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Listening through Webs for/of Creole Improvisation
Weaving Music II as a Case Study

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Résumé de l'article

Our paper reflects on our experience with Weaving Music II—a web performance space we built with fifteen artists working across different disciplines. The website and our essay attempt to create alternatives to the "at-the-same-timeness" of streaming technologies as well as the forms of listening defined by data capitalism and corporate platforms like Google and YouTube. At the heart of the alternative practices we propose is an embrace of what we see as the creolizing potentiality of the Web and of listening. To unpack these potentialities, the essay and artwork critically reflect on listening that occurs through Afrofuturistic modes of engagement with technology, space and time. We consider the historical origins of Web improvisations, our approach to collaboration using Weaving Music II, and theories of information that move beyond the need for predefined codes of understanding.

Listening through Webs for/of Creole Improvisation: Weaving Music II as a Case Study

Jessie Cox and Sam Yulsman

During the COVID-19 pandemic, it has become necessary to relay musico-improvisational, collaborative, and conversational practices to the Web. Technological shortcomings to practicing certain aspects of live musical improvisation online have come to the fore, suggesting different improvisational and experimental solutions. Toward this aim, we and our collaborators embarked on a project to create a website that would allow us to experience improvisational togetherness and interaction in a different way than seemed possible to us at the time (March until ca. September 2020) using tools like Zoom, where users deal with an often-confining at-the-same-timeness, or Facebook and YouTube, where the listening experience is strongly curated using data about one's past activity. The website we built—Weaving Music II—is, accordingly, an artwork focused on the process of its making instead of the achievement of specific, predetermined aesthetic or social goals. It is also concerned with the way artists and audiences can use the Web to interact while moving in and out of being together in time and space. There are no limitations as to artistic medium or style, and each contributor is free to bring their personal practice with them to create and edit content on their own time (or during scheduled hackathons where some of the editors would meet to discuss and edit at the same time). The website visitors—i.e., audience members or listeners—similarly have significant freedom of choice when it comes to how they want to experience the site's artworks: there is no prescribed singular narrative—their movements are not funneled in certain predetermined, desired directions. Instead, the website has become increasingly complex and maze-like, formats and page locations are constantly shifting in ways that make it difficult to return to a specific page twice or to find the work of a specific artist without first encountering unexpected or even undesired artwork.

Boundaries separating what it means to listen to Weaving Music II—understood in this context as coextensive with the improvisation involved in Web surfing/navigating—and the editing/creation of its content, become increasingly hard to locate within the complexity and unsettled quality of the website's layout. Editors/authors must first become listeners. To edit or publish their work, they must navigate through the maze of randomized, quasi-anonymous,[1] constantly re-mapped, entangled pages to find a page-location for their contribution, or existing pages they want to edit and relate using hyperlinks (see below for a detailed explanation of this process). This mode of navigating and collaborating on the Web within a scene of often insurmountable uncertainty about where desired (and undesired) content is located, contrasts in important ways with the design of existing spaces and tools used for hosting, streaming, and publishing collaborative, multi-artist improvisations. Most importantly, Weaving Music II's opaque stance toward the world—its attempt to encourage listeners to actively dig through its contents—encourages the listening process to proceed as a form of co-creation: listening as a technology of re-definition (Cokes 223). For if, as Édouard Glissant states, opacities allow movements out from getting to the bottom of what something is into the weaving of relational understanding—a "knowledge in motion" (*Poetics of Relation*, 185–91)—then the website's repeated refusals to clearly present its format and content location can similarly be understood as freeing the process of Web improvisation from proceeding immediately towards predefined goals via the logic of knowledge or experience acquisition. Instead, the visitor must navigate using a messy, precarious practice of clicking to see where a link might take them and then either retracing their steps or moving to a different constellation of woven pages. A single predetermined significance of the artworks encountered cannot be easily grasped. Rather,

meaning must be constantly redefined according to the improvisational process of clicking, reflection, and recalibration, as well as the woven juxtapositions presented by the often-contrasting aesthetics of the artworks themselves.

While it is true that all improvisations (on the Web or otherwise) involve dealing with some degree of uncertainty and unpredictability, it is also clear that everyday Web navigations are dominated by encounters with search interfaces and social media platforms built according to an ideology that privileges data transparency (West 33–35). Data about who we are and what we tend to do is collected in order to curate predictable, "useful" listening pathways through the vastness of the Web; what we see/hear along the way can be managed according to the needs of big institutions or simply capitalized on by using data for advertising purposes. In this sense, we can be reduced in these spaces to usable sets of information about our histories with a specific tool like Google or Facebook; transparent versions of who we are and where we want to go are constructed in an attempt to make our agency predictable. As Franco Berardi puts it, Google has become "the most perfect colonizer of all time," trapping our agency[2] in a transparent, predictable, knowledge-producing machine:

> Google knows what you need, and you know that Google knows what you know, and Google knows that you know that Google knows what you know. So the answers to your questions will be exactly the answers you need because your questions are more and more tailored by Google, as Google has been tailored by your questions and your world is tailored by the system of questions and answers between Google and you. (247–48)

