

INTERVIEW TRANSCRIPT

INTERVIEW #3

Date	14 September 2021	Duration	01:19:47
Interviewer	Principal researcher	Informant	Informant C

Interviewer (00:15): Can you hear me now? I can hear you.

Informant (00:29): It's looking okay for me and I was just doing something else. Not in Discord, though. I think it's working.

Interviewer (00:40): Can you hear me now?

Informant (00:43): Do you hear me?

Interviewer (00:52): Hold on. There we go. Can you hear me now?

Informant (00:55): Oh, there we go. Yeah.

Interviewer (00:57): Yeah, my input mode was on the wrong one. It's strange It just went to Zoom audio and it's never done that before. Are you well?

Informant (01:08): I am. How are you?

Interviewer (01:09): Yeah, no complaints. No complaints. Starting to get some more hotter days this side of the world. So really excited about that. Yeah, no, it's awesome. I just want to start off by saying thank you so much for putting some time aside to chat to me a bit and just for like everything that you have been doing with SuperContinent. It's just been such a wonderful experience for me.

Informant (01:37): Great.

Interviewer (01:38): Yeah, it's been really cool. This interview is going to be really [relaxed]. I want to keep it quite conversational and I really want to try and focus on your experiences as a performer. I am going to try and separate all the technical stuff from [this interview], because I know that a lot of our previous conversations were about some technical stuff and so on. But, yeah, I just want to understand a bit of your own experiences, and from

time to time, I might ask you to clarify something for me, if I'm not too sure what you're talking about. I've structured the interview into three sections - general questioning about you and your background, your training, your individual live coding practice, and then some of your experiences with SuperContinent as well. Okay. Cool. Are you ready to get going?

Informant (01:49): Sure.

Interviewer (01:50): Cool. My first question is, hopefully, a simple one. I already know quite a bit about your education in terms of you what your qualifications are, but I want to hear from you how you define your career title?

Informant (03:14): Well, I guess when all other things are equal, which they often are not, the title that I prefer is the title of artist programmer. I think that artists programming, or artistic programming I feel like; I think that's the thing that I enjoy doing the most. In a perfect world, I would just be doing that all the time and we don't exactly live in a perfect world. So, I'm not doing that all the time. But, you know. I think claiming it as an identity is a way of looking forward to a time and space where I can do even more of it. But I think also the identity of artist programmer is also what's kind of fun about it and claiming it, is that it's not a commonly legible one. I didn't grow up knowing of the existence of artists programmers, although they certainly did exist and have existed for a long time now.

Interviewer (04:34): Absolutely. Going back to the research side of things - how would you define your main area at this current point in time?

Informant (04:52): Yeah, that's a complicated question because I sort of have my feet in lots of different puddles at a time. I think because of the work with SuperContinent, you're sort of already aware of this side of what I do that has to do with live coding in collective situations - live coding together. I see that more broadly as part of a larger field of research that has to do with computational play. How people engage with, learn about, critique and interpret things that have to do with computation, through play, art, and improvisation. I think that this is an exciting field of research to be in, because in many ways I feel like the things that we are

sort of actually doing collectively, socially, with computational play, are all just tip of the iceberg. I have this sensation that if we keep going with them and we try to go deeper, we'll uncover the rest of the iceberg. And that will be very glorious thing. I feel like there are these silly, everyday tropes - I guess it's not silly, perhaps it has some scientific basis - where people say the average human only uses 5% of their brain. I feel like, socially, collectively, in terms of computational play, right now we're only using 2% of our collective brain. I'm really interested to see what happens when we start using the other 98%, which I think takes developing tools. It takes developing practices. It takes developing new ways of collaborating, new ways of playing to make those connections, and [learning] to play together in new and different ways. If that, for me, is an overarching theme, I think it comes down to ground in other places too. So, I'm also very interested in games research. It's not, it's not something that I have made a prominent part of my research profile, to this point, but it's something that I think I'll be doing more of going forward. It's always been a part of my life, and also a part of my development as an artist. I mean, I think I'm here now, doing musical live coding relatively frequently for such an obscure practice. I think that's because I was programming, basically, my whole life. Since I was seven. And if I was programming my whole life, games had a lot to do with that. When I was a seven-year-old starting to think about learning to program, it was in order to make games. Many of the projects that I set [for] myself growing up, and learning these things, were about attempting to create games, right? So, in that sense, I feel like I'm a little bit, right now, on the cusp of another inflection in what I do, where I start to pay more concrete and focused attention to games as a form of computational play. It's also been a part of my teaching. I teach a game design course here, off and on. I play a lot of games by myself with my family. So, I'm looking forward to that being a larger part of what I do. I think there are connections with live coding too. I think, sometimes I keep these two conversations separate, but sometime in the next one to three years - I don't want to be promising people too much - I think we'll see language, a system in Estuary that is oriented to live coding games.

