

Transcription Valarie Aurora Interview
Interviewer Jenna Gretsch
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Valarie Aurora is a Linux kernel hacker specializing in filesystem development, and a science and computing writer.

JG: What work do you currently do?

VA: Right now I'm a Linux kernel developer and I work on file systems.

JG: How long have you done this work?

VA: About ten years, this same sort of area.

JG: What about computers in general? Because you're referring just to file systems specifically right?

VA: Yes. Oh boy, twenty-five years. I would say I've done system software for ten years.

JG: What's your earliest experience with computers or technology?

VA: Getting an Atari and hearing the pacman theme song.

JG: What age were you, do you remember?

VA: I was either three or four years old. My mom was a computer person so --

JG: Was she the one who gave you the Atari?

VA: It was the family Atari. I just remember the incredibly magic feeling that we all had when we heard the music.

JG: Was there anything beyond that, like in your primary school years?

VA: We actually always had a personal computer at home. We got an IBM-PC-Junior, and some other stuff like strange clones. My parents alternately worked from home, wrote from home, started a business, that sort of thing. I think it was all just an excuse they just really wanted to have computers. So I played games and I actually had probably what is a fairly unique experience which was having my mother write BASIC programs that drew pictures and have us sit there and say what color would you like this to be -- pink hearts -- so she'd make the changes to the code and then we'd see it happen.

JG: So BASIC was your first language?

VA: Yes and on DOS.

JG: And that was in your primary school years?

VA: Yeah.

JG: And this wasn't formalized education right, you weren't being home schooled specifically in computers, it was casual?

VA: It was casual until I was twelve and then I was home-schooled.

JG: So would you say your mom was the biggest help in turning you towards technology?

VA: Oh yeah, absolutely. She was a scientist engineer and totally encouraged me to be a scientist and engineer too. I also had no brothers, I think that really helped.

JG: You have sisters though?

VA: Yeah I have three sisters.

JG: Do they all do computer work?

VA: No actually one of them started doing computers fairly late in life, in her late twenties early thirties and now she's a QA

test engineer but the other two are bartenders.

JG: What about in highschool, did you have any formal computer education?

VA: My experience with computers in formal education was actually pretty bad until college. Most of my learning was informal self-taught. I spent a lot of time on the computer by myself. In college I enrolled as a Biology major and I took a computer course because I thought why wouldn't I, that's so awesome. It was introductory programming for those who were doing it for their major. I did one more semester as a Biology major but at the end of it I switched to computer science in large part because of the income disparity between someone with a biology degree and someone with a computer science degree.

JG: So it was a conscious decision that in the end you would be better off financially going with computer science?

VA: Yes and I had a hard time seeing a job I wanted to be doing in Biology whereas programming was just like intrinsically fun.

JG: Did you have aspirations of going on to do graduate level work in either computer science or mathematics?

VA: No, it didn't even occur to me until after maybe a couple years of college. I did get pretty serious and applied to a bunch of cs grad schools and got accepted and then decided again that I didn't want to be poor.

JG: Ok let's move on to your current job. What is the most demanding aspect of it?

VA: (laughs and sighs) Working with the other file systems developers.

JG: So it's the social aspect not the technical one?

VA: The thing is that it's technically very difficult but that doesn't bother me so I wouldn't put the word demanding on it.

JG: What specifically is demanding about the social aspect?

VA: With working with other kernel developers? They're really obnoxious.

JG: How are they obnoxious, do you want to give an example?

VA: One of the people, who is one of my coworkers, stood up in the Linux file systems workshop and called someone literally a fuckhead. That's just sort of an example. One of my compatriots murdered his wife. They're just super mean. (laughs)

JG: In where you work, do you have to be with coworkers physically?

VA: No, only at conferences.

JG: So you can work remotely doing the job that you are doing one-hundred percent of the time?

VA: Yes, I've been working from home for probably seven out of the ten years that I've been doing this. But that doesn't really help honestly. My experience with all of these people uniformly is that they're much nicer in person, so going to a conference is a pleasant and wonderful thing, you can get stuff done and talk to people and have technical discussions without them turning into pissing matches.

JG: Day to day what is the main medium that you use for conversation?

VA: Email and IRC, mostly email.

JG: So is the obnoxiousness directed at you or something you have to put up with peripherally?

