LIVE CODING AUDIENCE RESEARCH IN SLOVENIA

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April 2021

INTRODUCTION

This research represents the first structured reflection on audiences in the field of live coding in Slovenia. We were interested to find out which segments of the population make up the live coding audience, what the potential audiences are, and how the producers address them. Based on the research, we want to draw communication guidelines, or rather strategic proposals for developing current audiences and acquiring new audience segments.

We opted for a qualitative approach. This, we anticipated, allows for an elegant reasoning process: As the existing audiences at live coding events (performances and workshops) are quite small, it is easier for actors to describe / identify them. By defining the existing audiences, we might know more about which are the non-existent segments and among them perhaps potential audiences.

In the period February – April 2021, we conducted four in-depth interviews. In the process of selecting the interviewees, we thought about providing demographic diversity and coverage in terms of the activities that the interviewees carry out in their professional lives. In one case, we also reached out to a collective that has little direct contact with live coding in its practice, but has created a related community, so their experience can be an important contribution to research. So we're talking about four profiles of interviewees, which also mean four perspectives on live coding contact with audiences. We asked them to present their profiles themselves.

INTERVIEWEE PROFILES

"Interviewee A" (hereinafter "A"): He is an author, producer and publisher in the field of music. He is interested in a multidisciplinary approach to art. He says his work and artistic development is driven by an interest in sound, music, video, digital networks, online communities, intermedia arts, performance, composition and computer music. He also says that his artistic and production work is explicitly politically and socially conscious. He has been working in his field for more than ten years.

"Interviewee B" (hereinafter "B"): intermedia artist, experimental computer musician and composer, programmer and creator of electronics. He is primarily concerned with "metaphors, observing the world and relationships," all of which flow into his interactive layouts and machines. At the same time, he works in the field of event organization, he is interested in working with people in live settings and creating "some active fields of encounter." With his colleagues, he manages and curates a permanent space for events in the field of sound and intermedia arts.

"Interviewee C" (hereinafter "C"): producer, electronic music producer and DJ. He is engaged in VJ performances, programming, and works as a lighting and sound technician. He creates original music for theatre. He started working in live coding in the past year, but defines his practice in related fields as creative coding. As a mentor, he passes on his knowledge to his colleagues and younger audiences. He is interested in the possibility of developing live coding in the production of club music.

"Interviewees D" (hereinafter "D"): They are an initiative that deals with the position of women within the technical context and intermedia art. Through several editions of educational workshops on the use of open source programs (programming, graphic design, robotics, etc.), a community of women has formed who support each other in asserting and researching technology in connection with art. They find it important to address the hierarchical position of knowledge, generated in the position of a male mentor.

DATA AND FINDINGS

In what follows, it will be possible to see that the sets of questions with which we faced the interviewees go beyond questions narrowly focused on audience development strategies. However, we believe that these issues are key to developing effective, and efficient strategies.

We will now outline each set of questions and, where necessary, explain the basic starting point for its inclusion in the survey, and then present concise findings from in-depth interviews.

a) **Definition of live coding**

We started from a hunch that on the one hand there is no internal consensus on what exactly live coding (hereinafter LC) is, and on the other hand that in the local area the general public, with the exception of a few interested parties, does not really know what it is. It is possible to speculate that the absence of a basic idea of what a certain phenomenon means in some way affects whether an audience will be transformed from a potential one (i.e. still non-existent) to an actual one.

We were mainly interested in whether the interviewees understood live coding as an art form or as a method. We believe that this definition significantly influences the decision on how to bring live coding closer to new audiences, because live coding as an art form can lead to the formation of an independent art sphere, while live coding as a method of creation allows its placement in various fields of sound, AV and intermedia arts.

"A" says that LC is by no means an art form. It would be best to call it a "way of working" that relies in part (but not necessarily) on an affinity for open processes, avoidance of rigid copyright laws, as well as questions of what is human, what is machine, what is intelligence, and so on. "B" answers similarly, but upgrades the answer: LC is not an art form, but a "collaborative method". That is, it introduces an element of contact between the author and the audience and / or between the authors, recognizing in LC the potential for social cohesion. "C" defines LC as a process of creating code that is projected during a performance – the spectator may not understand what the creator is doing exactly, but can keep an eye / ear on the process. He points out that live coding within the field is divided into a whole range of even more niche genres and appears in conjunction with many other artistic disciplines – from visual and musical arts to lighting design, dance, IA poetry, use of 3D printers, etc. He adds that live-coding has a prehistory in engineering, where the method was used before its entry into the art field. Both "A" and "C" find it important to emphasize that the use of open source programs is also a political statement emphasizing free knowledge.