Interviewer (09:44): That will be amazing. Wow.

Informant (09:47): Probably with Godot, because in the game design course here, we've been using the Godot game engine, which is a free and open source game engine similar to Unity, but completely free and open source. I've had a great time working with it and I can already start to see some ways that, I can imagine people firing up Estuary. In different places, they also fire up Godot on the side and now they're affecting what's happening in the game engine through the shared editing in Estuary. Totally doable.

Interviewer (10:20): I'm wondering how would those two things communicate with each other, on a technical level?

Informant (10:29): Estuary and Godot, you mean?

Interviewer (10:32): Yes.

Informant (10:33): Well, it would work basically [using] the same model is the SuperDirt socket. We'd have a little program that we'd run on the side, that would have a WebSocket and the browser client will talk to the local WebSocket and at the same time, that little program that's running the WebSocket, is a local binary. And so, it's able to send OSC messages and things like that to anything else or communicate with other processes on the machine. So, basically we're getting into the technical stuff despite your intentions, but the SuperDirt socket, which lets Tidal sample triggers go to SuperDirt and SuperCollider. For a long time, I've had the intention that that will grow into something that's not focused on SuperDirt, but a much more general Estuary helper, whose role is to connect Estuary to things in the local environment that the browser doesn't necessarily have good access to.

Interviewer (11:35): Oh, that sound so interesting. My word, I have so many questions, but we need to stay on track. You said you started learning how to [program] stuff from the age of seven, which is incredible. That's something that I've never heard of anyone that young, except for maybe music, but it's cool that that is the case anyway. My next question is, at what point did live coding specifically become a thing in your life?

Informant (12:16): The first time I heard of it was probably 2003 or 2004. I was in the middle of doing a doctorate in music composition. One of my peers was Scott Wilson, who now lives and teaches in Birmingham, UK, at the University of Birmingham. Scott was and is very well connected to all things SuperCollider. As music students you're always presenting compositions, and there was a very intense scene of performing for each other and discussing compositional issues and stuff like that. And so, I think it was from Scott in 2003 or 2004, that I first heard the word live coding and saw something kind of like it in some of his performances at that time. Then in 2009, when I started working here [in my current job], I wanted to form a laptop orchestra. I had formed a laptop orchestra the year before that, at [my previous place of employment], and had just been really blown away by what I learned from it, and what everyone seemed to learn from it. So, I knew I wanted to do it again, and so [I] conspired to form a laptop orchestra here at [the university]. Originally the idea had just been similar to the other group that I had led, and similar to the model of the Princeton Laptop Orchestra. People would bring their own computers [and] we would provide a bunch of speakers that people would connect to. Everyone would have their own speaker so that their sound would be localized in a semi-naturalistic way [in] the same way that a violin sound comes from where they are.

Informant (14:28): And so, we started doing that, but we just started doing live coding experiments that I think the initial impetus was because my former colleague, the late Stefan Sinclair, who was a very influential person in the digital humanities. I think internationally as well. He was always popping in for a chat or forwarding things to me. He forwarded some live coding things and said hey, why don't you do this with the group? And I was like, Yeah, we should do that and we tried it, and It's what really caught on. The group started that first year, [doing] a mix of things that were live coding and other ways of interacting with the computer, but it was the live coding that really sort of stuck with the group. I think that's, in my mind, because of inherent features of live coding itself. I think the fact that when you have this group that is coding together [and]

the way that they can share code with each other. Especially in that first year, we were in rooms with our own computers, there was no Estuary, no Extramuros. We'd always be looking over each other's shoulders and stuff like that, but the code was small. But you could do that, or people could copy and paste it and email to each other and stuff like that. So, there's this way in which code enables knowledge about things that happen in musical performance or knowledge about things that happen in sound composition, to circulate in really transparent and fluid ways that you don't necessarily see with other forms of musical knowledge. I think at some level, that's what makes it kind of addictive as a group. To put it in a nutshell it's like how, relatively speaking, easy is it to copy what others are doing. You can go to a master class with an amazing violin player, and if you're already a pretty amazing violin player, maybe you can glean some insight from watching the nuances of their performance – maybe.