VA: It's not at all specific to me or anyone else, it's a generic thing, but they are each individually directed in their criticism. I feel like there are really three broad classes of people working on the kernel. One is people who totally don't care what anyone else thinks or at least they act that way and just are complete assholes, and then there's people who are so nice that they put up with it and are just wonderfully sweet awesome people who are a pleasure to work with and they just have to be that nice in order to get along with all of these other people and then there are people who have to do it for a job and I feel really sorry for them, they don't actually care they've just been told go do this.

JG: And you deal with all three groups pretty consistently?

VA: Yeah.

JG: What keeps you in your job?

VA: I'm actually thinking about what I want to do next, I don't know yet but I basically have a project that I want to finish before I leave.

JG: Are you looking to transition out of technology in general or just Linux kernel development?

VA: Definitely Linux kernel. I am just tired. There used to be a time when I found fighting with other people really rewarding, or getting the approval of people who are super mean, that was a big deal to me, but I decided to fix that part of my personality and I succeeded -- there is this really great group of super nice wonderful people and they are unfortunately inseparable from the rest of them. So I'm not sure what I'm going to do next but the environment is going to be a very important part of it.

JG: So obviously you didn't go right from college in to Linux kernel development right?

VA: No, at the time it was still really unusual to be paid to do it. But in college one of my professors did Linux contracting and they were getting paid for that. So they viewed Linux kernel development as a very practical thing and actually with their help I got my first kernel job. But when I came out of college I was just looking for anything that was in Albuquerque which is where I was at the time. The market was just on the edge for exploding for Linux kernel developers. But it was still this feeling that I had to get some experience so I read Linux mailing lists every single day. I did this even when I got the first job because I wasn't particularly qualified for it. I had a great start from school because we did use Linux in our operating systems class but I was still largely self-taught.

JG: Let's talk about family and workload.

VA: (laughs) I'm single. I don't have any kids, I don't have any plans to so I don't have any personal insight to that.

JG: Has this always been the case, that you knew the path you were going to take and therefore could happily be completely absorbed in work? Because I read somewhere on your homepage or your blog where you said something very specifically that you're proud to combat the stereotype of being at the computer twenty-four-seven, so clearly there's some kind of balance even if it's just a personal one.

VA: Yeah, right.(laughs) Well the part that has always been hard for me that -- so I didn't have a balance for a long time, I just worked all the time and that's pretty common and the norm -- and what happened was I got really really really unhappy and just stopped caring. (laughs) And now I just have rules where I stop working at a certain hour of the day and I'm just not allowed to work after that. I got pretty sick honestly and physically I really hurt myself by working too much, now I just can't break the rules because I'll have pain. (laughs)

JG: How long have you done this regimen with these rules?

VA: A year or two probably. Yeah I just realized there was always going to be more to do and that working longer hours was not actually going to change anything.

JG: What projects have you participated in or completed yourself that you are most proud of?

VA: That's really hard to answer right now because I don't really like my job. (laughs)

JG: You said you were just working on finishing one, is that something you're proud of?

VA: No, I'm not proud of that at all, it just needs to be done, I can't leave without finishing it because it's mostly in my head and I'm one of the few people in the world who can do it, so it's a little oppressive. There was stuff I did early on in my career. I was at this small really badly run company and they let me design and implement a Linux network appliance all by myself and that was super fun. I got to learn all of these details of networking, fix a kernel bug and just write every single part from the bottom to the top and do a whole bunch of performance benchmarking, write the instructions for the manufacturing people -- when I left that company the project was at the point where we were finding bugs in my boss's firmware instead of my code and I was like ok I give up, I'm not going to deal I have this other better job, goodbye. But that was really fun.

JG: That was right after college?

VA: I think that was one year after college.

JG: Do you want to talk about money a bit, how it has affected your choices?

VA: Just randomly?

JG: Yes, whatever aspect you think is important.

VA: Money is very important to me because I grew up with parents who weren't reliable about making it and it was just this very clear thing for me. If I wanted to not have things be screwed up in my life I really needed to make money and be the person who made the money. You make pretty good money in this business and I can't really complain at all about that part.

JG: So you've always been well compensated even when you were younger?

VA: Yeah.

JG: So when you were choosing to not continue on in Biology was that one of the reasons?