All interviewees are of the opinion that the public in Slovenia does not "yet" know or understand what LC is. They believe that it should be made known. "A"

is convinced that this is part of a broader process of programming literacy for populations that he considers necessary in the 21st century. "B" also believes that basic programming literacy is part of language skills and that audiences need to be cultivated and told in an understandable way what is happening at LC events, even if they are not LC creators themselves. "C" believes that it is important that live coding therefore enters other fields of art and thus expands the audience, from club music to experimental jazz and beyond.

#way of working
#collaboration method
#literacy in programming

b) The position of live coding in Slovenia

We were interested in: 1) Is it (already) possible to talk about a live coding community? b) Is there a need for this community? c) If so, what determines it or is there a common system of interests and values that would drive the convergence of more fragmented scenes and actors?

All interviewees are of the opinion that the LC community does not exist in Slovenia. "A" and "B" emphasise that LC is a heterogeneous scene from a political and cultural point of view. One interviewee believes that LC is more of a "market offering" than anything else, a version of a product. One of the interviewees claims that LC does not exist in Slovenia at all. "C" emphasizes that there is a seed of a LC community, which is built through a series of concrete workshops, through which everyone who is just introducing themselves to LC upgrades and exchanges knowledge. He adds that the need for community certainly exists – for the authors mainly as a channel for development of their work. He sees a certain possibility in both global and local communities – with the "live" local community being considered invaluable in community development, especially in the transfer of knowledge.

"A" says he is interested in community development. His approach currently includes internal experimental online group meetings of approx. eight people where they deal with Supercollider. His basic drive for these sessions includes

a conscious attempt to provide sexual and sexual diversity in LC. "D" emphasize the importance of a space where basic technical support is available in building a community. They see someone who cares for, encourages and maintains the community as an infrastructural necessity while acknowledging the involvement of each individual as equally important. They also consider mentors and knowledge transfer to be necessary for community development, as well as output-oriented workshops – with concrete products that each participant can later develop and supplement themselves. "C" also emphasizes the continuity of events as a slow but reliable method of community building.

#there is no LC community
#community development
#care as infrastructure

c) **LIVE CODING AUDIENCE PROFILES**

Interviewees were asked for their assessment of the sociodemographic and interest characteristics of the population segments they observe in their performances and workshops. The purpose was to find out approximately which segments are present at live coding events, from which it is possible to guess which ones most likely are not, so that in the following phases we could explore them and prepare guidelines for communicating with them. All findings are merely estimates that are not based on concrete statistical surveys and therefore do not imply a precise or actual audience structure.

Two basic segments of audiences are drawn according to the method of participation: 1) the audience that attends events (concerts, performances), 2) the audience that participates in programming workshops, LC, etc.
The table summarizes the responses of all four interviewees who described audiences at LC events:

Audience on shows	Workshop participants
Interest in music	Interest in electronic music production
Wider generation range:	More narrow generation range:

From 35 to 60 years	From 14 to 55 years, with a core between 20 and 35 years
More of those who are not as interested in the method or technical aspects, etc., but enter events as consumers of culture and arts	More of those who want to gain technical knowledge for their artistic creation.
Most of them come from Ljubljana, which indicates a problem with the centralization of artistic practice	Mostly from Ljubljana, where most of the activities are centralized (the differences are only evident due to the Covid-fueled migration of workshops online, where people from other, smaller towns are also involved).
LC audience is seen at similar artistic events, especially intermedia art and experimental music	Difficulties in diversifying the profile of visitors (e.g. inclusion of ethnic minorities, migrants, the elderly, etc.)
	Good experience with LC workshops for children, harder with high school students (shows a lack of interest).
Authors in the field of intermedia arts, computer music, etc.	
Interest in hybrid, unformatted approaches in art	

d) Audience acquisition and development strategies

We were interested in the ways and channels through which authors and producers approach audiences and whether communication tactics are modified by target groups. We were also interested in whether there was enough connection between individual actors and whether the connection seemed necessary. We also included in this set the questions about the critics' coverage of live coding happenings and the possible needs for a constant physical space that hosts LC related events.

