems. Each time I went in for help, I made small yet satisfying progress. I did well on these assignments and felt a boost of confidence that maybe next week, *next week*, I'll get it done with no help. Never happened. According to one graduate teaching assistant, the weekly programming assignments introduced me to important cultures and practices of coding. First, the assignments reflected what actual coding was like: collaborating with others, searching online for resources, breaking things as you go, all while under a tight turnaround date. Second, the weekly programming assignments were acts of interpreting and translating software design documents into code. This way of reading code required a different way of doing analysis, problem-solving, and ideating solutions I had never done before. I passed with a C+, not because of the weekly assignments but because I had no support for the three in-class mid-term exams. I still don't understand why weekly assignments—which reflected the actual work of coders—wasn't weighted more than exams, or why we needed exams to begin with. But that's the ungrading assessment scholar in me talking.

Clearwater Academy taught adult learners similar cultures of coding under a demanding and intensive curriculum. Their primary engagement with coding was through Wordpress and exercises on FreeCodeCamp, which required similar efforts to translate instructions written in English into instructions written for a computer. During class, Zeus, the twenty-four-year-old martial artist, and club bouncer from the Introduction, told me that he had not "forecast the severity of the workload we would really be doing" in the computer code bootcamp. He had taken half a semester of coding years before, so Zeus felt that he should have retained that information to be at least "semi-pro." He explained to me, "I picture myself being this computer champ, at least in my book, and understanding and being able to maneuver this [coding] so easily. It's very upsetting to admit that I was intimidated by it, ya know?" Zeus looked wistfully at FreeCodeCamp on his laptop. "It's an alien language right here."

Clearwater Academy offered job training and computer programming as interventions in Black adult learners' personal and professional interactions to change their odds against poverty and racism. Although learning computer programming was a struggle, what mattered most to participants was awareness that the policies, rules, assessment practices, and expectations that govern how to learn computer programming also governed how they lived outside of Clearwater Academy. While this observation can be true of education in general, the cultures of computer programming seem particularly different, as they require more than just discipline but also a different way of thinking about yourself and literacy. Through interviews and participant observation, I became aware that what Black adult learners really needed was a community based in carework. Pierre from the fall 2017 cohort said that computer programming and the possibility of a lucrative career brought him to Clearwater Academy, but *empathy kept him in the program*: "I'm like 'I wish there were more teaching.' But if it was *all* teaching and hardcore *the whole time* and none of the stuff we've done, I don't think that—I don't know if I would still be here. I feel like I wouldn't be *valued* the same as I am now." Pierre wanted his humanity to mean something to others; he wasn't another potential worker for a tech company. His education in Clearwater Academy should help him achieve self-actualization, or to become the best person possible creatively, spirituality, and mentally (hooks, 1994).

Clearwater Academy, and other adult and youth computer code bootcamps like it, try to intervene in lax diversity, equity, inclusion, and belonging, or DEIB in the tech industry; they join in other efforts occurring in college courses and in open technology communities. For years diversity advocates have called on Big Tech to recruit more women and people of color across all positions—from coders to middle and upper management—to rectify histories of white men dominating tech designs. While diversity, equity, and inclusion have been around for a long time, belonging—feeling safe in an environment and bringing full authentic self to a workplace—became prevalent starting around 2019. In *The Washington Post*, Jena McGregor (2019) writes that "belonging" has become the latest buzzword in Silicon Valley giving "the impression that other concepts haven't made enough progress retaining diverse employees." The George Floyd protests of summer 2020 seemed to galvanize many tech companies to dig into DEIB. In June, for example, DEI-related job postings in tech increased by fifty-five percent while major companies pledged billions of dollars to support this renewed effort (Maurer, 2020).

Scholars in computer science education have made belonging a critical topic for research in college classrooms. The range of scholarship suggest belonging is "positively associated with student outcomes such as their motivation, grades, interest in a field, and the intent to pursue college or persist

in the field" (Moudgalya et al., 2021, p. 445) while race, class, and gender, among other social identities, influence belonging. Scholars find that racially marginalized people can have as much interest in STEM as white people, but campus experience and classroom interaction disrupts senses of belonging for these marginalized undergraduates (Ong et al., 2011). Closely associated with these broad influences are how Black students navigate stereotypes often associated with being a coder: a white, straight, awkward man. Black people may "disidentify" with coding because they consider this "typical coder" the antithesis to their own identities. However, research on belonging may contain hidden biases: Solomon et al. (2018b) find that much research on belonging "were based upon notions of Black masculinity or white femininity. These understandings of belonging are indicative of the invisibility of Black women due to their non-prototypicality" (p. 3).

Partnerships between higher education and industry, even if implicit, create a pipeline of responsibility to diversity. But this partnership suggests DEIB provides profitable advantages to industry rather than benefit to marginalized people. DEIB in computer science and the tech industry are thinly veiled attempts at rectifying systemic bigotries to attract Black coders into the profession as "commodities used to enrich others" (Scott & Elliott, 2019, p. 376). STEM's labor system can resemble the labor system of sharecropping enacted after Emancipation: to ex-slaves, sharecropping seemed to be a desirable job until they learned it wasn't any different from slavery; landowners took advantage of sharecroppers who could not calculate yields or read contracts, trapping them in endless cycles of debt to the landowner. Black women sharecroppers received little social gain. Because they were ineligible for negotiating contracts with landowners, Black women gave the fruits of their labors to their husbands. In STEM, computer code bootcamps and other training programs present coding as a desirable job for Black people who "missed their opportunity," but that can be a ploy to attract Black people into for-profit institutions that make Black people enormous amounts of adult learner debt (Cottom, 2017). And even if they cross into those coveted jobs as software engineers, Black women have differential treatment compared to men and men of color in industry. Implementing DEIB in industry should not just focus on developing coding skills but also develop "better knowledge about the social systems in which they intend to intervene" and "identify strategies by which people, and especially women of color, can emancipate themselves from systems of oppression" (Scott & Elliott, 2019, p. 379).

Open technology communities, another important site for digital literacy practices, also face challenges with diversity and inclusion, despite being more democratic and flexible than post-secondary education and private industry. Members believe that their Do-It-Yourself (DIY) practice coupled with their

hacking closed software culture philosophy can be used to hack their own majority white and male-dominated community. Unlike the profit motives of private industry, open technology communities use diversity and inclusion practices to promote "experiencing jouissance and a sense of agency" which community members obtain through technology use (Dunbar-Hester, 2020, p. 4). However, promoting more freedom for more people to harness the power of technology fails to address systemic injustice. Without a "robust appraisal of power, and of technology's role in reproducing social orders," even diversity advocates in open technology communities with their best intentions, have "the troubling potential to feed back into status quo arrangements of social and economic power [they] are nominally critiquing"(Dunbar-Hester, 2020, p. 4) As outsiders to the tech industry and thus unbeholden to drawing in marginalized people as commodities for profit, open technology communities are best positioned to interrogate power and technology. Their loyalty to technological agency forces them to stop short of true social justice practices, work that could emanate from the hackerspace to private industry itself, not for changing social structures in private industry but "because their power to propagate social analysis of the states" (Dunbar-Hester, 2020, p. 5).

The sample critiques of DEIB in the tech industry reflect broader efforts across institutions in general, from private industry to higher education. When an institution already embedded in capitalism adopts a policy and practice of diversity, they struggle to balance real change with institutional advantage. DEIB isn't part of the daily routines and structures of these institutions; diversity practitioners work to institutionalize diversity by fighting to bring diversity to leadership's attention. Although an institution will declare a committee or office for diversity, it will still sow resistance to the very people seeking change, what diversity practitioners, in Sara Ahmed's qualitative research, calls "'institutional inertia,' the lack of an institutional will to change" (Ahmed, 2012, p. 26). Instead of changing institutions, diversity must become "part of what an institution is already doing, when it ceases to cause trouble" (Ahmed, 2012, p. 27). Sometimes diversity becoming part of the institution involves supporting its whiteness; diversity practices "[change] *perceptions of whiteness rather than [change] the whiteness of organizations*. Changing perceptions of whiteness can be how an institution can reproduce whiteness, as that which exists but is no longer perceived" (Ahmed, 2012, p. 34, italics in original). However, institutions may have no qualms with completely ending diversity offices or committees. After the U.S. Supreme Court ruled that affirmative action was unconstitutional in 2023, colleges and universities voluntarily renamed or restructured their diversity offices; in other states, Republican governors put a moratorium on all DEI offices in universities across their states. As if following their playbook, tech companies in 2024 began pulling

back on their 2020 promises with deep, massive cuts to their rank of recruiters seeking marginalized talent (Keenan, 2024).

The marriage between coding literacy and diversity and inclusion can lack real institutional change or real social analysis of oppression not only in the institution (see Chapter 3) but also, most important to this chapter, the individual lives an institution recruits into its halls. While DEIB, especially belonging, creates community in tech workplaces, we may ask what kind of community and to what ends? And how does coding literacy get wrapped into these communal-building efforts? Coding literacy still supports the social order, and DEIB tries to create relationships that maintain technology's support of the social order, to prevent community from breaking down prevents the social order from breaking down.

My contention in this chapter is that computer code bootcamps can learn from Black adult learners about how communities of care become a foundation for opposing oppressive cultures and practices of code within these institutions. Carework, or care as labor, starts as a feminist practice of "relationship[s], of seeing and responding to need, taking are of the world by sustaining the web of relationships so that no one is left alone" (Gilligan, 1982, p. 62). Understanding human relationships as a web rather than a hierarchy creates "the vision that self and other will be treated as of equal worth, that despite differences in power, things will be fair; that visions that everyone will be responded to and included …" (Gilligan, 1982, p. 63). Working with a diverse workforce and deploying DEIB in software industry requires this ethics of care, but it is only, as I wrote earlier in this paragraph, a starting point. Black feminist scholars have critiqued ethics of care for centering "a predominantly white, middle-class, heterosexual feminine ethic as the basis for a supposedly feminist ethics" and lacking "the cultural specificity of what counts as caring" (Thompson, 1998, p. 527). In addition to inclusiveness, ethics of care leaves uninterrogated the power and privilege that flow within webs of human relationships.

Black feminist caring provides a more complex picture of care among Black communities. Carework responds to lived experiences with and knowledge of Black oppression rather than responding to personal emotions; caring reaches out from the Black family, which has never been safe in the United States, to society because Black families send their children into a racist world. Audrey Thompson's work informs my thinking on how carework operates in cultures of code. She gives a non-exhaustive list of themes from Black feminist caring scholarship: emphasis on authentic, trustworthy relationships; interpreting the world from a Black standpoint; a pragmatic approach to strategies that promote survival; and understand that social relations can be exploitative and oppressive (Thompson, 2004). Thompson concludes that caring, unlike ethics of care, isn't about addressing private or semi-private problems; Black

feminist caring "means bringing about justice for the next generation, and justice means creating the kinds of conditions under which all people can flourish … Love and caring do not step back from the world in order to return to innocence, but step out into the world in order to change it" (Thompson, 1998, p. 533). Diversity and inclusion practices in tech fails to show awareness of oppression and exploitation. These histories and current practices of turning Black coders into commodities for profit maintain dominant cultures of code. However, when computer code bootcamps ground care in the knowledge and experience of oppression they can transform Black experiences with coding literacy practices.