Informant (17:16): [If] you go to a collective live coding session together, and it's like no, you could just copy and paste that stuff, and then take it home and continue to play with it. You're playing with the exact physical material situation, that the other, perhaps more experienced, perhaps just experienced in a different way, person was playing with. If you compare this to the violin situation, it's as if you sort of snuck into the body of the expert violin player during their performance. Everything was frozen and now you could kind of look at the parts, look at the muscles, and look at what kind of acoustic feedback they're getting. You can tweak the system before letting it go again. I think that's one of the fundamental powers of live coding, and I think it's why it was so attractive to continue to explore it as a group. To come back to your question, I think that it was through forming this orchestra that I really got involved in live coding, it was through this collective rather than this individual project. After that I devoted a lot of my research energy to things that support those kinds of activities. Like to making software that makes it easier for people to play together as a group. I've done solo things as well, but I'll admit on some level, they feel kind of like indulgences. Sometimes

they're things that I steer towards, potentially having other utility as well. For example, the language Punctual is my pet project, in the sense that I'm the only person that makes it. I'm happy to take suggestions a little bit here and there, but I'm certainly don't have a request line, or something like that. It is my pet, my baby, that I'm sort of moving in different ways. But at the same time, when I first made it, it was kind of thought of as meeting a certain gap that existed in Estuary. So therefore, it might be useful for other people as well.

Interviewer (19:44): Right, which was that audio visual combination, or not necessarily?

Informant (19:49): Right. Yeah.

Interviewer (19:50): Okay, cool.

Informant (19:51): It's not really a gap now. I mean, we have several languages for different ways [of live coding], but perhaps this audio-visual synchronization part of it is still more emphatic in Punctual than elsewhere.

Interviewer (20:04): Yeah. Yeah, so if I ask you about punctual you're the guy. The question that I was going to ask kind of is already answered, but [I'd like] to know in [which] ways does live coding performance, specifically, intertwine with your profession?

Informant (20:45): And by profession, do you mean job?

Interviewer (20:48): Yes.

Informant (20:49): Yeah well, [in] lots of different ways. I'm [an] associate professor at [a university], so there are all kinds of ways that live coding is part of that job for me. When I teach undergraduate classes, I will often find ways of introducing students to live coding. For example, the course that I have taught the most often is a second-year course called Digital Audio. It's a [relatively] large core course. There's something like 90 people in it this semester and part of a course like that is, is introducing people to basic concepts of synthesis, alongside a somewhat larger emphasis on recording, and transformation. When we get to the parts of the course, where we're more focused on synthesis, we use live coding languages to

do that teaching. We introduce live coding, but we don't actually make a big deal about it because we're just using the live coding environment, or the live coding practice, as a way of having a really fluid interaction around something else we're trying to teach, and also one that that works, for a relatively wide variety of people in different circumstances. If we wanted to do this with modular synthesis, we could and actually I've been sort of quietly building up a bank of equipment for that purpose, so that we can use modular synthesis equipment for this part of the course. But [at] the same time that, we're not going to do that with 90 people at a time, that would be a lot of modular synthesis gear.

Informant (23:05): So, the thing that we do in the computer, is a way of doing that - that's really scalable. If we do it in a kind of collaborative live coding setting, there's all kinds of other pedagogical benefits, you could say, to it. Anyway, long story short, I'll introduce live coding to people in classes for various reasons, including reasons that aren't necessarily about live coding. It's just facilitating something else. At the graduate level, in our master's program in our PhD program, I'm often working with students who choose to make their research about, or touch on, live coding in some or other way. That's always a lot of fun. Part of my job is to do research. We've kind of already talked about this, but a big part of the time that I have for research, I spend developing tools that can then be used in live coding situations, particularly collective live coding situations. To a reasonably high extent, considering how obscure it could otherwise be, this work is legible. This research work is legible to the university. I'm allowed to do it. They want me to spend my time developing these tools, you know? So, I'm not going to get in trouble for it. That's a real privilege, and I'm very conscious of that. Being conscious of the privilege of being able to do that rewarding work, because the university and the larger society has already paid for that work. That leads me to be really conscious about making sure that the results of the work can be available in a sustainable way. That starts with simple things like free and open source software, right. [If] we release a

software that is free and open source, in theory, someone else can rebuild, continue or extend this, even in the absence of my work.

Informant (26:03): But I don't think it's quite so simple as that, because as any of us know who have ever struggled with the installation of software, or tried to make code contributions to other people's projects, or to abandon projects and stuff like that. It's one of those things that may be possible legally and possible in theory, but not always possible in practice. For me, thinking about the sustainability of the project as software culture going forward is all also about thinking about what kinds of things that are added to the software, and how are things added to the software, so that it doesn't take me too much work to continue to develop them. If we said Estuary is going to do this, and this and this - all the things that people wanted - we could say that. [But] in the absence of the infinite time and resources that it would take to actually keep those things going, all we would do would be making a piece of software that would collapse under its own weight. Which would end up not serving any interests. So, I have to play a delicate kind of delicate game of not committing to too much all the time. Incrementally loading things attached to the structures of the systems, and thinking very carefully about 10 years from now when things have completely changed. Maybe there isn't the same grant support around this project, or even a related project. Will I still be able to make this work with not too much effort? You don't always get it, right and, in some sense, I don't know if we've gotten any of it right yet, because it's too early to say. These are the kinds of things I'm thinking about with the project a lot, because I've had the privilege of being able to make this stuff [and] do this kind of deep work over a few years. To me that top priority is what things can I do or not do in order to increase the likelihood that 10 years from now, or 20 years from now, people can still derive some benefit from this work?