"A" emphasizes that he is particularly interested in gaining audiences from disadvantaged or vulnerable groups and those to whom "society says that

creativity, especially computer creativity, is absolutely out of their reach." (see also above, where "A" talks about his methods of developing the LC community through continuous meetings).

"C" emphasizes that in such niche fields of art it does not make sense to build ambitious promotions, but to build the audience with patience through constant events, theoretical and content inputs and space, which would be a kind of a "home" of LC.

The epidemic and the consequent migration of production and events online have also given all authors access to the wider LC community globally. "C" emphasizes that this works well at events, also in light of learning about trends and innovations abroad, but makes less sense in workshops where there is potential for building local communities live.

"C" also emphasizes that audience development is facilitated not by recruiting for LC, but through developing and moving LC to other art genres (club scene, experimental music, improvisational scene) that already have a stable audience of their own. In this way, LC enters into a mutually beneficial cohabitation relationship.

"D" emphasizes that in a community based on workshop building knowledge and actors, it is important how the work from these workshops is presented to the public. Exhibitions and public events are welcome to acquaint the public with the work, concepts, etc. When communicating with a wider audience, they emphasize the importance of storytelling, which provides insight into an otherwise hermetic professional discourse, which is especially true for audiences who are more interested in the experience of the event (performance, concert) than the method.

Critics: It is easy to see that the computer arts do not achieve such critical coverage as other approaches / media / ways of creating do. Critics in principle have the opportunity to bring a piece of art or an artistic practice closer to the audience, and from this point of view there is certainly untapped potential here. Among the answers given by inteviewees, however, there is also a concern that critical writing may lead to the appropriation of live events.

e) Gender- and sexual awareness

"D" emphasize that it is important to create a safe space (also when it comes to women-only events) within which we can learn, overcome fears and support each other. It is especially important that the bearer of knowledge (mentor) is not (always) a man, but that community is also educating and looking for women authors. The use of multiple/neutral gender forms and pronouns in online and general communication also contributes to greater inclusiveness.

"A" is convinced that there is a large segment of the population that initially believes that it does not have sufficient skills for LC, programming, electronic music production and similar activities. He is largely interested in event design in this segment, which includes both economically and socially disadvantaged and specific status-group segments (LGBTQ+, migrants). He believes that it is necessary to work on the empowerment of these groups and to bring them closer to new ways of artistic creation.

#depatriarchalization
#class difference
#social inclusion

RECOMMENDATIONS

1. **Defining audiences**: LC audiences should be considered in at least four segments that require different approaches:
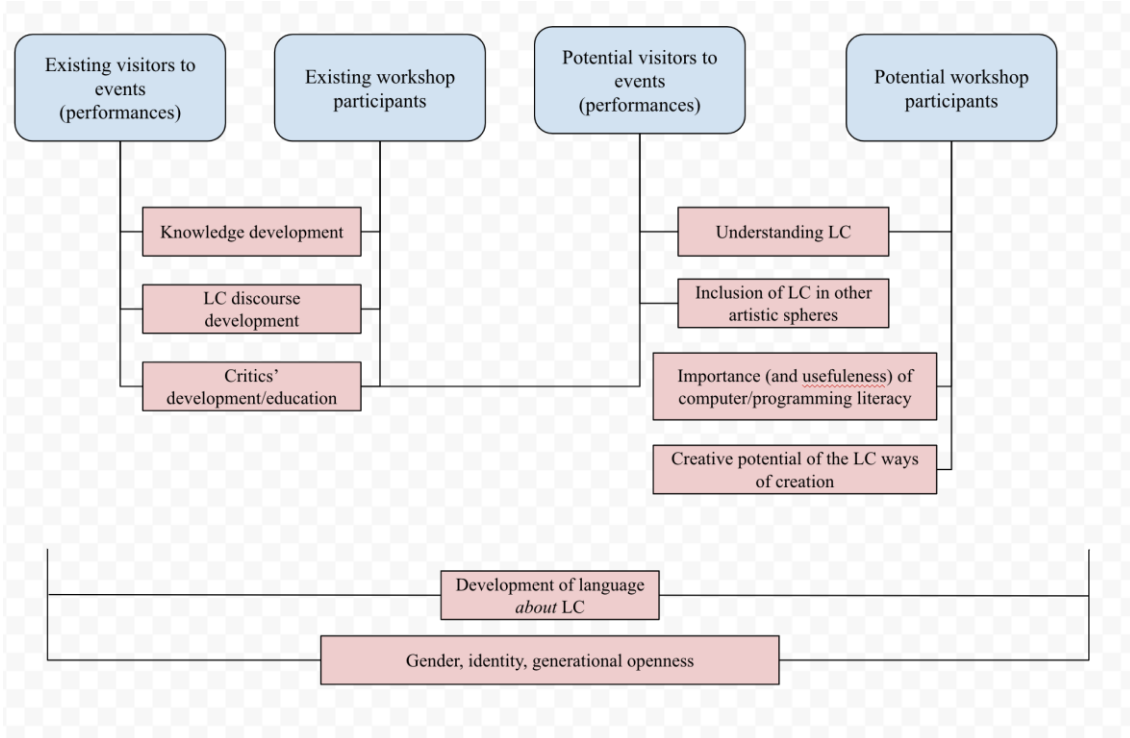
2. **Discourse:** We believe that it is the task of all LC actors to "speak of themselves by themselves", "of LC by LC", otherwise the public, like the critical sphere, is constantly confronted with LC as an area of the unknown, almost unspeakable. That is to say, it is necessary to present the LC in the local space, to say what it is (or is not), what potentials it represents and to place it in a wider artistic as well as social space. An appropriate format could be a **symposium**.
3. **Space:** For the long-term development of the LC audience, it is important to cultivate a continuous physical space where both the authors and the audience have professional support.
4. **Continuity:** The audience building strategy should be based on the continuity of events and the long-term expansion of the pool of authors and consequently their audiences.
5. **Cross-over:** One way to gain new audiences could be to intensify the insertion of LC into other artistic spheres.