In this chapter, I argue that when cultures in tech and race diverge in computer code bootcamps, Black coders use carework to maintain the web of relationships needed to learn computer programming. Carework answers oppression while preventing the cultures of coding from creeping on adult learners, ending their attempts to learn computer programming. Looking closely at how participants and instructors maintain their web of relationships reflects the constraints Clearwater Academy puts on already struggling Black adult learners, but it also reveals the transformative power of coding literacy. I show that Black adult learners often didn't know until they came to the program that they needed a place where their lives were affirmed and valued (hooks, 1994). In this chapter, I tease apart what I call hustling and grinding for care, a rhetorical tactic to *re*-refashion their world after meeting the cultural practices that Clearwater Academy has asked them to live. The hustle and grind for care is an important source of labor in a computer code bootcamp. I advocate for its practice as a deeper commitment to social justice within literacy workplace education that train racially marginalized people in prestigious emerging technologies. Black feminist caring explains Black adult's experiences in Clearwater Academy and provides a conceptual framework to situate my analysis. Black adult learners' spoken words, storied actions, observed actions, and to some degree my own actions demonstrate how they discover new definitions of community that assists in pursuits of computer programming within the cultures of Clearwater Academy. As I directed my attention to Black adult learners' stories and actions, I came to find how much carework mattered to them while learning coding literacy.

My primary data for analysis are one-on-one interviews and what I call networked drawing. Asking participants to draw and then discuss their web of relationships came out of practical necessity. My schedule in the spring and fall of 2017 allowed me to visit Clearwater Academy only once a week. A lot can happen in eight to nine hours but that wasn't enough to create a complete picture of how Black adult learners lived their lives outside the computer code bootcamp. I took a more direct approach to understand what was happening

outside my participant observations, and asked each participant to literally draw a picture of how laboring for Clearwater Academy impacted their working lives and what they did in response to fulfill their life responsibilities while learning to labor for tech. Network drawing (see Figure 2.1) helped me discover a complete metaphorical and literal picture of how the policies, rules, assessment practices, and expectations that govern how to learn coding literacy can also govern how Black participants live their lives.[1] Maps have been used in other literacy studies before. Paul Prior and Jody Shipka studied academic writers' writing processes by asking them to draw representations of their processes. They then discussed those drawings with the authors. As Prior and Shipka (2003) point out, drawing assists with creating a thick description of literate activity. Looking closely at their networks of support and participants' stories about those networks, I can highlight the constraints Clearwater Academy puts on already struggling Black adult learners and their literacy activity with coding. The hustle and grind to assimilate reflects a hidden laboring of carework, a labor on top of unpaid labor.

Taken together, the following sections demonstrate how learning computer programming alone does not always intervene in changing the odds against racial inequality. Carework in cultures of coding extends that intervention further for Black adult learners in computer code bootcamps. Essentially, participants tell instructors, "Here's how you can help me in this community, not with DEIB efforts, but according to what community means to me." I first explain that the way Clearwater Academy restructures lives makes learning computer programming risky and tricky for Black adult learners; this section sets up the context for needed carework within and without the coding bootcamp that responds to this risky and tricky mission. Then I describe Black adult learners' philosophies of care—abstract concepts of what they expect from themselves and others to maintain their web of relationships. This section explains that these philosophies arise out of their ongoing interactions with computer programming, classmates, and instructors; they had different expectations of Clearwater Academy at the start of the program. Then I sample the concrete ways participants carried out these philosophies in two different ways: listening for oppression and offering a word of wisdom and accountability. These actions from a variety of sources in their networks led to holistic transformation of self, another unexpected result of attending Clearwater Academy. In the conclusion, I ruminate on how social equity can become an administrative concern in computer code bootcamps. Reframing cultures of code as access points to carework enriches the lives of Black coders in training.

1 I have de-identified names on some of the participants' maps.

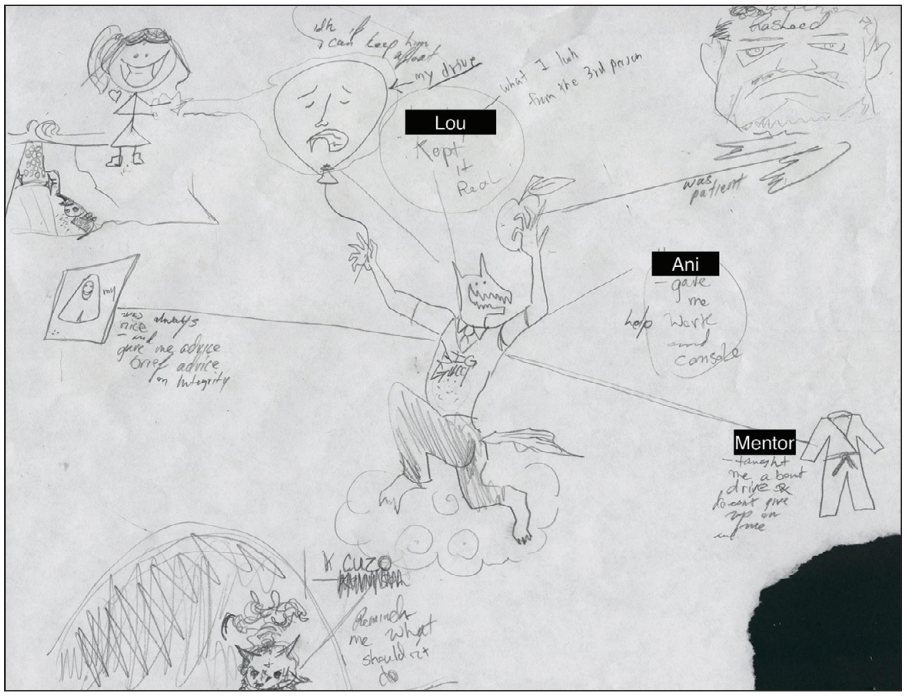

Figure 2.1. Image of Zeus' network map

"I'm Four People in One": The Riskiness and Trickiness of Coding While Oppressed

In this section, I give a high-level view of Black adult learners' lives in and outside of Clearwater Academy. In the words of one participant, coming to Clearwater Academy made life awkward and difficult, and that required Black adult learners to approach the next three-and-a-half months with care and skill. I show how participants understood that their learning computer programming meshed with life responsibilities, responsibilities that often required them to deal with financial inequality and family life. Coding—as an "alien language"—was hard for participants to grasp, exacerbating the difficult balance between life and training for human capital through computer programming. This section sets up the broader context for why Black adult learners hustle and grind for carework as an intervention while pursuing computer programming.

Black adult learners had relatively stable lives peppered with challenges from oppressive systems, but the introduction of Clearwater Academy augmented some of those existing problems. Halima attended the computer code bootcamp in spring 2017. At the time, she worked as a hotel housekeeper

cleaning guest bedrooms and bathrooms. This job marked a significant departure from her working in IT for Sakowin University under a temporary contract two years before. The hotel had just cut back Halima's work hours so bad that she would have to quit. While Halima was losing access to a livable wage, she lived with her three children in the Salvation Army's shelter for the unhoused. Her coming to the Social Justice Collective (SJC)—the nonprofit organization that offers Clearwater Academy as one of many programs to combat social inequity—led to some relief. She was eligible for their housing program, in which the nonprofit would cover one month's rent and the security deposit. Halima just had to find the apartment. A case manager in SJC suggested she apply to the nonprofit's Clearwater Academy training program. The sudden blessings of housing and returning to computing excited Halima: "And it's just like, 'Why would I be cleaning toilets when I'm capable of so much more?'" she thought. Yet the introduction of Clearwater Academy left Halima scrambling to restructure her life. After quitting her hotel housekeeping job, she had just a week to "adjust my schedule, because I have three kids to manage, right? I had only one week to adjust my schedule. And I'm still fighting with that. My whole schedule, getting my kids to school every morning, getting to training on time." Nevertheless, Halima was happy to be in Clearwater Academy among likeminded people who loved tech.

However, life in Clearwater Academy was hard for Halima; I noticed signs during participant observation and in conversations with her. Some were relatively minor, like sharing that she had gotten only two hours of sleep the day before, so she fell asleep during a long guest lecture on finances and budgeting. "I hope no one noticed," she told me a couple times (I hadn't noticed myself). Other problems hindered her from learning coding: at the start of the program, Halima needed new eyeglasses because her old pair were broken. Three weeks into the program she still couldn't afford them. Each class began with a stand-up meeting. Generally used in Agile project management, stand up is an opportunity for software engineers and other members of a project team to literally stand up and report on their progress for a project, what they planned to do for the day, and what challenges they needed help overcoming. In Clearwater Academy, instructors came up with different prompts for adult learners to answer in addition to noting their progress on their projects. On March 7, 2017, according to my field notes, everyone could share whatever they wanted. Halima jumped from her chair and shared with the group that she was grateful for Richard's—the technical instructor—teaching the day before: "What he said helped me change my thinking," Halima announced to the class. "I keep focusing on the negative lately because I have a lot going on in my life right now." The boundaries between learning coding literacy and taking care of her children blurred, or at times one interrupted the other.

Halima's attention was split between coding and lectures and the schools her children attended. During class she kept her smartphone underneath her left thigh in the chair to catch the vibration of a phone call or text message. Often the calls were from teachers about Halima's children misbehaving in class or even little things that didn't need any contact at all. To stay focused on Clearwater Academy, Halima had asked her children's teachers to not call between 9 a.m. and 5 p.m.; if it was urgent, they should email instead. "I don't have time," Halima told me during class. "I'm four people in one, and if you waste my time, I'll tell you about yourself." She wished the teachers had more compassion for her children; like herself, Halima's children were under a lot of stress from living in the Salvation Army's shelter. And they went to school where most likely many came from stable homes with lots of resources. Lacking a job, proper housing, and having mouths to feed all at once, Halima dropped out halfway through the program. When low-income Black adult learners restructure life for Clearwater Academy, because the computer code bootcamp demands their time and energy, they shift their life carefully and deliberately. But what cascades from that is more struggles with inequality. Halima is a cautionary tale where the balance or boundaries are lost, physically, emotionally, and mentally, and that pushed her out from the opportunities to learn coding literacy.