Interviewer (28:48): It's such an interesting way to look at it and I feel like not a lot of people really approach things that way, which is quite disappointing in a lot of respects.

Informant (28:59): People are responding to the pressures of the world, right? That's why I say the job I have, one of the real privileges of it is that I have this research academic freedom, and it's a material research, academic freedom, right? It's not just that you can read whatever you want, we don't care. There's time that is set aside for developing, for doing this basic research, for doing these things whose immediate utility is not apparent, but whose long term utility can be discovered and worked out. Worked out by others. So, that's the nature of a job that has a strong research component as part of it. But not a lot of people are in those kinds of jobs in that kind of position. So, I think it makes sense that, when people's income and livelihood is coming in a different way, they'll have a different viewpoint on the kind of economy of their work.

Interviewer (30:06): Yeah, absolutely. I hear what you're saying. Okay, one last question before we jump into your own individual live coding practice. Just for interest's sake, what is your musical training background? What instrument did you play?

Informant (30:29): I guess I played lots of different instruments, but when I was seven, I started piano lessons. At almost exactly the same age, I started playing trumpet in the elementary school band. I switched to French horn in the beginning of high school, and that was a great switch. You have these cohorts of players that move through different grades of schools, and by the time my cohort had reached grade 10, the last French horn player had quit. So, the band director, for whatever reason, asked me if I wanted to leave the quite amply staffed trumpet section to be the lone horn player in the group. It was a really great change for me, because all of a sudden, I could hear myself. I couldn't hear myself as just one of eight trumpets, [and] so I did much better on horn. Around the same time, I started playing guitar and got really, really serious about that. So, when I went away to university a few years later to study music, my main focus was jazz guitar. I was [an] improvising jazz guitarist. I did that for four years while studying music performance and music education at the same time, with a jazz emphasis. I was doing a lot of composition and so I did another undergraduate degree in composition and went on to do

a Master's Degree and Doctoral Degree in composition. Even before going into composition, I was always experimenting with other instruments, not just the ones that I really played. I think that going into composition, in some ways, was like a way of playing all the instruments, you know? Even the ones you can't play. As a composer, you can even play the instruments that you can't play.

Interviewer (32:40): Right, so now let's go to your individual live coding practice. There are a few questions I could ask you, but there's one question that I really haven't had answered yet, and that is, with regards to the strategies for how you would approach a live coding performance. Is that too broad of a question? Do you want me to be a bit more specific?

Informant (33:49): The first thing would be that I think live coding performances happen for lots of different reasons and purposes. I've been so embedded in collective settings for live coding, such as the [university orchestra], but also more broadly. The group around the [university orchestra], including people who have worked in the orchestra at one point, but they've graduated, are still around here. I think because of those collective settings, a frequent situation in which I do solo live coding is because the group has decided to put on a night of solo live coding acts. Here, in the [research centre], we were doing a [university orchestra] concert, but the orchestra only wants to play one or two pieces [so] we're going to fill it out with solo acts. In some cases, when you're a group trying to fill some time with the solo acts, you do it with really systematic constraints. We haven't done it for a while now, but for a while the orchestra was sponsoring these performance nights downtown, where we would call them eight by eight by eight, because we would use eight loudspeakers, there'd be eight soloists, and each person would have eight minutes from scratch. You also had to do it back to back. The person has to come, take their laptop, they connect to the interface, and when they're done, they disconnect. Next person comes up, connects and tries to go as quickly as possible, which I always thought was a cool format because eight minutes is enough to have some musical development for sure. Eight of them is 64 minutes. It's about a length of

half of a concert or something like that. But we could make it a whole of lot them. I just thought that made a nice thing. If you have a constraint like that, and I think you'll encounter other similar constraints and other communities around the world, a lot of your strategies flow from that situation or constraint. You're naturally thinking of things that you can get going quickly, that you can move in interesting and surprising ways. I think that thinking about this situation of the eight by eight by eight, does help me actually get to a slightly deeper point that I hope addresses your question about strategies. Which is that one of the not immediately visible, aesthetic and political tensions in the live coding movement revolves around the question of whether the results of live coding should be surprising to the live coder. Versus the results of live coding, being familiar and reassuring to all.