VA: Yeah absolutely because I didn't have anything I wanted to do really with a biology degree. I didn't want to go to med school and it seemed like the path to becoming a researcher was -- I mean that was a possibility but it wasn't something I was really thinking about. Basically I was doing biology because I was really good at memorizing the names of muscles, and I had a really nice biology teacher, and I enjoyed learning, there's just so much to learn about humans, we're incredibly complicated. I thought all of that was really really interesting but there wasn't a path forward. I figured out that I was going to be making maybe thirty-five thousand a year and cleaning rat cages while I did it and at the time programmers were starting at fifty or sixty thousand a year and I was like, well I like doing this.

JG: Do you know what your peers make, what their salaries are?

VA: I actually got in huge big trouble for telling people my salary publicly and I've always discussed it with my peers and looked it up in salary surveys and things like that. At one point in my career I was probably more in the upper end of compensation than my peers but I've pretty much stopped caring unfortunately. Money is really important but there are lots of things that I just won't do, it doesn't matter how much money they're paying me.

JG: How many women do you currently work with?

VA: In my actual company zero, in the Linux file systems community at large, occasionally one, I'm not sure if she is currently on the project or not.

JG: Zero at your entire company or zero that you work with?

VA: In the file systems group there are zero. I can't actually think of a single female kernel developer employed by Red Hat, so probably zero in my engineering area.

JG: Have you ever had a female technical manager?

VA: Well it depends on your definition of technical manager but I have had one in my whole career.

JG: Do you have any examples of discriminatory behavior that you've seen towards women?

VA: Yeah I definitely have examples. At this point it's such a non-question that it's really hard to take seriously when people are like, "really, well I don't know if that's true", and it's like give me a fucking break you know.

JG: You mean because people perceive it as sexism is dead, that sort of thing?

VA: Yeah. I really love having Hans Reiser now because you think murder is completely unacceptable and it's true, but it doesn't mean that people don't do it. So I have people at conferences, I remember Linux symposium being the worst, I've had guys come up and ask me if I was a reporter. And I've asked around and this doesn't happen to men, I'll say yeah I'm a Linux kernel developer and they'll say "oh yeah? well what did you write?" and they want specific examples. The first few times this happened to me I was so gobsmacked that I was just like, uh, um stuff. I had to go back and search the internet to find out all of the projects I had worked on and all of the code I had checked in. That's something you just don't have to do if you're a guy. At conferences there are people standing up there with the microphone saying bring your wives, bring your girlfriends, this is a way to pickup chicks -- then there are several conferences where it's known that this is the night where everyone goes to the strip club together and charges it to the company. It's just ridiculous, all of the time, totally obnoxious.

JG: So are you still actively trying to combat this stuff? I'm trying to suss out whether you are at the end where you're so tired of it, exhausted by it, that you're not willing to go there anymore, or if you still think it's necessary.

VA: Talking to you is one of the more active things I've done in probably over a year. I recently went to OSCON and sat at a table with five or six other women that I'd met through women in open source activism and out of the five of us, four of us were currently burned out and not doing anything and the one who was not, had been burned out for several years and had just gotten back in to it. I wrote "How to Encourage Women in Linux" and gave a bunch of talks on LinuxChix and volunteered a lot for many many years on that. I still will occasionally write a blog post but a couple of years ago I just realized that I wasn't

sure if what I was doing was having any effect. It seemed like the only thing that was unquestionably helpful was being available as a role model and so that's just what I've been doing. I think it's important to say that I haven't repudiated feminism in any way or activism, I just simply don't know myself what an effective thing to do is.

JG: Is that why in your "How to Encourage Women in Linux" you said that if you were to write it today you would do it differently?

VA: Yes. Basically what I'm saying is that I have more knowledge now so I could do a better job but it's impossible to even get motivated.

JG: Many of the women I've spoken to have a strong sense of individual autonomy and volition. In fact throughout the interviews I was beginning to think, wow, it's all so rosy.

VA: Are you kidding me?

JG: No seriously, there is a strong sense from some women that they are not affected by gender in any way, but most especially in regard to equity and work. So it's, I don't know if nice is the correct word, but it's interesting to have the counter-perspective. Do you find that women are dismissive of being affected, you said you were all on the same page at OSCON?