Other Black adult learners pushed themselves into financial strain to make Clearwater Academy work in their lives. Zelda attended the computer code bootcamp in fall 2017. Her father was impressed that she could stick to the job training because she made no money from Clearwater Academy and there was no emergency fund she could use to stay afloat. Zelda was surprised herself that she was making it so far. Alice felt the consequences acutely as she reflected over her network drawings. She had no job at all while going to Clearwater Academy, other than working a two-hour shift in Journey's office, an education program that offers humanities courses to low-income adults for college credit. Alice got laid off from her job as a banker and had the opportunity to take another job in a different department. But she thought the layoff was a sign to try learning coding literacy. Alice had known about it for a while. There was never "a time when I had a healthy … a time when I could exit and wouldn't be just up and getting a job." She had the support of her partner who worked and made enough money to support her and her children, but they as a family had still been in difficult situations. For example, Alice never received unemployment benefits because the government considered her a "full-time" student attending Clearwater Academy. Without a consistent check, Alice often worried when the power company would shut off her electricity. To make ends meet, Alice was "proactive in disconnecting luxuries such as my personal cellphone, cable service, and Internet. But by

disconnecting my Internet, I introduced a new challenge: How can I study Internet technology with no Internet connection?" Even if you worked, you didn't work all that much to make barely any money. Myra worked overtime as a certified nursing assistant "making 2000 dollars in two weeks. Like I lived at work. That's how I was able to bring home that much money." When she decided to attend Clearwater Academy in Fall 2017, Myra's mother questioned how she would survive and take care of her daughter without any money. But she didn't quit her job: "I just went way, way down in my job. I don't work that much." During her time at Clearwater Academy, Myra said she took "a big, big financial cut in my life," just making $400 every two weeks. These three Black women had some financial support, but even then, they wondered what their breaking point was before addressing their poverty mattered more than learning computer programming.

Mental health also played a significant role in their context of struggle before coming to Clearwater Academy. The computer code bootcamp could add more weight to those burdens. Pierre disclosed to me that he had been diagnosed with severe depression. Stressful events in his life and the lives of his family members triggered depressive moods. "Yeah, just like that, financial stuff, not having the lights, girl stuff, exes, new girlfriends, yeah. I can't … Lots of drama. Lots and lots of drama," he said. Microaggressions with his landlord was the most recent drama added to his life. During our interview, Pierre had to stop and take a phone call. He later returned and said a fuse had tripped in his apartment. But the apartment complex needed to get a lawyer involved in addition to hiring an electrician. He could understand how race played into this problem at home: "Dude, if I was rich and white, this would've been fixed a long time ago." Pierre is mixed-raced—his mother is Black, and his father is Irish—but he's often encountered racism and racial microaggression in a way that he associated with being perceived as Black, not racially and ethnically mixed. The problem, he said, is his skin. "I literally, the place I live in right now, I deal with it every day … And I've talked to my general manager, and every time I go to shake his hand he says, 'It's nice to finally meet you.' And I'm like, 'Why do you not remember me? Why am I an afterthought?'" Pierre reasoned again that a blond, blue-eyed white woman would get better treatment to resolve the fuse problem and probably affix herself in the landlord's memory easily. But not all participants linked depression and stress with microaggressions. Zelda had anxiety and depression, and they hampered her willingness to go to class every day. "Because I suffer from depression sometimes, so sometimes I don't get out of bed and sometimes I don't sleep because I have real bad anxiety," she admitted to me. Continuing coding at home was just as hard because Zelda would get, in her words, "lazy" and start watching Netflix. Yet Clearwater Academy's structure

and her own goals motivated Zelda to go to class. The easiest part of all, she said, was simply getting to the camp each morning.

The hardship of life coincided with the hardship of learning computer programming. I've already referenced on two occasions Zeus' observation that computer programming – HTML, CSS, and JavaScript in this case – is an alien language. But it helps to give more concrete examples for what's at stake and then understand what participants do to stay on top of their computer programming when they leave Clearwater Academy at the end of each day. Participants could easily navigate the employability skills, often to some annoyance for the lesson's repetition (see Chapter 4). But the exercises in FreeCodeCamp, and completing coding in Wordpress, was an emotional and mental drain. DeAndre remembered just sitting in class when suddenly he was hit with a bad anxiety attack; he excluded himself from class to hide the physical reaction. I asked him what the attack was over. It was his thoughts: "Cause at that time I was scared to fail or some shit. Like, everything hit me, I was behind, and I couldn't get shit done. I couldn't remember HTML. … And then my thoughts were like, Boom! 'You gonna fail, nigga. You gonna fail. You gonna lose everything then.'" The anxiety attack didn't make sense to him; DeAndre was already halfway through the program, and he had plenty of success with learning HTML on FreeCodeCamp.

And Alice said she was trying to read about JavaScript in *Eloquent JavaScript* by Marijn Haverbeke (2018), a book required in the class but not read often. With FreeCodeCamp Alice had done JavaScript lessons repeatedly to try to understand its concepts, so the book was supplementary to making sense of what she was doing. Rosie assessed her success with FreeCodeCamp based on how often she needed to use online tutorials, too. Every now and then she was fine, "but for the last four or five [challenges] I've needed it [online tutorials] each time and I'm like still not getting it." Early on in this section of the program, Rosie could do simple arithmetic with JavaScript "but now they're getting into an area where I don't know what they're talking about. Say, 'What? Who?'" Rania, learning coding in Fall 2017, liked using Richard's suggestion that they copy and paste existing coding from other websites into their project, but she found that some code would still not work, and she needed to go in and modify the lines of code. Like Rosie, she wanted more direct instruction from either Richard or one of the volunteer tutors that visited once a week. But it could be hard to make those connections. Rania thought Clearwater Academy was going at a breakneck speed, so she couldn't even pause to listen to God for direction in a quiet space. "I keep going, going, going, I haven't even had the chance to really focus and be quiet. … Just going boom, boom, boom. Homework, homework, homework. Study, study, study. Project, project, project." The best bet to success in this intensive program?

"You have to definitely go home and just trial and error," Rania advised me. "Try it do it try it do it. Stuff like that. That's the way you gonna get it." From these examples, I could understand how on paper (the advertising, the syllabus, the website) Clearwater Academy required 36 – 40 hours of class time; but the program's intensive curricula followed adult learners into their homes, requiring more hours of coding practice than they had first thought.

From my observation notes and interviews, I concluded that most participants in my study graduate from Clearwater Academy partly because they strategically made time for the difficulties of coding outside of class. Often this came at the expense of family and sleep. Take, for example, Myra, who said her "coding pattern" was so different from everyone else in her fall 2017 class:

> Because I didn't get enough study time like everybody else. When I leave, this [brain] shuts off. Now I got to go home and get my family together. My studying habits is different from everybody else. I would do homework at 7 o'clock in the morning while everybody still asleep. Five o'clock in the morning. Doing FreeCodeCamp while everybody else is still asleep because when she [her daughter] gets up, my brain shuts off on that mode. I have to try something else. And I would ask my classmates for a lot of notes. So I would read a lot of notes; and I would read them on my phone while I'm in bed. Yeah, studying pattern is crazy than everybody else.

Myra described coding as an embodied and cognitive literacy practice. For her, coding was an off and on switch as she balanced expectations of Clearwater Academy with the expectations of family. Shutting the brain off when she left the computer code bootcamp and then turning her brain back on when it was time to code for a couple hours, a light bulb that goes off immediately. The metaphor suggests that coding happened suddenly and in short bursts for Myra. To supplement what she missed in those very early hours of the day, Myra switched to class notes—a burst of electricity while her brain was stuck on learning how to labor with computer programming at Clearwater Academy.

Alice was also a mother. She was grateful for a quiet, stable household, which was essential for focusing on coding in Clearwater and at home. Her daughters did their homework and seemed to follow the rules at school; her partner looked out for them when she was either at class for Journey or busy with FreeCodeCamp. Even then, Alice understood the sacrifices she was making, especially time spent with her children. She wouldn't get home until 6 p.m., and when she did, Alice had to cook dinner, eat dinner, and help her daughters with finishing their homework before taking their baths. "And then

it's time for bed," said Alice. "It goes really fast, and I don't see them a ton. And then it … usually once they go to bed, I have time to be myself and work." Alice would then start coding. Sometimes she worked until midnight. Other nights she would go to bed at 10:30 p.m. "I usually can't stay up too, too long because I have to do it all over again and be up by 6:30. Then I just … I don't like being tired and groggy and feeling like, you know, the next day and I try to get enough sleep because then I feel like I don't have a whole lot of time outside of class to work on projects and in FreeCodeCamp. It's really just trying to find a balance. It's tricky." When to work on coding and for how long before letting the body sleep? Alice wanted to balance family with the need to work through computer programming exercises. She couldn't spend too much time on either, however. Containing time with her children within a few hours can be tiring, so she needed the energy to sit up and read about JavaScript or tackle the computer programming itself. But if she stayed up too late, she wouldn't be prepared for neither family nor Clearwater Academy. Hence, laboring at Clearwater Academy while doing carework for her children was *tricky* across all dimensions of her life.

Pausing coding for family wasn't the responsibility of only mothers. Black men like Isaiah had to strategically note when to learn coding and when to look out for family. A month before the program began in February 2017, Isaiah learned he would be father to a baby boy in September. Quality time was all his girlfriend required of him, but that was often negotiated—when to see a movie together and when to stay home and work. However, Isaiah's nephews had no concept of boundaries when they visited his mother each weekend. He was an uncle to four children: an eleven-year-old, a ten-year-old, an eight-year-old, and a two-year-old. The two-year-old "sticks to me like glue" but "likes to throw things. And most definitely not going to let that happen to my laptop." Sometimes he could coax the nephews into doing something else or get a little help from his mother to look after them. Isaiah would then have space to figure out coding and work on projects for Clearwater Academy. But most often he had to wait: "So when it comes to that I'm kinda like coding at night, or working on my stuff when they're not there," explained Isaiah. "When they first got here last weekend, on Sunday they left. So I spent the majority of the time working on my personal website." Isaiah sometimes worried that he just couldn't get coding or understand how to make it work for him, so finding space between himself and family was important to his success in Clearwater Academy.

The introduction of a computer code bootcamp into lives already oppressed or stressed not only restructures mental health and family life, but also simply taking care of yourself and your personal space. Recall that Rania was so stuck on "project, project, project" and "study, study, study" that she couldn't pause to go into her quiet place and listen to God. While her spiritual

life was in flux from coding, her body and personal space was also in flux. In August 2017, Rania had just moved into a new apartment, but she had no time to set up the new place because she had to attend classes. "My air mattress busted so I'm sleeping on the floor. You definitely don't get a full night's sleep," she explained, giving me a mental image of her living conditions. Well into the program at the time of our interview, Rania "still haven't unpacked. It's still like things I need to get done." The intensity of Clearwater Academy required her to decide mentally and emotionally what in her personal life needed attention and what could be put off. She explained that overcoming the challenge of coding requires "just doing it" but with procrastination. Rania had previous experience working with Wordpress.com, for example, but not Wordpress.org, a service that traded premiums for more coding features. But when she hadn't taken the time to learn it, she felt an "uneasiness" and a need to "go ahead and do it. … Something else is going to have to be put on hold. And so that's what I'm working right now; what's going to be put on hold." That's just the way it is when she must learn computer programming on her own: "Because when you teaching yourself you got to say, 'Okay. This got to be on the backburner. I'm gonna have to dedicate all of this time for this.'" It's the only way to stay in Clearwater Academy and achieve social mobility through computer programming.