Informant (38:24): If you go into a live coding performance and your intention is to smoothly recreate an existing genre of music, that's kind of what I mean by the reassuring side of things. But if you go into a live coding performance, and your intention is to discover something that you haven't discovered before, that's kind of the other pole of that tension. For me, when I have done solo performances in particular, I often use that as the moment to do the exploratory surprising stuff. I will take a lot of risks in a solo performance. However, when things go back to the collective side of things and I'm playing with other people, I think that's when I like to dial it down and I like to encourage the groups that I'm in to dial the risks down in those settings too. It just becomes unmanageable basically, or it becomes frustrating for people. If things are blowing up, and things are not working or people can't hear what they're doing because someone else is making a super loud or a super aggressive noise or something like that. I feel the solo situation is a really great chance to take the risks instead.

Informant (40:03): When I think of one.. [pause] I won't continue that thought. Anyway, I am conscious of, when I start a solo performance, this aesthetic tension. I will often go into solo performances, deliberately, very unprepared. While with groups, collectives, I'll tend to be the person insisting on

more rehearsal, or insisting on more awareness of the structure ahead of time or stuff like that. When it comes to just performing by myself, I usually have not prepared anything. I usually do not know what the result will be. The most I will usually know is, if there's a visual part of it, I might have already picked a photograph to work with ahead of time. Only because I don't want to expose the audience to me looking around for a photo. It's in consideration of the audience, saving them that aspect of things. But as to what will actually happen with it, I don't know. I guess I'm just riffing on the idea here. I do feel like, for me that in some sense, that's what I like to see in solo performances. That's how I like to do it. That's also how I like to see it in when I watch solo performances too. My favourite moments in watching other solo performances are those moments where I have the sense that the performer didn't know they were going in that direction. It's like there's some drama to the decision making that you're seeing that's happening there. But, you know, it's all good. Maybe those moments are kind of rare in seeing them from other people's work. Either because, as in the position of an audience member, it's hard to appreciate what people know in advance and what they don't. And other reasons as well.

Informant (42:31): In championing these moments of fundamental decision making, in championing these moments where people take these leaps of faith and go down a route they haven't gone before. I mean, I don't think I'm doing this in any absolute sense. I think that those moments are real treats, when they happen. In my own performance, I do them and they pay off, and that's a real treat too, but I don't expect that to be the case all the time. I think there are moments where we take it easier, or we take it safer. Those can also be ways of building up energy, knowledge or safety, to enable these other decisions and risk taking in the future. So yeah, it's not like a, I certainly don't want to give this even in the case of solo performance, I don't want to give the sense of like, sort of completely free improvisation and leaping into the unknown as good and reproducing what's known as bad. That's not quite the, you know, not quite how I would like to scream thing. It's more like it's really is

like, solo performance is a chance to, to take more risks than you would take in the other setting. But I think perhaps this is what I'll say. I'll say it this way. I think in in, in solo performance, you can take more risks than in collective performance. But I think that in both solo performance and collective performance, you still are managing risk and safety as you do it. Yeah. Just perhaps in slightly different you know, in different in different ways.

Interviewer (44:20): Yeah. That's very interesting. You said so many things that mind just went to all these different places about things that I've been experiencing and reading. It's so interesting, but I want to continue on with what you were saying in terms of the strategies that we have developed as an ensemble in SuperContinent. I actually have a better idea now of how we're supposed to approach using the strategies because of what your previous answer. I don't even feel like I need to ask you that question, because I already have the answer that I want. Maybe [for] reinforcement, [I'd like] to find out how you would approach a particular strategy given that the group has decided on one. Like you said a lot of the stuff that you do is improvised. Do you use other [approaches] too? I don't know, I guess my question is very open ended.

Informant (45:52): Are you asking like what kinds of things am I thinking?

Interviewer (46:02): Yes, yes.

Informant (46:05): When we're in a collective performance?

Interviewer (46:07): Yes. Yeah. Absolutely.

Informant (46:10): That's a great question. There are all kinds of ways in which I'm sceptical or, let's say have reservations, about psychological and biometric research. But despite those reservations, if we had a device that magically would show us how people's thoughts and attention flowed during a collective live coding performance, my interests would perk up. Oh, I think I will look at that data, actually. That is my slightly cheeky way of getting into a very basic observation, which is just, like everyone,