VA: We were totally on the same page. We were like, this sucks. You do this and you get attacked and it's just tiring and you're not sure that you're having an effect. So we all pulled back and were working on our careers, doing things that were directly rewarding instead of things that were directly offensive. I felt so great when I read about, you'll know what this is, but the denial of personal disadvantage. I was like, ah, this is what is going on. Part of it is, I see that there are a series of stages that you go through as a women or other visible minority, and you just have to have compassion for the people who are still in the old stages. (laughs) And hope that there is a future stage where you can do something again because there is that stage, the denial of personal disadvantage, and I got through that by being part of LinuxChix and having all of the educated feminists come in and say "oh that's an interesting thing you say and you might want to read this book"... I think that you have to be at that point of blindness in order to not be discouraged and one way to feel good is to believe that it's all about what you do personally and that the rest of the world and how other people behave doesn't affect you.

Something that might be related to the individuality thing is that part of the reason why I ended up here is that is that I grew up -- I was neglected, I was left alone a lot, I did homeschooling, which really meant that I put myself through the books. I was always encouraged to speak up and reject conventional wisdom and all of that. I was also raised with not very much emotional awareness. So I came in as a sort of bull in a china shop, not knowing when I was offending people and not caring. I see that a lot of where I've gone in my career is the result of being able to say that the emperor has no clothes and not caring or being smart enough to figure out the people will care. Without that I would not be in Linux, I'm not going to judge as to whether that's a good thing or not though.

JG: In FLOSS, I think it's Yuwei Lin who said it, that there tends to be a privileged place for programming, do you agree with that? That this tends to crowd out other means of contributing to the projects?

VA: Yes, oh yeah of course. One of the things that I've realized in trying to figure out what I want to do next for my career is that programmers, and especially kernel programmers, think that every other job in the world is pointless and for stupid people.

JG: Do you think that's because of the insularity? Such a small group controlling and reinforcing each other? I'm trying to understand if it's a cultural aspect, that insularity breeds arrogance or?

VA: I have a well developed theory on this. Part of it is that you can see a spectrum. There's programming, there's kernel programming and then all the way at the very end there's file systems programming. Part of the deal of working on the kernel is that if you do it wrong, you break everything. It's really freaking nerve-wracking and unpleasant to work on something that delicate and so pretty much the only way you can get through it is to be incredibly arrogant and sure of yourself. If you don't have the disconnection from reality in that way, and I totally completely include myself in this, to believe that you're right even when you know you're going to be wrong -- I mean as a kernel developer you know that perfection is unattainable yet you still try to attain it. Just to have the nerve to keep doing that, and keep checking in code is difficult. So file systems is even worse because it's permanent you don't get to restart, that's your data, so you have to be even more arrogant and cocky and fuck you to the rest of the world (laughs) on average to do this. And you really saw this in Hans Reiser's trial because he was really like what all you other people think really doesn't matter, what I think is really important. And that does allow you to start projects, I mean you have to have this megalomania in order to be like I'm going to start this project and get a bunch of other people to work on it. What is surprising to me is the people who aren't like that in kernel programming and especially file systems programming.

JG: And you've run across those people?

VA: Yes, file systems actually has a number of super nice people, people that I totally adore and respect who are models of politeness and respect and I think that they are doing it because they want things to be right and feel guilty that they aren't and

I think that I'm in that group as well, as well as the arrogant. (laughs) Especially with Linux and open source, there are the people who are like I don't have a life, I don't have any friends and so I'm going to define it by participating in this open source project and that's really hard to compete with and you see that a bunch. These are generally people who are going to be in to process and legalities and sending in typo patches and stuff like that but god there is so much ego involved. And it's sort of inherent because you need the ego to be willing to take the risks of developing so I think it's perhaps inextricable, depressing.

JG: With the volunteerism, which is what I think you're alluding to in those that have no lives, that's often a very anti-inclusionary aspect because those who do have children or do have lives obviously have other priorities when they come off the work day and have less time to volunteer. I guess that's just an axiom, but do you want to comment?

VA: One of the things I'd like to note is that I am too proud to work for free, to write code. And I think that might also be a practicality thing, my ego is not linked enough to it or hungry enough to write code just for the glory of writing code and I think that's probably related to being a woman in some way. I've never worked on open source software for free, I've always been paid.