Clearwater Academy restructures everyone's life in different ways. The examples above tell a story of adaptation that keeps up with coding, family life, and work, but Rosie (see Figure 2.2) remains an outlier. Her life is the penultimate way of adapting to a computer code bootcamp curriculum. When I asked her about her networks of support, Rosie took that to mean "before I started the class the things I needed to put in place that would take care of the obligations that I had prior to the class. So I guess that's my support I guess." Rosie had just taken early retirement after being diagnosed with lupus; her main responsibilities now was caretaker and health advocate for her mother and her older brother who had stage four esophageal cancer. With Clearwater Academy now in her life, Rosie needed help getting them to their doctor's appointments. She used to drive her brother to a cancer clinic for treatment every two weeks, but with his blood work looking better, the doctors moved him from IV treatment to receiving chemotherapy through a bulb in his stomach; that lessened the appointments for Rosie, which was "a real blessing, a load off of my mind, too." For her mother, Rosie convinced one of her sisters to move into the same building as their mother back in December. Then her sister could check on their mother, even though Rosie herself lived a five minutes' drive away. They split responsibilities between one another: her sister helped with "in-house daily cleaning, cooking, whatever" while Rosie "help[ed] with doctor's appointments, grocery shopping, transportation-type things."

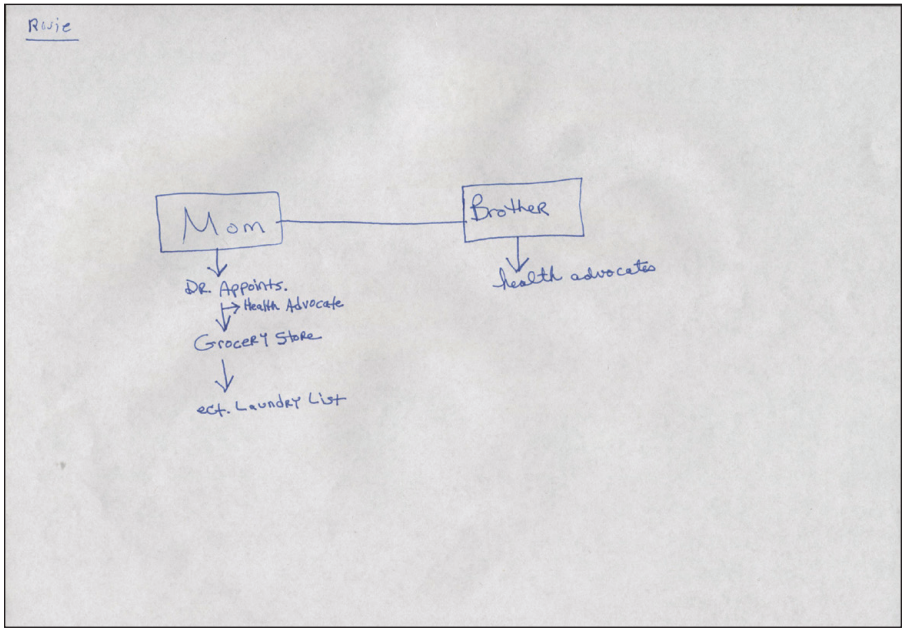

Figure 2.2. Image of Rosie's network map

Rosie recalled missing only one class at Clearwater Academy because the doctor had to reschedule an appointment for Monday. An appointment is never just an appointment for Rosie's mother; it usually turns into an outing to other places like visiting the zoo or the arts and cultural center in town. "And so that's how I supported myself, I guess, in that way," explained Rosie, "so I can be here without … for a few months." Everything else remained in place; the only change is that Rosie had to be mindful of her finances. Budgeting was key, especially with driving to and from Clearwater each day. So, while other Black adult learners had to navigate the tricky and risky work of adapting to Clearwater Academy, Rosie set up guardrails to stay in the computer code bootcamp so she wouldn't worry about her mother and brother. She herself may not have the same measure of responsibilities or racial inequality as other adult learners, but she did have to manage the inequality of her family members. Because of common health disparities for Black people, Rosie needed to be a consistent health advocate for her family. If she became a fulltime health advocate, Rosie could no longer keep up with becoming a Black coder.

In this section of the chapter, I step back to consider multiple hardships or difficulties Black adult learners bring with them to Clearwater Academy. Black adult learners contend with unlivable wages, mental health issues, racial microaggressions, and family obligations. Clearwater Academy has institutional influence on the lives of Black coders; its 36 – 40 hours a week demand

that they learn how to translate solutions in English into viable bits of code in their spare time, which forces adaption, a re-restructuring of their lives. But most significant in these pages is that Black coders do this adaptation *on their own*. Given that they must practice code while dealing with the consequences of racial inequality, not all can succeed independently. Although they figure out how to fit all the puzzle pieces of life together, they may falter. They may leave themselves more vulnerable to new social challenges even as they try to learn coding to deal with those challenges. This broad context informs participants' definitions of and unconscious hustle for community-based care.

Philosophies for Care in a Computer Code Bootcamp

In this section, I explain participants' beliefs about how to create a community of care within Clearwater Academy, and how to repair and maintain the web of relationships created in the computer code bootcamp. Instructors Richard and Jessica called Clearwater Academy a worksite yet my discussions with Black adult learners over their network maps suggested they had found the anti-thesis of learning coding for capitalism: valuing human beings for being human, especially marginalized humans, and not always as potential coding literate subjects for the tech economy. These beliefs about what makes a community of care in a computer code bootcamp developed as participants experienced the training, not before or after. As I analyzed the interviews and my observation notes, I couldn't help but think these definitions were slowly emerging for Black adult learners in Clearwater Academy. I first reflect on *what care is not*, especially from Clearwater Academy. Then I outline four significant beliefs about communities of care, how to build them, and how to maintain them.

Ubuntu: Not an Obligation, Not Family. It's Grandma.

I want to pause my reporting and analysis here to give my meta-reflection on how I came to define care in the context of a computer code bootcamp. This subsection is a foundation to help readers, and honestly myself as the writer, make distinctions among carework and obligations moving forward. Clearwater Academy is one of many programs that furthers SJC's goals to combat racism and poverty. As a nonprofit, SJC can provide social resources to adult learners attending Clearwater Academy. Richard and Jessica knew who they are teaching, so these resources must be a daily option to support low-income women and people of color. I've mentioned one of those services while describing Halima's story: housing assistance. Alex, a adult learner from the spring 2017 class, was homeless for a month but went to Jessica for help.

They supplied one month's rent and the security deposit. The rest of the lease was up to Alex to pay. Other services included gas cards, bus passes, and recommendation letters to receive Section 8. Alice wrote a scholarship essay to receive $1,000 from SJC to help pay her electric bill and other necessities. As I analyzed interviews and observation notes, focusing on definitions of care in a computer code bootcamp, I had trouble separating care from social services, or, to put it more bluntly, separating care from "that's just their job." As a researcher, you get deep into the weeds of language, emotion, belief, and motivation. Listening to marginalized voices that I shared affinity with, I found it difficult at times to say for sure that an action was care. "Surely," I thought, "*everything* can't be care."

My interview with DeAndre (see Figure 2.3), however, provided a clearer perspective on how to make sense of what was happening in Clearwater Academy. Incidentally, he referenced life outside of the computer code bootcamp to help me think through carework and obligation. Studying his map, I asked DeAndre if there were any other kinds of support he needed to succeed in Clearwater Academy, such as working as a pizza maker to pay bills. DeAndre replied, "That's not support, that's an obligation … That right there, that job supporting my house, supporting my bills. If I don't have that I feel obligation to go to that job when I fail. That's an obligation. Me getting money is an obligation, too." Work. Make money. Have a good future for future children. They were "all an obligation to myself. I only have one, which is me. I'm the only obligation that I have right now." But when I read that he had written "Grandma" on the page, I asked if she was an obligation. That's when DeAndre began making distinctions: "It's not an obligation, it's grandma." I kept thinking of the difference between obligation and responsibility to family as one and the same. Oh, so that's family, I thought. DeAndre clarified further: No, that's *not family*. "That's my grandma," he said. Family "can't ask me what she ask me," like calling DeAndre to take the trash out at 7 o'clock at night because her hip hurts.

DeAndre considered "obligation" and grandma two different things. Obligation, using the typical definition of the word, means fulfilling expectations because there's a social contract to fulfill. He must work and make money to contractually pay bills; he must save money and further his career using Clearwater Academy to complete a social contract to his future children. I thought obligation also meant fulfilling loyalties to family, but DeAndre made his grandma standalone, a person separate from family. Grandma is the person, she herself matters to him not out of some social contract but because of *who she is* and, I would add, *what she's going through*—like in the case of taking out the garbage, her hurt hip. This kind of relationship, I would argue, comes by way of lived experience, not relationships already made for

you when you're born into the world, such as having a sibling, aunts, uncles, etc., the family you cannot choose. For example, DeAndre counted Grandma as grandma and family as family, because other family members treated him poorly when he still lived in Chicago: "when I was down, I rarely got help. It was either getting kicked even more or I was getting put down. There was no in-between. No help. No support. You weren't doing good, get ready for insults. Just know they going to talk about your ass. In your face." As we will later read, DeAndre's grandma treated him differently.

I adapted his perspective on what's obligation, what's carework, why carework happens in Clearwater Academy, and how communities of care should be central to computer code bootcamps in ways that identify and interrogates social oppressions. More important, DeAndre also reminded me of ubuntu, which is often translated into English as "I am because we are." This African philosophy emphasizes a universal connection among all human beings and with their spiritual and natural environment. The philosophy also recognizes that "a person makes sense of who they are in relation to others" (Browdy & Milu, 2022, p. 236). Both your humanity and who you are affirmed, and because of who you are, and your relationship with others, care and respect must be the response. When DeAndre does carework for his grandmother, then, it is because of her humanity, because she simply is grandma. Interestingly, in computer science Ubuntu is a Linux open-source desktop software. Developers created the program after being inspired by the African philosophy's emphasis on sharing to guide the open-source movement: share with no required payment or restrictions on how to modify and design the code (Lockett, 2012). Yet ubuntu itself is missing from cultures of code. The overlap between Black feminist caring (doing carework from knowledge of and experience with oppression) and ubuntu reinvents how these cultures protect and honor race, gender, and sexuality in relationships and technology design (Mhonde & Hingle, 2021). Grounded in DeAndre's own perspective on relationality, coupled with Black feminist caring and ubuntu, I forge ahead with how participants defined communities of care in Clearwater Academy and then offer examples of specific actions that support their learning computer programming.

During our interviews about their network maps, participants often expressed expectations of what counts as care or what would be valuable to maintaining their web of relationships in Clearwater Academy. These interviews occurred later in the semester, so everyone spoke from having experienced Richard and Jessica's teaching, learning coding through mini projects on Wordpress and activities on FreeCodeCamp, interacting with volunteer tutors, attending Meetups, touring local tech companies, collaborating on numerous projects, and forming bonds (or not) during breaks, lunch, and outside Clearwater Academy.