I think that my thoughts and my attention are not consistent, strategic and under my own control all the time. In a performance, I'll be paying attention in different ways, and maybe my mind is wandering at other times too. There's a lot of variability there. I don't think any of us come into a collective live coding performance as an improvising machine that's 100% on the job ready to do what it does. We come into those things as people with minds that behave in all kinds of different ways from each other, but also, different ways with respect to ourselves from one moment to another. We go through different states is one way of figuring this. In answering the question of what kinds of things am I thinking during a performance, I guess what I'm going to end up doing is highlighting some of the states that I'm most aware of. I think one state is where one is watching what the rest of the group does. Particularly in the case of live coding, I think that I'm often put into this state when something gets my attention and I don't know where it came from. There are these moments where I'm like there's something happening like there's a sound [and] maybe it's dominating the foreground attention a little bit, or perhaps it's because it's new or something like that. It gets the attention. At a quick glance, I can't see what's making it. I end up spending a minute, just trying to figure out what it is. Having figured that out with something that someone else has done has come to my attention in a more salient way. I think there's often a state where I'm thinking what can I do that responds to that in some way. If something that someone else has done in any way really catches my attention, I'm likely to think about some way of incorporating it into what I'm doing. Sometimes in really abstract ways. If someone has done something that divides a pattern into six parts, maybe I will also divide something into six parts. Maybe those six things will line up in time, but maybe they won't too. Either way, I still feel like there's some kind of connection. Just kind of a rambling answer. I'm sorry.

Interview (50:40): No. Please carry on.

Informant (50:47): Well, this isn't really an answer to the question it, but it's maybe pointing to a difficulty. One of the difficulties of collective live coding

performance is making dramatic, unified changes. I really think that those dramatic unified changes are in some sense necessary. In musical performance it's very hard to find, anywhere in the world, a tradition of music making that doesn't have dramatic, unified changes. Including, for example, when things start and stop. [There are] all kinds of musical forms around the world where the nature of the form is that the performers know that, at this moment, exactly this moment, it's over. There's a punctuation to that. Those moments, in all of these different musical cultures, I think are so nice for the audience and the performer, both. Because they create this unified sensation that the thing is over. Perhaps people clap, or perhaps they do whatever other thing it is that people do to mark that moment, at the end of the musical performance. In collective live coding performance, because our practices don't support that very well, we often have things that drift away. We're not really sure when they're over or not. I think it makes it hard for everyone, therefore, to kind of like celebrate the musical event, including the audience. It makes it more difficult for them to celebrate the musical event, not impossible [though]. I think that same difficulty migrates into the inside of the musical forms as well. It's hard for us to make big changes right away.

Informant (52:56): Bringing this back to the question of mental states; that's another thing I find myself paying attention to. Thinking about what I can do in the ensemble, that will introduce a change at the bigger level of form. Again, I think that for audience members, those things are critical. If I can go on a little tangent here. A bit of a rant perhaps. One of the problems of the live coding movement, is that there is sometimes not enough consideration given to the needs of the audience. To the extent that the audience calculations and in the internal discourse of groups, sometimes the audience doesn't exist, because the artists are deriving sustenance from their interaction with the machine. They're enjoying the code that they're making, and they're enjoying the interactive process of changing the code. To make an example of it, they don't notice that the texture has barely changed in any, salient way for 13 minutes. If you're someone

watching a live stream, or you're someone sitting in an Art Gallery somewhere for 13 minutes. Yeah, there's some texture that's changing a little bit. Yeah, there's a bunch of noise that's sort of changing. Maybe. You're not sure. That's not really a tenable situation from my standpoint. I find myself always thinking about having change - sudden change, also gradual change, having change. Keeping things moving or having surprising inflections and things because I think it's those moments of change and those moments of surprising inflection that really give listeners something to hold on to.

Informant (55:28): When the music is what you might call progressive music, which I don't mean with any kind of political connotation, but rather with the sense of, when it's music, whose argument is about how it changes over time. I think those changes have to be there. I think there's other music that has to do with beats, and has to do with motion and dance and stuff like this. That's another way of giving people the audience something that they can derive sustenance from. I don't think all musical patterns do this, and I don't think all trajectories through changes of musical patterns do this too. The job of the musician, including the live coding musician is to use these things in a way that an audience gets something out of that experience. That's the sort of the rant, or the tangent. Coming back to being in a group, that's something I'm thinking about a lot. Often these groups tend to be neither the one kind of music nor the other. Often live coding groups are making beats and things that have to do with motion, and dance and stuff like that. They are exploring that part of the things. Often they're also exploring progressive musical ideas about parameters that change through time as well, so we're doing both of these things. And so, when I have the feeling we're not really delivering on either of those two promises, then there's a thought process [of] what can I do about this, and sometimes it's a change. Sometimes, I can just add something to what's going on that steers things in a better direction, from the way I'm hearing and seeing things.