This relationship between opacity and transparency, and the possibility for improvisation as we define it—an improvisation entangled in creolization and Afro-diasporic practices—is unpacked throughout the remainder of the essay so as to reveal the value of such improvisational practices, as well as the value of and created by listening. The resulting analysis, and indeed the artwork itself, attempts to re-interrogate the transparency/opacity axis and, in turn, its relationship to agency, power hierarchies, and the delimiting of the types of life allowed/made possible by the Web. In this sense, of course, Afro-diasporic improvisational (or Afrological) practices are particularly germane to our approach, especially in relation to the search for ways to unsettle and decolonize these intertwined spaces and practices. It seems fruitful, then, to mention that these Afro-diasporic practices are not to us outside or other, but are right there in place. Their unsettling activity cannot be neatly confined to a tradition of merely sonic, visual, or social aesthetics and then related transparently, after the fact, to a specific practice of Web navigation; rather, they are inseparable from Black life and hence proliferate as exactly that unsettling structure within a scene of improvisation that allows listening to redefine instead of limiting it to reduction, comparison, and understanding.

Here, it becomes necessary to address the discourses around questions of Afrological musical improvisation. The George E. Lewis essay that introduced the term Afrological improvisation laid the groundwork for much ensuing inquiry as to how Afro-diasporic musical improvisation practices interface with particularly Eurological ones, and raises questions as to what power structures are involved and/or performed ("Improvised Music" 93). The terms Afrological and Eurological have to be historically situated and heard in relation to a specific set of agents and agent assemblages (institutions, labels, festivals, etc.). More specifically, they are articulated assemblages—at once mobile and productive of lasting hierarchical structures. As Alexander Weheliye notes, "preferred articulations insert historically sedimented power imbalances and ideological interests, which are crucial to understanding mobile structures of dominance such as race or gender, into the modus operandi of assemblages." This fusion of "articulation" and "assemblage" is needed because assemblages, as defined by Gilles Deleuze and Felix

Guattari, "foreclose the conceptual reflection of the ways racialization and different axes of domination cooperate in founding racializing assemblages" (Weheliye 49). Following such a line of reasoning, Alexander Weheliye points poignantly to how black studies risks (re)articulating the very problematics it works to undo by taking up "the assemblage of black people as the de facto real object of black studies analytics" (Weheliye 17).

Similarly, we ask how the articulation of, and the emerging discourses around, the Afrological vis a vis the Eurological reperforms its own originary violence of erasure. What seems to be at stake in these terms is the question of mobility and the place of Afro- as outside of and opposed to Euro-/Europe. Eurological is not ascribable to Black individuals; it is defined through not being Afro-. More specifically, it practices an erasure of Black subjects and defines itself through critiques of Jazz. At the same time, Afrological is ascribable to white ("European") subjects. Ergo, blackness, what one could call a component of Afro-, is more easily transferable than Euro-, or whiteness. This raises some issues: on the one hand, Black subjects cannot as easily become European (if at all, since, if articulated through this opposition, this is an insurmountable difference), nor benefit from the privileges of whiteness; and, on the other, blackness can be removed from Black lives. This problematic points to how this articulation of the Afrological vis a vis the Eurological can lead to an exclusion of Black lives even if the Afrological, as opposed to the Eurological, is ascribed to white subjects. In other words, there is a danger that Afrological improvisational practices can be removed from Black lives. This does not mean that the Afrological cannot be ascribed to white subjects—on the contrary, this is one of the strengths of this particular term—but what these considerations demand is a practicing of both improvisation and its boundary conditions that sustains the possibility of Black living subjects (as opposed to only dead subjects) entering the same space: an improvisation of spaces not hostile to Black lives. What this analysis points to is also, of course, the assumption of the Euro- as white, and as Lewis highlights, the general "exnominative" character of whiteness as an articulation of power ("Improvised Music" 99–102). The problematic lies in whiteness' operative opacity—its refusal to transparently define itself and, as such, its propensity to hide in plain sight, cloaked in seemingly neutral categories. The term Euro- must be considered as a disguised marker for whiteness, bearing with it as such the erasure of non-white European subjects.

In conclusion, the Afrological-Eurological dichotomy has to be further scrutinized as to how its articulation can reperform the very violence of erasure it addresses. We would like the reader to consider this unpacking of the Afrological when reading our thinking-through of the creolizing potentials of the Web. It is crucial to acknowledge this complexity and the importance of the question of Black life in relation to creolization, Afrofuturism, and of course improvisation. For while creolization implies, on its surface, improvising meetings and mixings beyond the immobile hierarchies of the Afro-Euro dichotomy, such an approach is real and substantial only where creolity is routed through the question of Black life, the violence of racism, and their entanglement in the history of capital and empire. As Gayatri Spivak points out, a Glissantian articulation of creolization "acknowledges the place of capital and class. . . as well as imperialism" (27); otherwise, it will always risk reperforming the violence of pre-existing power hierarchies. What becomes evident then—what has to be included in this set of acknowledgments for creolity—is the acknowledgement of creolity's foundation in an engagement with the problem of the colour line, with the question of Black life and institutional racism. As Glissant notes, particularly in relation to the Americas, the experience of creolization emerges "against a background of slavery, oppression, dispossession by the various systems of slavery..." (*Introduction 5*–6).