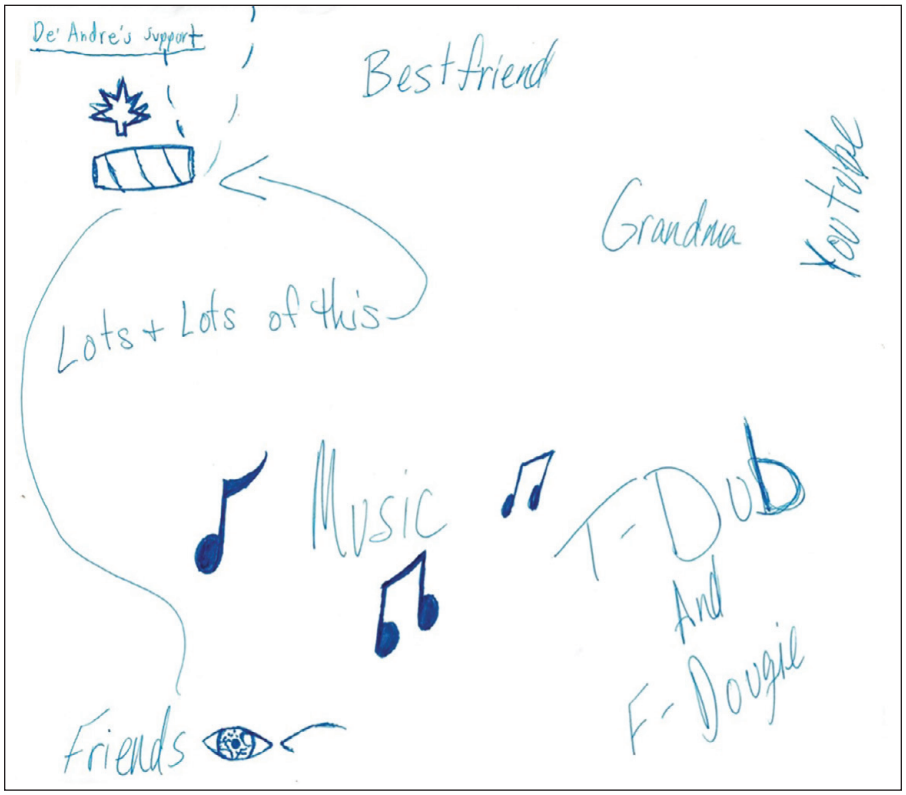

Figure 2.3. DeAndre's network map

What Maintains the Web of Relationships in Clearwater Academy

The first belief is that working on code in communal networks of care leads to success for all adult learners. Over several weeks in Clearwater Academy, some participants noticed that other actions supported their laboring for the computer code bootcamp. I could tell there was a change in participants' expectations from when they first started Clearwater Academy as they began to make sense of the curriculum and the computer code bootcamp's philosophy. A couple participants thought Clearwater Academy wasn't supposed to be more than learning coding and job training. While reflecting over her network map, Myra thought Clearwater Academy was just "something you did and got over with." Pierre also assumed as much, focusing on learning a new skill for social mobility, something to take him further in life, but he admitted in his network map interview that "you start to really care" for your classmates and "I didn't intend on that." Clearwater's instructors created a curriculum that allowed multiple access points to carework.

Zeus noticed connections among instructors, coding literacy instruction, and emphasis on proper, ethical behavior. Referring to his map, Zeus pointed at the Timber Wolf in the center of the image (see Figure 2.1). Originally it represented himself but later in the interview he revised that interpretation. "Let's say this figure here doesn't represent me but the content," explained Zeus. "And the content includes proper behavior because they teach us that … They taught us ethics and principles. That's part of the class." He ideated further the consequences of not modeling and teaching ethical thinking: "if the student isn't following the content, then the class fails altogether because everyone has an influence on each other." Clearwater intended to align the practice of coding with values and beliefs that positioned their adult learners on firm moral ground, and that would make them better coders. Kevin learned this idea from Richard when discussing the limits of whiteboard interviews—interviews in which a job applicant for a software developer position solves a coding problem on the fly using dry erase markers and a whiteboard. Describing the lesson, Kevin said that in certain situations the applicant "is a genius but he's kind of a dick. And this guy isn't a genius, but he gets along with everybody. This guy is going to get hired. And it's kind of a flip but as far as whiteboards go it doesn't really show." Zeus hinted at the importance of interpersonal relationships when he noted that "everyone has an influence on each other."

The difference between Kevin's lesson about whiteboard interviews and Zeus' own observation about Clearwater Academy's curriculum was that the first maintained a professional community while the other focused on proper behavior to recognize and support adult learners' humanity. I unpack further the difficult line between ethical behavior to maintain communal networks in cultures of code with ethical behavior to uphold the whiteness within cultures of code in Chapter 3. Here I want to establish that, as Zeus and others observe, Clearwater Academy instituted carework as a bedrock for the class itself, and it had downstream effects on the entire web of relationships throughout both cohorts.

While the first philosophy of care from Clearwater Academy is working on code in communal networks of care, the second belief is expecting everyone to take responsibility for their own behavior and striving towards greatness. Pierre felt valued in Clearwater Academy, and he extended that empathy to other classmates, or at least he had hoped he was doing carework well. "I don't even know if I'm valued to them," he thought, "but I like try and communicate with most members of the class. At least participate during all of our activities. I don't talk down to people and such but that kind of thing …" He himself experienced the opposite of this philosophical belief while collaborating with two other classmates on a major project. They designed a website

that listed kid-friendly events for parents looking for something to do with their children at the last minute. Richard assigned the project manager role to Sean, a white man who used a powerchair. Meanwhile Pierre and another classmate worked as the software developers and interactive designers. The power dynamics disrupted multiple opportunities to share care in a challenging training environment.

Pierre thought Slack was a useful digital space for finding resources and advice on coding and job training. However, he avoided Slack about halfway through the program because Sean—the project manager—would constantly nag Pierre in private messages, or he would post messages on the class Slack channel that blamed Pierre for supposedly not doing his part. "I really like Slack," Pierre said, "but this project has made me avoid it like the Black Plague. I open up my computer and I have—he's always trying to teach me something, but he doesn't know how to do it himself." Case in point: Sean volunteered to research on how to import information about children's events into an RSS (Really Simple Syndication) feed on the calendar website. Meanwhile, Pierre researched how to design and code the actual calendar. A month passed, and between individual projects and employability training, Sean had done nothing. Pierre himself had to figure out how to pull all RSS feeds about children's events from different websites. But he soon ran into another snag: they could pull in dates for events, but they had no way to organize the dates on the website. Sean offered to help: "He wanted me to get this plug-in that would organize that for me, but it would put it in a list form. … So he sent me this code to put in and it crashed the whole thing. And he was like, 'Do you know where you saved your stuff?' And I'm like, 'Yes I know where I saved my stuff.' 'Why are you raising your voice?' There's so many little nuances with that." The frustration came from doing twice the work, as Pierre suspected he would be on his own for the group project. So that he would not fail and "fuck myself," Pierre created a separate calendar website. "I have to do it. I have to learn it for myself, because I have to do it again," he said. "I have to do--like I have to turn in two of my own… but I thought he'd be able to help me at least figure out the RSS feeds for the calendar because he said he'd research it a month ago. He can't. It's like the one fucking thing. The one thing but you're out here making me look crazy."

Reflecting on this class project, Pierre wanted basic human decency from Sean that could lead to care. For example, the other classmate they worked with was mostly absent and unresponsive to Slack messages. Pierre understood. She had eleven kids. But Sean "wants to be pressing her and I'm like, 'Leave her alone. This is something we can handle. We can show her how to do this and if she doesn't want to learn, that's not on you. She has a life. Don't push someone to the edge." Pierre desired more empathy

from Sean and more gratitude for himself. After all, Pierre wasn't just a classmate; he was also a caretaker when Sean's nursing assistant was absent, fixing "this man's suspenders, I grab his chair, I do so much for him now that I've been in this group project—I should be getting paid for it." Pierre outlined simple actions that could make learning computer programming significantly better: "All I care about is that you say 'Please' and 'Thank you,' and treat others the way you want to be treated." He noted that he wasn't trying to disparage Sean for his disability; Pierre delicately asked for a reciprocal relationship, not an "investment of losses and gains"; care "is not a resource that owners 'deposit' or 'withdraw' at will (Douglas et al., 2017, p. 2). The request flips the script on the value of independence and re-centers Pierre as a caregiver. And he leans into and wishes Sean could be invited into the interdependence of carework so characteristic of Black communities (Bailey & Mobley, 2019).

Taking personal responsibility for one's own actions further promotes coding literacy as a community-based practiced. Belief in the goodness of other people and yourself drives that value. To extend this part of the philosophy of care, Alex explained in specific language why faith in humanity becomes essential for being in Clearwater Academy and life in general. During his network map interview, Alex (see Figure 2.4) pointed to Faith as foundational for getting through the computer code bootcamp. "There's this very odd kind of a dichotomy between how bad people are and the potential that they have and can possibly rise to," explained Alex. "My faith comes from the fact that I know that people suck but nothing can stay the same forever." Building on this point, Alex thought the solution to sucking less was self-awareness of how you can suck, something reminiscent of Pierre's request for care from Sean. A "shitty human," in the words of Alex, "invalidate[s] or … demand[s] an explanation of understanding your feelings which you can't possibly put forward. That is me being a shitty human. And that is me succumbing to the human condition. My selfishness, my arrogance …" The self-awareness of how much a person sucks helps them control how much they suck. Some of that awareness can come by way of the communal network calling your behavior into conversation. To not render care when it's needed for everyone in the computer code bootcamp, makes someone an awful person. One can't make people code and code cannot show care. An instructor, using Alex's logic, can become an awful person, and their adult learners fail the program. They can code well but their well-being in an oppressive state must be given. We will find out how Richard and Jessica sometimes help Black adult learners rethink their self-image based on regularly one-on-one performance reviews later in this chapter, so they "suck less."