Informant (57:45): Other times, especially if the group is really busy at the time, what any individual does, doesn't make so much of a difference. Then it becomes

necessarily more of a question of reaching out to people and talking about it, which is a unique possibility as the live coding ensemble. Hey, can we make a change soon? Or, should we add a beat to this? Or should we make this heavier? There are these various kinds of aesthetic shorthand [that] start to come into play. I think those are certainly some of the most characteristic states of mind. In respect of collective live coding, I think there is another state of mind which comes up in roulette, particularly with the [university orchestra], and particularly with the before the pandemic locked us down. We would do roulette, a lot. We would often do this in a room, and so we would do it in a way where we would set up stations for different panels. A laptop where you could type for this panel, a laptop where you could type for that panel. Results are being heard on the big speaker system and you're seeing the visuals on all the displays and all that, but we're standing in the room so we can line up. So instead of lining up in the widget, we line up in real life and in fact the widget in Estuary for lining up for roulette, was inspired by this process of lining up physically in real life. [It] doesn't look like that, but conceptually it's the same. You're lining up and also sometimes milling about, because the group has often been big. Sometimes 12, 13 people.

Informant (1:00:04): You don't all need to actually line up all at the same time. Sometimes you take your turn, you change code, go back into the middle. Before lining up, you just kind of mill about and look and listen for a while. Roulette starts simple, and [when] people are doing that there's a really interesting thing that happens. It's interesting because you navigate it collectively as well, where you can arrive at a point where no one in the room understands what the code is doing anymore, but you still like it. The result is cool. You've created some weird synthesis network in Punctual or something like that, and people understood the individual steps that they were taking. Yet somehow, because your attention hasn't been 100% on it all the time, or maybe even if it was, you would still lose the thread. In any case, you lose the thread, and you don't really know how it's working anymore. You have this sensation that you've

built this kind of machine that has a mind of its own [and] you don't know how it works. I think that's an interesting state of mind, even by itself, but it's especially interesting when you have that as a group. When the group is working on this thing and there comes a moment where the group recognizes collectively, that it doesn't understand what it's doing anymore. In my experience, usually, you can't go much further than that. First of all, usually what happens once you get that point, there's maybe five minutes left on the performance, because you took a certain amount of time to get that there. So now it's time to go, and so gracefully fading things out, is a nice way of extricating yourself from the position of not really knowing what's happening anymore. Usually, you can figure out how to do a fade out still. Not always. Or people keep going and because the group doesn't have an understanding of what's happening anymore, it only takes a moment for them to commit a so called misstep. Someone makes some new connection in the thing that no one understands, and before you know it everything suddenly stops, or everything blows up, because in some sense it's dangerous to intervene in running systems that you don't understand. Those moments tend to be the end of the performance, but I think they're quite nice moments, especially when they're experienced collectively because it is a moment where as a group of people you're appreciating the complexity, unpredictability and the inability of the computational ultimately, to be constrained to instrumental purposes. You're appreciating that in those moments where the system gets out of your control and you're appreciating it collectively with a group, which seems somehow important I guess.

Interviewer (1:03:56): Yeah, definitely. We definitely don't have nearly enough of those moments, currently in UPLorc. Okay, so we're nearing the end of our interview, so I wanted to ask you like an ending off question. I know that you're not a part of SuperContinent any longer, but at the time before you decided to leave, what did participating in an ensemble like SuperContinent I mean to you personally. On a personal level.

Informant (1:04:43): Well, I've participated in lots of different collective live coding and in some ways, if I was to answer the question of what does participating in

an ensemble like SuperContinent mean, it would take me to that long series of ensembles. In some ways, the other things I've already said, probably speak to that. Focusing instead on what precisely is distinctive about SuperContinent, as opposed to all these other collective live coding ensembles, is the intention to create a group of people that are maximally geographically distributed. Because so many groups are formed based on proximity, including geographical proximity, but not only geographical proximity. People form groups with their buddies, or even when they don't form groups with their buddies, they form groups with people that are very close to them in professional networks. In quote, unquote, "professional settings", they form groups of people on the basis of commercial and professional relationships. I think, at the beginning of SuperContinent there was the idea [that] people will be geographically distributed. There'll be a rule about not having people in the same location. Also, that they won't necessarily be the people that we've worked with before. We didn't proliferate the group by getting random people from the other side of the world. That might be another interesting experiment too. I think there were connections through professional networks, but they were a little bit more distant than the normal or something like that. SuperContinent is not a random group of people, there's still a strong influence of certain professional networks, on the way that the group came together. Even that, notwithstanding, I still feel like it's an interesting experiment in making music with people who by virtue of where they are, you wouldn't have otherwise made music with them. This for me, brings it back to the tip of the iceberg thing a little bit. We need to do much, much more of this to really understand it. Much, much more thinking about how to form groups. How to make music together with people that you haven't made music with before, and are located in very different places, physically, culturally, etc. What's meaningful about SuperContinent to me is that it's like the tip of the iceberg on that kind of question. It's like an initial experiment in taking advantage of online music making to form, or potentially form, musical friendships in different ways than they have hitherto been formed.

Interviewer (1:08:45): Right. I see.