JG: There is the stereotype that FLOSS is too difficult to learn and consequently many women turn towards proprietary or Microsoft based programming, that and perhaps that there are more GUI interfaces and stuff like that, but do you have any thing to say about that?

VA: Open source is good as parts for companies to make things out of, the economic model does not work at all for doing finished work. So you're going to come back to something that is only being done by volunteers or very poorly funded companies. You just look at the number of people who are paid to work on the Linux kernel because it enables --- oh I just got so tired of that word enables --- we are all about enabling. I don't think it's magical, I think it's economic. I use a Mac, one of my goals is to have a job where I can only take the Mac, right now I have to take two freaking computers with me everywhere I go, one is for work and the other is what I use for life.

JG: How can we bring more women into open source?

VA: I think if I knew the answer to that I would be doing it. The conclusion I came to, and why specifically I stopped working on women in open source, is that society as a whole needed to change. The number one thing is that men need to do more child-rearing work, that's just it when it comes down to it, and I'm including household work and maintenance types of stuff because they often go together. That unpaid and unvalued labor needs to be better split, men need more and mandatory paternal leave and things like that. There's this basic debt that is built up by pregnancy and breastfeeding being incontrovertibly an incredibly important thing to do. There's that part of child-rearing that you can't transfer, making up for that takes economic incentive. There are ways to set up tax breaks that encourage men to stay at home. But unfortunately as a society we're still stuck on the, paid childcare at work for women or giving women more time off and it's like no, no, no it's totally wrong. So I thought if I hosted a birds of a feather at a Linux conference it would be like building sandcastles at the edge of the ocean but if I spent part of my life changing by one percent the amount of time that men did child-rearing and house work that would be like vastly more effective so I really think it comes a lot from the other direction, and that's what I picked.

JG: So what about to an individual woman, I was going to say to a younger woman, but what I am more interested in from the FLOSS side is the mid-career point for women because all of the statistics state that women are dropping out mid career. So what would your advice be if they were saying yes, I want to get involved in FLOSS or kernel development, what strategies would you suggest they employ?

VA: Completely emotionally isolate yourself. Don't get sucked in. It's one of the hard parts because part of the reward is being part of the community and pretty much the only way to experience the community in a positive way is to do it in person at conferences. So part of what has happened is that I couldn't travel as much for various reasons including that Red Hat has decided to just not pay for travel. The sustainable approach is just to say it's a job, I do it at my work and then I go home and I do something else.

JG: Besides emotionally isolating and balancing your time do you have any other strategies?

VA: Always be self-directed. One of the things that doesn't work is to follow orders. You'll just completely waste your life writing code that won't go anywhere. With open source you have to say no to your boss and be creative and come up with new stuff and when the maintainer says no we'll never accept that you have to go back and do something else. Women are definitely not taught to be self-directed and I really think it's a wonderful accident of my upbringing because I didn't really have a choice about that. It's all very contradictory, it's why I'm having such a hard time with it; care, but don't care.

JG: What excites you about technology right now?

VA: I really love the ability to organize and access data more and more in real time, that's really awesome, that Google Earth exists and financial data feeds are getting closer and closer to real time, you can get live video from places and stream video. Organizing and making publicly accessible the world's information is really cool. All the time I think, wow, back in 1985 I

would have had to use the phone book. And I remember doing it and being like how do I find this and going through the phone book and thinking ah, I don't know where to buy soccer balls or whatever it was. I was part of this medieval society for a while and I remember that for years we wanted to do it but just didn't know the name of it or how to find it and now it's just all over the web, which medieval society do you want to join, here's a guide.

JG: What might be next for you?

VA: There's a number of things that I'm thinking about. I think I want to do advocacy and writing something where my main job is persuading people to change their minds about some socially important topic such as feminism or climate change or nuclear energy or education of some sort. I find that one of the things that I enjoyed doing the most in Linux was persuading other people to use some technology or new technique or something like that or explaining how something worked so that everyone could understand it. One of the things I hate is the technological priesthood where you make things deliberately confusing and difficult to understand so that you can keep that patriarchal dominance. It's interesting because I really see that in the code I'm working in right now and I see that it's simply a reflection of obsession and fear, people don't even have to be trying to deliberately keep people out, they just are so afraid of being exposed or making a mistake or being seen that they don't want to write a comment.