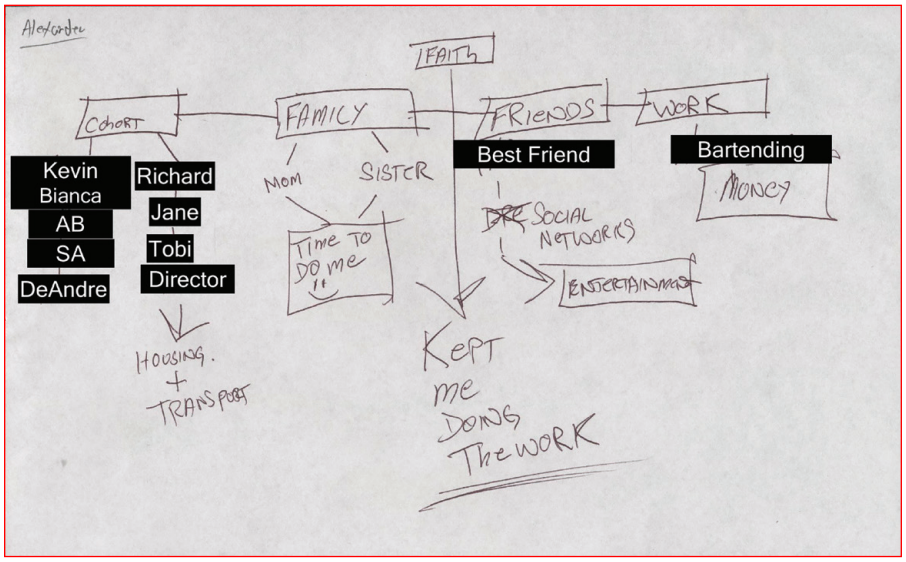

Figure 2.4. Image of Alex's network map

Refusing to cause trouble is a third element in participants' philosophy of care that helped maintain their web of relationships in Clearwater Academy. Here Black adult learners have the option to call out classmates or even the instructors to make their work in the computer code bootcamp easier. However, participants recognize this may cause so much friction in their relationships that ultimately complaining to higher authorities isn't worth the trouble. On her network map Rania (see Figure 2.5) wrote "My sister, friend" and the name of the person. The kind of help Rania received from this friend seemed simple at first: when Rania went to church each Sunday, she would just say hello to her friend and give her a hug. Almost immediately, Rania clarified that this "friend" was the CEO of SJC, Richard and Jessica's boss. And what's more Rania knew the CEO's mother. Rania didn't want to tell me at first that she knew the CEO's mother through another member of the Delta Sigma Theta Sorority. This member introduced the two of them when Rania was still going through domestic violence and raising her children as a single parent. "She's been my sister my rock ever since we like this. So she's my big sister. It's like if I need anything I can call her. We do holidays together. Whatever."

Because Rania had deep personal ties with the CEO and the CEO's mother, and saw them so often on Sundays, she could, if she really wanted to, say something about the program to them. Complain that there wasn't enough direct instruction in coding, for example, or hoping for better relationships with the instructor. But Rania didn't find use those connections to her benefit. "But I don't want to put no negative—it is what it is. You see good and you

see bad, and you just deal with it." What she really wanted to do was "just get through the program. I feel like it's a lot of connections that I probably will keep in contact with people because you got that vibe but yeah … I like the network. I like the connection." Rania had the option to make Clearwater Academy better for herself, leverage relationships into more social services, for example, but that would cause a shake up in the web of relationships she formed with her classmates. She guarded her social connections, so she didn't appear arrogant or out for herself. Certainly, Rania could also use her close ties with Clearwater Academy's administration to improve the lives of other adult learners, but she feared losing something vital in the end that would make doing coding post-graduation easier.

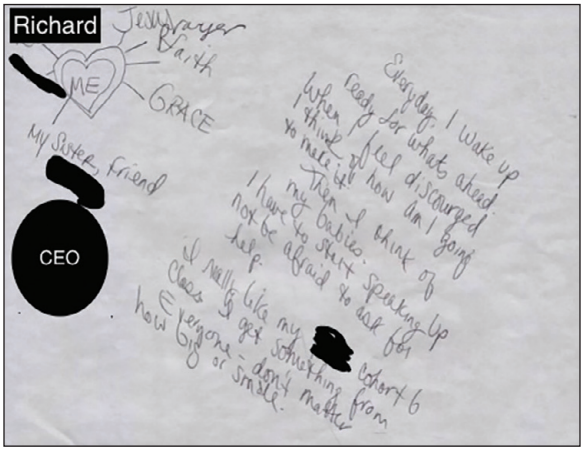

Figure 2.5. Image of Rania's network map

Participants had reason to separate themselves from some classmates so they wouldn't disrupt their coding literacy practice. Kevin had much sympathy for Alex as they were working on a group project for an e-commerce website that sold medium and small recreational drones. Alex was struggling with housing and holding a stable job and was thus not as tuned into the group website. Their team needed a wireframe of the homepage, but Kevin and another team member wondered if Alex could pull through with delivering the design on time. If Alex couldn't balance his life struggles with coding, Kevin and his peer thought about drawing the wireframe themselves and then coding the homepage separately, just in case. Each team member assessed the other's performance at the end of the class in Clearwater Academy; Kevin saw no reason to "throw him [Alex] under the bus. Like be like, 'Well you didn't do his part that's why we don't have anything.' We're a team. And if he can't do it, that's fine." This flavor of refusal to cause trouble is different from Pierre's decision to create a separate website from the original one he designed

with Sean. That was about protecting himself from failing the program. Instead, Kevin and his peer sought to take on extra labor to ease the burden on Alex, and give him space to address life responsibilities that disrupted his own workflow in Clearwater Academy. Kevin acknowledged that Alex needed care, even if Alex most likely wanted to contribute despite his hardships.

Refusing to cause trouble included separating oneself from family members who may cause emotional harm. Alex found that his mother and sister only cared about his work in Clearwater Academy when money was involved. Alex translated "How much money does computer programming make?" to mean "How much money can you share with us?" In discussing his network map, Alex admitted that being away from family and even not talking to them really helped him focus on Clearwater Academy. He described their dynamic as negative and positive charges. "I have a different charge from my family," Alex explained. "And it's not like I don't love them—we got a different charge going on. And so that charge is reactive. And I wouldn't want that to come in the way of the love that I have for my people and the love that they have for me." Like Rania, it was not Alex's intent to break up or make space and distance from the relationships he cared for, but if he closed the distance, the web of relationships would begin to shake, twist, and possibly fall apart. *Lacking* social connection by choice, ironically, ensured his engagement with coding over *severing* a social connection altogether.

Finally, I glean from participants that too much carework can be detrimental to themselves. This philosophical belief overlaps with the ethics of care principle that operating in your relationships requires you tend to your own self-worth. Sacrificing yourself too much to uplift others against their own oppression is *oppression against the self*. Myra's familial responsibilities before Clearwater Academy followed her into the computer code bootcamp. The program became a mental space where she could learn many life lessons, including how to protect herself against the needs of her siblings. Myra's mother was a single parent and often absent, so she was left to take care of her brothers and sisters. Her taking on motherhood at a young age made Myra "grow up faster than I was supposed to. … I was too busy making room for everybody else." That life continued well into adulthood. For example, her brother was an entertainer; Myra always went to his concerts. Another sister earned two college degrees; Myra attended both graduations. Her other sister wanted to work in construction; Myra had a spare bed for her while she finished vocational classes. Even though another brother bounced around the East and West coasts, Myra offered to help financially. And when another brother had two strokes and two heart attacks, "I was there." Myra supporting her siblings would derail her chances to start Clearwater Academy early. She had been talking to Jessica about learning computer programming for two

years before finally attending in 2017. Each time Myra planned to start the program, she pulled back and put off Clearwater Academy for another semester and another semester. "I refused to stop putting myself first," Myra said. "Just doing what everybody else was doing." Myra could have started a career in tech a long time ago, or at least leverage those skills into a more lucrative job and with better hours. But she paused potential upward social mobility for more carework than what was perhaps necessary.

While Myra took two years, and perhaps her entire life, to finally prioritize her self-worth, DeAndre wasted no time in putting himself at the center of his web of relationships. Early in the spring semester program, Alex, you may remember, lost his apartment after a landlord demanded that he pay six months' worth of rent. DeAndre offered his couch to help Alex. At the time we spoke, Alex had been living with DeAndre for a week, but already he was having problem with him. A good friend, DeAndre thought, but not a good person to live with, because he was "a little bit too lazy—he leaves shit everywhere." DeAndre worried that Alex's behavior—leaving a soda bottle unopened, leaving split sugar all over the kitchen counter attracting ants—would influence his roommate, who had just started to learn—in subtle ways, DeAndre said—to clean up after himself. DeAndre didn't want to see his roommate backslide on cleaning because of Alex. One morning DeAndre tried to wake up Alex four times so he could show up at Clearwater Academy on time. He never woke up and was thus late to class that morning. DeAndre felt bad at first. But then he thought about his grandmother who had sleep apnea. She said that Alex was an adult who should be up and ready go to class on the second try. That assuaged DeAndre's worries. DeAndre wanted to help Alex until he got a new place, but he also worried that he was caring too much. "It's not going to get me anywhere," DeAndre thought. "It's not going to get him anywhere." DeAndre suspected that Alex had too many enablers (family and friends), and he was one of them. DeAndre figured that if he helped too much, Alex "won't ever learn to support himself if he still has all these things that he can just fall back on whenever he fuck up." He talked about the issue with his grandmother, and she suggested DeAndre kick Alex out. But by then, Alex had found a place and rent assistance through Clearwater Academy. From these lived experiences providing carework, participants understand the limits of their communal networks on themselves and the consequences that may occur on their relationships as they attempt to learn coding literacy together.

The sociocultural dynamics of a community have a significant impact on coding literacy practices. Black adult learners value their web of relationships as much as coding literacy, and at times attach those relationships to working on code or employability skills. Carework eases the burden of learning computer programming under the burdens of oppression. Macro-level forces

that derail their attempts at learning coding literacy requires knowledgeable, empathetic responses from instructors, peers, and others around them. A communal network of care, a strong web of relationships throughout the program can go a long way. Suddenly, in the words of Pierre, their difficulties don't matter compared to the opportunities of what coding literacy can do in their lives. Labor in Clearwater Academy should be a communal experience in learning how to establish relationships, not for work. That could pave the way for learning computer programming collectively. Care is needed for collective success. Their philosophies of care shape the actions they take in and outside of Clearwater Academy. In the final section of this chapter, I outline three such actions that seemed to be consistently valuable across network map interviews and in my own participant observations. These actions serve as examples of what happens when carework becomes a part of cultures of code in a computer code bootcamp.

Ways of Delivering Care for Coding Literacy

In the previous section, I explained how some participants shared expectations of how a community of care should work in a computer code bootcamp. In this final section before the conclusion, I describe three specific practices of care that Black participants delivered to each other, from instructors to adult learners, and from family and friends to adult learners. Based on my analysis of network map interviews and some field notes, I discover three moves that added to the culture of code in Clearwater Academy: (1) Listening for Oppression and (2) Offering a Word of Wisdom and Accountability, which inspired some adults to revise their self-image, a result I call (3) Holistic Transformation of Self. Actions like these show that someone cares about their existence in a racist world, that someone recognizes Black adult learners as more than workers-in-training that benefit the economy and tech companies.

Listening for Oppression

Building trust with one another begins with learning how oppression works in others' lives, which motivates delivering carework in Clearwater Academy. Learning requires *listening for oppression*. I had not understood the value of listening until I spoke with Pierre about his network map. My conversation revealed how listening is a double-edged sword. Delivering care can look disingenuous or look like a suspicious ploy to get something that benefits the caregiver over the Black coder. Even though I shared some affinity with other Black people in coding, my positionality was still rooted in my educational and class privilege—a graduate student who came from a middle-class

family—my parents lived in poverty, but they worked to ensure my two older siblings and I did not—attending a prestigious internationally known university. When I spoke with Richard and Jessica, and some other adult learners, they occasionally read me as a student. Richard and Jessica asked me if I got everything I needed for my research; adult learners were excited that I would graduate with my doctoral degree thanks to their generosity.