Informant (1:08:48): We need to do more of this. We really do, because I see groups in the live coding scene - there are definitely groups - and for me, it's an interesting thought experiment. Whenever I see a group I look at the group and say what's the thread that brought them together, here? There is almost always, that thread and it's really obvious what it is. There's a pre-existing sociality, that has been translated into the format of the group, and to be clear, I think that's fine. I don't think there's anything wrong with that. I don't think that we have to exist as atomized individuals who occasionally bump into other people in this very anonymous way. It's good that people bring their existing relationality into music with them. But I think our existing relationalities can also be limitations, can also be problematic, can also be ways that privilege and oppression are extended through time and stereotypical ways, right? So, for these reasons I'm really interested in situations that mix things up in different ways. Perhaps I can say one further thing about the international dimension of it. In profound ways, I am an internationalist, so I think that there is no future for the human race apart from a much deeper, and a much more profound level of international collaboration that I don't think exists, or perhaps has ever existed. What we need is perhaps something that has never really existed, or it certainly not existed on the scale of our contemporary world. When you start getting into international collaborations, one of the problems is that when international collaborations are framed as collaborations across national borders, that way of framing things can actually objectify or reify, or bring into reality, the very thing that you're trying to step over. I think of the Olympics, for example. The Olympics is a well-known event that people will point to as an example of the peoples of the world coming together. But how do they come together? They come together under their national flags right, with everyone neatly categorized according to these states that claim them. And so, I think that the whole exercise ends up actually reinforcing the national competition and the colonial national states, because most of them are that - that were set up over the

last two or three hundred years. In thinking back to SuperContinent as the tip of the iceberg, and thinking about the possibility of future groups that will engage in international collaboration, those are some of the things where I'm trying to think further as well. How can we make groups that are geographically distributed, that have people making music together that would never otherwise have made music together? How can we do that in a way that resists this kind of Olympics phenomena of very stereotypical discourses about people's national location being reproduced as the discourse of the group? It's a question I don't have an answer for, but I think for me, SuperContinent was a chance to think about those things.

Interviewer (1:13:33): Yeah, definitely. As you know what I have been doing with SuperContinent and UPLorc is still a very new idea here. So, I'm really trying to understand it so that I can also try and create a scene here to expand it to, like you say, include more people who you otherwise wouldn't have engaged with. The problem is I haven't found a way to do it yet. Like you said, a lot of thinking needs to go into something like that and it's really, really interesting, hearing your point of view and learning from you about these things. I really appreciate your willingness to be so open in sharing with your knowledge, so thank you for that.

Informant (1:14:33): Sure. Yeah, thank you to you, too. You know that what you're saying there about making a scene? I think that is, in many ways, the most important thing.

Informant (1:14:42): It's possible to form these musical friendships and to learn from people around the world, but I think it has to go hand in hand with things that are not around the world. Things that are just where we are as well, too. Because, in a way, if I'm kind of going to connect it to my last point about national discourses, a lot of the biggest differences are always right on our doorstep. Right around us, right? Often as scenes form, in particular local areas, they unwittingly reproduce particular patterns of exclusion too. There's this enormous potential in the activity of live

coding to not do that, and to engage in a more productive way. To engage in a more generative way, with people who are positioned differently. But it does take thought, and it takes energy, and it takes time. It's not easy. With the caveat that it takes thought and takes time, and it's not easy, one thing I noticed here, and I've noticed it in other people's stories about how their scenes have gotten started, is that there's a lot of collaboration with institutions that are already positioned in different ways. Here, when we started the [university orchestra, there were lots of art galleries downtown that were reaching out to us, and that was really great. We connected with people we wouldn't otherwise have connected with, because of that relationship with the galleries. With the artist-run centres. Schools and teachers are another sight. They're often looking for people to come in and give a presentation or to lead a special activity or on some basic level, they just need stuff like this. When you show up and you do it, connections are formed. There can be ways that people can stay in touch. I guess my advice really on it would be - don't be shy about reaching out to galleries, to schools, to community groups. Any of these groups that already have a kind of public facing [or] sociality to them. They're usually keen to have guests that come and gives a presentation or a workshop. A lot of stuff can happen as a result of those, especially if you do workshops, and then there's some way that people stay in touch.

Interviewer (1:17:5): I already have so many ideas running through my head right now, and like you say, just showing up and just like putting yourself out there, is the only way to get these things done, I suppose. Ah, awesome. Thank you so much. I really appreciate it.

Informant (1:18:14): Thank you.

Interviewer (1:18:17): Yeah, I hope we get to work together again soon. It'll be really cool.

Informant (1:18:23): Me too, yeah.

Interviewer (1:18:25): Keep in touch. Awesome.

Informant (1:18:50): Sure. Thanks a lot.

Interviewer (1:19:40): Awesome. All the best. Chat soon.

Informant (1:19:43): Thank you. You too. Ciao.