6. **Youth segment:** One of the long-term investments in audience development for LC is working with young people (from primary school onwards). For this, it is necessary to raise awareness of parents and educators and to place LC in the existing mechanisms of cultural and artistic education. Both the method of entering the premises where they are educated and the introduction of the audience to the LC space(s) in the city make sense. Such an approach requires systematic and constant work. For a niche area, long-term monitoring of a small group of community-building adolescents makes more sense than a mass approach.

7. **Generational openness:** Although there is a certain drive for the focus to be directed at so-called young people, we suggest to producers not to dive into ageism. The assessment of the demographic coverage of LC events itself shows that LC exceeds age limits, and rightly so. There is absolutely no reason to focus exclusively on young people. Instead, we propose communication that highlights the socio-artistic and creative potential of both LC ways of creating and the consumation of LC works, as this is what really differentiates LC from other artistic processes.

8. **Gender difference:** It is rather obvious that there are currently more men than women included in LC in Slovenia. A diverse audience also needs to be cared for through the diversity of authors. Male-oriented community building is not exclusionary, but it is also, to put it mildly, boring and omits many interesting and innovative artistic and social perspectives.

9. **Language:** We noticed that more interviewees immediately switch to using English when talking about LC. Therefore, we offer the question of whether the use of the English language in the Slovene-speaking area may hinder the development of some audiences, as it creates a dividing line on the basis of fundamental mechanism of communication.

10. **Criticism:** The critical sphere is the one that articulates artistic events and innovations and thus brings them closer to the audience. It often represents the first contact of individuals with a particular art and thus influences the development of the audience from non-existent to potential and only then perhaps actual. We believe that proposal no. 2 (discourse), also directed to the critical sphere, represents an important channel for the development of LC audiences.

The research was made possible with support from the Ministry of Public Administration of the Republic of Slovenia and the Municipality of Ljubljana – Department for Culture. The residency is a part of the On-The-Fly project that is co-funded by the Creative Europe programme of the European Union.

On-The-Fly is a project to promote Live Coding practice, a performative technique focused on writing algorithms in real-time so that the one who writes is part of the algorithm. Live coding is mainly used to produce music or images but it extends beyond that. Our objectives are: supporting knowledge exchange between communities, engaging with critical reflections, promoting free and open-source tools and bringing live coding to new audiences. The project, running from 10/2020 to 09/2022 and co-funded by the Creative Europe programme, is led by Hangar Barcelona in collaboration with ZKM | Center for Art and Media Karlsruhe, Creative Coding Utrecht and Ljubljana's Ljudmila.

Mestna občina Ljubljana

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA JAVNO UPRAVO

Co-funded by the
Creative Europe Programme
of the European Union

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