However, Pierre scrutinized my presence beyond just being a graduate student. He wondered if I truly listened and cared for their challenges and triumphs as people, and not as study subjects. When we first met in fall 2017, Pierre thought, "Oh you just want a PhD, man." But during our meeting later in the semester, I was surprised that he included me as one of his sources of support on his network map. Pierre drew a small fried chicken leg next to "instructors," recalling the time I gave him money to buy lunch from a fried chicken restaurant down the street. What I thought to be gestures too small to make a huge difference, like giving him lunch money, Pierre took as a sign of genuine generosity. For all his life, no one "asked what's your experience in something that you're doing as an African American person," Pierre told me. He had gotten a lot of grief from racism and racial microaggressions. He wanted to vent with me in ways that he could not with family. He also dealt with depression, and so Pierre felt "like shit more often than not" while learning computer programming. It helped that I was at Clearwater Academy, "listening to us during what we're struggling through, caring about our experiences in the program … seeing someone that I've never met in my life that cares about me and people like myself that means a lot to me."

Zeus was the only other participant who felt my presence made a difference in Clearwater Academy. Our formal interviews, and informal, friendly conversations helped build a strong repertoire. On one hand, our interviews sometimes became a haven for Zeus to share his thoughts and parts of his life openly without judgement. During our literacy history interview, for example, he wanted to make sure I wasn't going to report to Jessica anything he said. On the other hand, our drawing network maps together later in the semester seemed to break down barriers between us. We happened to be chatting on my birthday, and I hadn't told Richard or Jessica. Zeus volunteered to draw me a gift, something that "I would like." He later pointed at his network map and said that the exercise took "a lot of brain and emotional power … just reflecting on this and all this … It's kinda like … yeah." Zeus found the conversations about his network map beneficial because it was "like therapy for me." I'm not a therapist, but for Zeus a therapy session was happening, in which one person listened with the intent to understand another person in the context of cross-cultural communication (Ratcliffe, 2005). To listen for oppression is to listen with care. Pierre

and Zeus acknowledged that I belonged within their web of relationships at Clearwater Academy.

As mentioned in the Introduction, I offered my skills as a writing instructor to help with résumés, cover letters, elevator pitches, blog posts, and even some efforts to decipher directions on coding exercises. That was an obligation *and* carework, as I knew that researchers visiting marginalized communities can take what they need and do little to give back or amplify participants' voices. But my positionality seemed to address their histories of never receiving carework from school or work. Listening for oppression stoked the motivations of learning coding, to undo histories of never finishing or doing well in life. Here I participated in adult learners' learning with significant consequences on their literate lives and literate activities. Interviews, participant observation, and volunteering my pedagogical expertise became an access point to care in Clearwater Academy.

Clearwater Academy used stand up as an access point to listening for oppression, too. Recall that stand up is an opportunity for software engineers and other members of a project team to literally stand up and report on their progress, what they planned to do for the day, and what challenges they need help overcoming. As noted with Halima's story, stand up was a sly yet effective way to build relationships among adult learners. A change in the prompt—from the professional three-part question on projects to subtle personal questions transformed stand up into a valuable tool for Black adult learners. The intent was not to share trauma but to allow adult learners to be vulnerable without judgement. Pierre thought listening to his classmates during stand up clarified his intentions and resolved his own anxieties about the sacrifices he made to learn computer programming. For once, he wasn't alone. It helped to learn, for example, "what other people have going on in their lives. That makes my life so much, like not freaking out and thinking the world is the worse for me because it's not at all." Like Pierre, his classmates had "other needs" but learning coding and employability skills were "a bigger need for them." Stand up sometimes explored those needs: some shared brief yet deeply personal stories about themselves. Sometimes adult learners would cry during stand up. Pierre noticed that no one offered comfort to those peers at that moment—a hug or a tissue—but "we don't forget, and you treat people differently because of that … Like if anything happened to anyone in the class, it would affect me deeply." Using stand ups for personal narratives motivates Black adult learners to connect and help one another; they lead to direct action later in the program and it also develops the philosophies of care described above. Learning about someone else's common lived experience with oppression informs Black adult learners how to navigate cultures of code, which maybe the antithesis of Black feminist caring.

Stand-up can put oppression front and center, but it can also clarify the talents of Black adult learners. In this way, stand up becomes more than an unintentional way to broadcast pain or trauma to others. In fall 2017, the class nominated Myra to give the commencement speech at Clearwater Academy's graduation ceremony. She was floored to be so honored. Myra's classmate and best friend Leslie was excited to hear her speak at graduation, because "it would've been boring" otherwise. But then Myra, recounting the story, corrected herself: "'Well, they wouldn't be boring,'" she recalled Leslie telling her. "'They wouldn't be you.'" Myra approached the task with some reluctance: she had never really shared significant details about herself during stand up, and sometimes Myra felt she didn't say enough to gain so much attention from her peers. But Leslie encouraged her further, giving Myra an outsider's perspective. Leslie always looked forward to hearing what Myra had to say during stand up, and she was certain the commencement speech would make everyone get a little laugh. The class still needed to vote on the speaker, but even then, Myra focused less on her ability to speak and more about herself. She encouraged Leslie to vote for her because of who she was not because Myra could make people laugh. "Pick me because you love me," said Myra.

Although I have highlighted my positionality and stand up as access points for listening for oppression with care, this practice occurred in other ways, especially private conversations, or hangouts with each other during smoke breaks and after class. Black adult learners, and other adult learners in Clearwater, connected with one another in ways I cannot account for in any observation, field note, or network map. Still, stand up has been like therapy to the self in the work of coding literacy and within Clearwater Academy. Listening for oppression builds trust and empathy among Black adult learners, influencing how exactly to go about the work of coding literacy.

Offering a Word of Wisdom and Accountability

If listening for oppression was a key practice for building the web of relationships in Clearwater Academy, listening mattered just as much for the family and friends that Black adult learners went to for help. They reported often in their network map interviews that these relationships outside of the computer code bootcamp offered wisdom and stirred motivations for accountability. These relationships run the gamut from daughters, partners, and friends to even fur babies. Through these familial, platonic, and animal relationships, Black adult learners found ways to persist in their efforts to learn coding while contending with the pressures of economic and racial inequality. Wisdom and accountability enhanced beliefs in coding literacy and its potential opportunities. Consider DeAndre—a major influence on how I understand

obligation and carework in the context of a computer code bootcamp—who relied on wisdom from his grandmother. She wasn't a coder; had no history with coding at all, but she did have plenty of living on Earth, and that experience informed her advice for how DeAndre could navigate life. If he needed professional advice, he would approach someone else, he told me.

But I noticed that life and coding literacy intertwined. DeAndre could make connections between his training and life through conversations with his grandmother. For example, allowing Alex to crash on DeAndre's couch created some strain between them that carried over into their relationship as peers in Clearwater Academy. There was the miscommunication about getting up on time for class. There was also an incident the night before my interview with DeAndre. At around 8 p.m., he and his roommate left to a visit friend for a smoke session; both of his friends had taken ketamine—a tranquilizer meant for putting horses to sleep. They took a safe dose, but it was enough to knock them out for a few hours. It just so happened that Alex arrived at the house around midnight, but DeAndre was in another part of town and could not return until his roommate recovered from the ketamine. DeAndre didn't get home until 3 a.m.. "I felt bad," DeAndre said. "I apologized but … So much I could do, really wasn't my fault. Ever since then, [he] just been looking at me funny. I understand he offended but at least come and talk to me. Don't do that. That's childish. That's very childish." DeAndre's grandmother suggested he kick Alex out of the house to avoid enabling him and because he wasn't cleaning up after himself. But DeAndre had to balance that advice with his relationship with Alex in the computer code bootcamp for the rest of the spring semester. Thankfully, the choice never came, as Clearwater Academy helped Alex pay for his first month's rent for an apartment.

DeAndre also felt accountable to his best friend, a girl he had met through Instagram some time ago. They started off as potential dates, but DeAndre later decided that her jealousy would be a barrier to anything serious. When DeAndre was struck by the aforementioned anxiety attack during class his best friend came through after he returned home. She checked in on him, asking if he was okay and how she could help. DeAndre said he appreciated even that simple gesture. Although he had intense thoughts of failure and possibly dropping out of the program, DeAndre's best friend gave him a reason to stay. After all, just as she went to college, his friend encouraged DeAndre to try Clearwater Academy. "She was like, 'You should go ahead and go. You like the smartest person I know but you a dumbass,'" DeAndre recalled. "I'm like, 'Eh, fuck you.' She's like, 'Why don't you go? You just wasting your life.' 'Okay, you right. I might as well get up and do this shit.'" DeAndre had to look back on how life wasn't going well: he had spent his days finessing pharmacies and making money off those stolen goods. The problem: money flow wasn't steady. DeAndre admitted

that "she was the reason I got up and got started with what I was doing. She has been there for a long time. She has a big influence. We been through a lot of shit together. She a big support system. And I don't even tell her thank you."

DeAndre had panic attacks over failing the program, but Pierre questioned the worth of his time and energy. He was most interested in what he thought was a guaranteed paid internship after graduating from Clearwater Academy. Pierre often complained about the uncertainty, but just in time his family responded with words of wisdom about trusting the process: "Well you should if you put in the effort," they told him. Pierre said, "Yeah! You know what you're right?" His family told him "what to do to succeed and no one likes to be told what to do, but they really want to see me succeed." The advice seems abstract—just put in the effort—but Pierre knew what that meant for him; it meant discipline and patience with learning computer programming, connecting with peers over the work, and being proud of the work done. He got another boost in confidence about the internship from an Uber driver one day; the driver just happened to be a graduate from Clearwater Academy. The driver told Pierre his story: he didn't get an internship right after finishing the program. It took another six months before the driver got a job in tech. Pierre realized that while he wanted a paying job immediately, the realities of the job market, and his own effort, worked together for reaching that goal. "If that doesn't happen that doesn't mean I'll never get an internship," Pierre concluded. "So talking to him was pretty good." His own vision of the future and his relationship with family also made Pierre feel accountable to staying in Clearwater Academy. People like his mother invested emotionally in his well-being, asking how he was doing in the program and giving advice on how to stay the course. Some days he didn't want to make the effort. Should he even go today? "Yeah, I should go," Pierre explained. "I'd let down my family. And they've been supporting me during this."

Alice herself felt like giving up, if not for her mother's weekly phone calls from Colorado. Her mother was like Alice, going to an intensive, fast-paced program for nursing after being out of school for many years. Alice's mother knew what it was like to take a difficult training program like Clearwater Academy. Later in the spring semester, Alice totaled her car in an accident, which made getting to and from Clearwater Academy difficult. She thought about quitting the program, but her mother offered wisdom on sticking with the computer code bootcamp. "She really reminds me of that even though there are times when I want to give up or even though I'm going through this crappy car situation there's got to be something I can do to make it work," Alice explained during our network map interview. "Because if I give up, she's just 'it's all for nothing. You could've taken a job.'" Alice's mother wove together wisdom and accountability at the same time. She highlighted that if

the prestige of coding literacy was for nothing, perhaps Alice could use her existing literacy practice for a good job. Indeed, she had the opportunity to do so after getting laid off; Alice's bank gave her the option to take a new position, but computer programming's call mattered more. The risk was worth it, but giving up made the risk a waste of time, money, and energy. Alice was also accountable to her family who had made changes to their lives for her training and schooling. The grief over coding literacy felt wasted, so the wisdom from family is to find a way out of no way.

Stick with the computer code bootcamp. Stay devoted to the career you can have. Rania found wisdom and accountability from both a friend and God. First, the CEO's mom—the very same from church and the sorority where they met—often steered Rania away from other responsibilities to focus on Clearwater Academy. Any excuse was unacceptable, Rania said. Whenever Rania found a reason to skip class, the CEO's mother would respond, "'No you're going to [Clearwater Academy]. You're going to class! You're going to finish class.' She be the one saying, 'You're going to class.' 'I need to be working on Friday.' 'No, you're going to be doing this.'" After all, Rania's friend encouraged her to sign up for the computer code bootcamp; thus, Rania was accountable to staying and finishing her coding literacy training. But she also found strength and accountability from her faith in God. Rania broke down the spiritual food God gave her in three ways: faith, grace, and forgiveness. Faith "is what's going to keep pushing me. And without faith I would have nothing …" Grace is that undeserved gift of life that flows through Rania every time she wakes up with "strength in my body." When she got discouraged from learning coding literacy, job training, or her own circumstances, Rania thought about God, and then began to feel accountability: "I think about all the things I have to do keep going because I'm my biggest cheerleader." On this part of the interview, Rania began to think of her responsibilities to the web of relationships created in Clearwater Academy. Once she had given herself strength through God, Rania could then share that strength with others "to uplift them. … Encouraging myself so I can uplift somebody else."

The ad hoc networks Black adult learners form to hustle and grind to succeed in a computer code bootcamp offer other forms of support, from materials to time; but familial and platonic relationships circulate emotional support tempered with wisdom. Participants also find that coding literacy has more value because they must be accountable to those relationships.

Holistic Transformation of Self

The relationships formed in Clearwater Academy and the practices of care delivered from participants and networks outside the coding bootcamp

led to significant transformation for themselves. Some thought they would transform into entry-level coders with more value than when they first entered Clearwater Academy. Instead, some participants found clarity on who they were as people. Technical skills instructor Richard and case manager Jessica played a significant role in this revelation. I've already discussed how standups are points of access to carework (listening for oppression); another common workplace practice in some cultures of code are performance reviews. These occurred about every three weeks in Clearwater Academy when Richard and Jessica had one-on-one conversations about how adult learners worked as "employees"; however, they were also assessing their best and worst qualities and how that may or may not disrupt their employability chances and enhance their work as coding literate subjects. Relating these holistic assessments back to the economy made participants think beyond themselves as potential workers and more about how they lived in an oppressive world. In this final subsection, I focus on Zeus. Of all participants, he felt the consequences of Clearwater Academy most acutely in our network map interviews. I detail the lessons he learned about race and racism, the agency coding literacy rewarded to himself, and how he could use his skills to help others.

Zeus was a twenty-four-year-old self-identified "mulatto" who worked part-time as a bouncer and full-time mixed martial arts (MMA) coach at a local gym. Before then he spent some time selling drugs for a gang, and his MMA skills came in handy for this kind of job. Fighting taught Zeus how to dehumanize opponents, to think of them as something to conquer. Although he was "neutral," to use Zeus' word, he could view buyers as just sources for money, not humans with substance use disorders (SUD). He worked and lived with a friend named K-Cuzo who helped Zeus leave town when he got in trouble with rival gangs. He stayed low for some time until the rival gangs lost track of Zeus. Now back in Sakowin, Zeus still associated with K-Cuzo as a friend. Danger lurked around him, however, so K-Cuzo was a good resource for buying a Glock for just fifty bucks. Looking back on that life from the standpoint of a coder in training, Zeus thought he was living in ignorance, that selling drugs was "just a shortcut" to making money. But Zeus took that shortcut because he thought he couldn't be anyone else.

Zeus entered Clearwater Academy feeling Black people, and people of color in general, had no power in the presence of white people. In his life experience, previous counselors were often white and exerted agency over other people of color, including himself. (In fact, one reason he worked as a bouncer was so Zeus could legally shove drunk, affluent white college students out of the bar, getting back at the racist society he lived in.) He saw Jessica the case manager as the more powerful between her and Richard. She ran the show and Richard was, at best, an "Uncle Tom." But then one day an incident

happened that brought clarity to the racial dynamics of Clearwater Academy's instructors and management. As a bouncer, Zeus often worked late nights, making it hard to wake up a few hours later to attend class in the morning. He fell asleep in the middle of class with his mouth open. Jessica yelled at him and reprimanded him in front of the class. Only one adult learner—Myra—spoke up and defended him. "And I was like, 'Don't yell at him. Y'all don't know what he got going on. What he doing or how he getting here,'" Myra explained. The oppression or inequality Zeus fought everyday was exactly the point upper management made to Jessica later. Zeus wasn't present for the conversation, but he guessed that, after being yelled at, the employment services manager—I'll call Dean—spoke with Jessica. Later Dean checked in with Zeus and asked how he was doing. This was the first time he met a Black man that had power over a white person. "[Dean] stepped in [and explained] who he was and that really gave me faith and I was like, 'Oh us minorities can become something.'" With this revelation in mind, Richard looked less like an Uncle Tom.

> **Antonio:** So if he's not the Uncle Tom, who is he?
>
> **Zeus:** He's Morpheus.
>
> **Antonio:** So [Richard] is Morpheus.
>
> **Zeus:** He gave us, I like to say, what's the word … Yeah, because if you're not on a search engine, then you're a slave. If you don't know how to manipulate all …

Zeus caught a glimpse of a person of color having some power over white supremacy. Richard had power over Jessica, a white person, and that made him a powerful mentor. In *The Matrix*, Morpheus, played by Black actor Lawrence Fishburne, reveals to Neo the truth of his reality. That revelation leads Neo to not only free himself from the constraints of the Matrix; it also helps Neo become the Chosen One, a Messiah-like persona destined to free humanity from the tyranny of the Machines. The metaphor of Richard as Morpheus in *The Matrix's* plot maps well onto Zeus' relationship with Clearwater Academy and coding literacy. Richard had revealed a new possibility for Zeus' reality. He can be a powerful person of color, and digital technology makes that possible. Zeus explained that Richard showed him

> If you can't manipulate the Internet then towards your, sort of financial, something that feeds you, gives you work, then you're working for someone else … [Richard] basically gave us: awareness of the Internet and how we can be masters more so; not slaves.

Digital technology, especially coding literacy, offers a pathway to social mobility, to re-create Zeus' reality. Obtaining social mobility is a way to become a master of your life. You can direct resources in ways unavailable to you before. This suggests that Clearwater Academy and coding literacy affirmed Zeus' humanity and position as a person of color in a racist world. They were resources for his lifelong process of achieving social mobility, but that process requires discipline in a world that Zeus is not used to nor thought was possible. Interaction with other people in his network, helped Zeus re-consider his past life as a drug dealer as a learning opportunity. Zeus considered K-Cuzo a positive presence in his life—he wrote in his map that K-Cuzo"reminds me what I shouldn't do." He compared his life before and after Clearwater as "[ascending] from ignorance to education coming here." Zeus began to see himself anew through Richard and Jessica's insights and through the web of relationships formed among his peers (and admittedly myself). At times he could be a space cadet in the Clearwater Academy, and Zeus wondered, "Imagine growing up, how much a space cadet I could've been."

Although Zeus had lost this opportunity from childhood through early adulthood, he had a chance to make real change for himself and others. Classmates helped him understand these possibilities. Dean was an example of how care should be given to people who already deal with the same oppression Clearwater Academy means to address through coding literacy training for work; but Zeus understood why falling asleep while "on the job" reflected poorly on Clearwater Academy and disrespected the hard work of his peers. A close friend and classmate often helped Zeus get an outsider's perspective of himself. Speaking on the incident and Zeus' other behavior at the start of the program, his classmate said "You look stupid. You sound stupid." Zeus simply replaced "stupid" with "You look like a kid" in his mind. He admitted that he regressed at times in Clearwater Academy. But he wanted to be better and do better as the space cadet he saw himself as.

His best example for how to deliver care through authority was from his MMA mentor and owner of the gym where he coached teens and adults. His mentor used to work for another gym. He believed that a gym wasn't just a business; it was a community center, a place to uplift troubled youth through the discipline of martial arts. But the instructor Zeus' mentor worked for overcharged adult learners and put them under contracts that mostly benefited the owner. Zeus' mentor quit and started his own gym that truly benefitted poor adults and teens. Ultimately, Zeus learned about "integrity" from working closely with his mentor. As a coach to youth, Zeus wanted to keep teaching people "that want to be great." Zeus admitted he had "done so much bad and been such a bad example for people, especially with having so much influence." Like Myra, Zeus did not come to Clearwater Academy for "some

redemption." He had only wanted coding literacy to obtain social mobility quickly. But the cultures of code he did encounter at Clearwater Academy showed him that he had many options in life and living "without a care, down the wrong direction" was no life for him.

Conclusion

In Clearwater Academy Black adult learners unconsciously hustled and grinded for practices of care to continue accessing coding literacy. Participants made financial and social sacrifices to attend the computer code bootcamp, sacrifices that weakened resistance to the consequences of racial and economic inequality: losing their homes, losing their jobs, and even losing their health. Care in this context required awareness of these dangers, of the everyday oppression Black adult learners encountered to and from, and sometimes during, class. Social services could help meet some of those challenges, but Black adult learners' stories suggest they needed more than this material and financial help from Clearwater Academy to keep their learning computer programming active; they needed to feel valued. Without that, Clearwater Academy would be just "just like anywhere else," to use the words of Pierre, where you must be on time for work and complete work regardless of what you have going on in your life that may disrupt that work altogether. Knowledge or even awareness that "we all have experienced trauma in some type of way and in some area, we are stunted," as Zeus put it so eloquently in a blog post for Clearwater Academy, helps build a strong web of relationships that allows carework to flow in meaningful ways. Not for personal gain but for genuine interest in the well-being of others. Simply being human motivates these practices of care.

Discourse about race and oppression in the context of coding literacy help envision a Black tech ecosystem that draws on an important feature of education for Black-identified people: building relational caring and communal networks. This feature takes cultures of code beyond mere diversity, equity, inclusion, and even belonging because it's rooted in common concerns for how one deals with oppression. Histories of racist policies in education, housing, and the economy create inequality, and without that knowledge, cultures of code continue practices that do harm against Black people, and other marginalized communities that dare to accept the so-called open invitation into tech. The events described in Clearwater Academy provide a roadmap for a curriculum centered on lived experiences with oppression and creates a window into how tech industries fully dismantle racism through its cultures and the designs it creates. Coding and employability skills and adapting to whiteness in tech workplaces do not provide significant pivots for Black adult

learners, and a diversity and inclusion effort must dig deeper into the injustice that perpetuate division.