Such engagement with improvisation (specifically vis a vis questions of Afro- and Eurologicalness) enables not only a redefinition of the present, but the search for alternate

futures through an-other kind of relation to the past. In other words, a creolizing approach to improvisation has to go through Afro-, its history and its historiographical erasures and ambivalences. This is an Afrofuturistic doing that uncovers "the histories of counter-futures created in a century hostile to Afro-diasporic projection and as a space within which the critical work of manufacturing tools capable of intervention within the current political dispensation may be undertaken" (Eshun 301).

Let us turn to the Web and attempt to listen in this Afrofuturist manner that creolizes. While it has become increasingly dominated by transparent movements in predictable, mineable trajectories, the *germs* for the possibility of a Web centered around individual agency and improvisations across cultural and technological differences can be traced back to the 1980s. "Enquire"—an early precursor to the Web developed by Tim Berners-Lee—was created to facilitate collaborations between scientists from different countries who traveled to and from CERN for interrelated research projects (Ryan 105). Berners-Lee intimates that Enquire was never "suitable for general consumption," in part because it demanded (much like Weaving Music II) a considerable degree of individualized effort to find information. Users had to progress via "links from one sheet to another rather like in the old computer game 'adventure'" (217–18). This points back not only to West's account of the link between transparency, useability, and constraints on user agency on platforms like Facebook and Google (33–35) but, perhaps more importantly, to the way platforms structured around the demand for users to *actively* sift through an archive of information—to improvise "adventures"—can simultaneously facilitate improvisations between agents collaborating across cultural boundaries.

In the case of CERN specifically, these differences were still within a Eurocentric structure of exclusion—in 1979/80, for example, the large majority of participating scientists were from only France, Germany, Italy, or the United Kingdom (Krige 255). However, using a creolizing gesture that re-imagines Gayatri Spivak's repositioning of Dante via Glissant as already situated amidst various popular and political Italian creole languages, the early World Wide Web can be understood with more precision as emerging from within the creole improvisations of French, German, Italian, and British physicists. If one follows this thinking of the internet's history, then an alternate means of engaging with the Web can be heard and sounded going forward. Heard through Glissant's notion of créolité specifically, such a sound would necessarily allow for the acknowledgment of "the place of capital and class in any theorization" and hence demand a much more thorough account of how specific Web creoles come into being in relation to specific structures of national funding and exclusionary ideologies (Spivak 27). CERN emerges here as a kind of incomplete history of potential creolizing Web counter-futures. Questions of possession—or ownership, capital, and power—as well as the question of how we relate to the other, must, in turn, be entangled with *questions about the territories/spaces* that any Web creates and hosts, as well as the assemblages of individuals it allows for. Questions of community and relationality are amplified here as well. DJ Spooky notes:

> To me, digital community is about this sense of networks: it's people who you relate to, send files to, and exchange information with. If we were to draw a diagram of everyone in this room and the relationships they have—between you, the moderator, the audience, and me—there's lots of layers of connectivity going on. That's a social process of how human beings create meaning. (Miller and Iyer 233)

This definition of community, as rooted in relationality making, is a creole network, an improvisational co-inhabiting. If distant spaces and times, people, and as such also cultures, are brought into one room, then this can be creolizing if they are, according to Glissant, in a heterogenous relationship and if there is an unforseeableness to their merging (*Introduction* 9).

Regarding the heterogeneity that Glissant insists upon for proper creolization, it seems that this heterogeneity, particularly in the Web, is a question also of agency and of opacity and transparency, which are forms of power. Unforseeableness is also, of course, a question of opacity as it pertains to temporality or causality. Below, opacity and transparency's relationship to each other, power, and the Web are further interrogated, as well as their entanglement with the possibility for improvisation. At this point, we will proceed to build upon our initial description of Weaving Music II so as to discuss at greater length how opacity allows for the ambivalence and unpredictableness of individuals, and how this incalculability—i.e., inability to be easily mapped or mined—is entangled with the possibility for creolizing improvisation.

Overview of Weaving Music II

The Weaving Music II website centers around improvisational navigations through a large database of co-authored sounds, images, texts, and videos. The structure of the database was designed in relation to what Kodwo Eshun describes as "a museum whose ruined documents and leaking discs" are encountered by future African Web archeologists (287)—in our case, website users/listeners. Formatted in a three-column grid, each page of the museum/database is identified with a random string of numbers and letters, which means that there is no clear/obvious indication as to where one is going. The use of the randomized naming structures produces a situation where the exact location of the content is not readily apparent, forcing a user who wants to find the same content twice to continually search by trial and error for its location. In this sense, the site allows for forgetting and for the discovery of other and/or even undesired places and pages at the same time that it attempts to emulate a more biological form of memory within the structure of a database or archive. The listener needs to accept, or deal with, the uncertainty of where and when something is. This should afford each website user/listener a chance to begin their listening navigation by actively digging and sifting through an indeterminately defined set of portals to potentially meaningful Web materials (instead of moving directly to a destination with predefined significance). In short, they have to improvise.
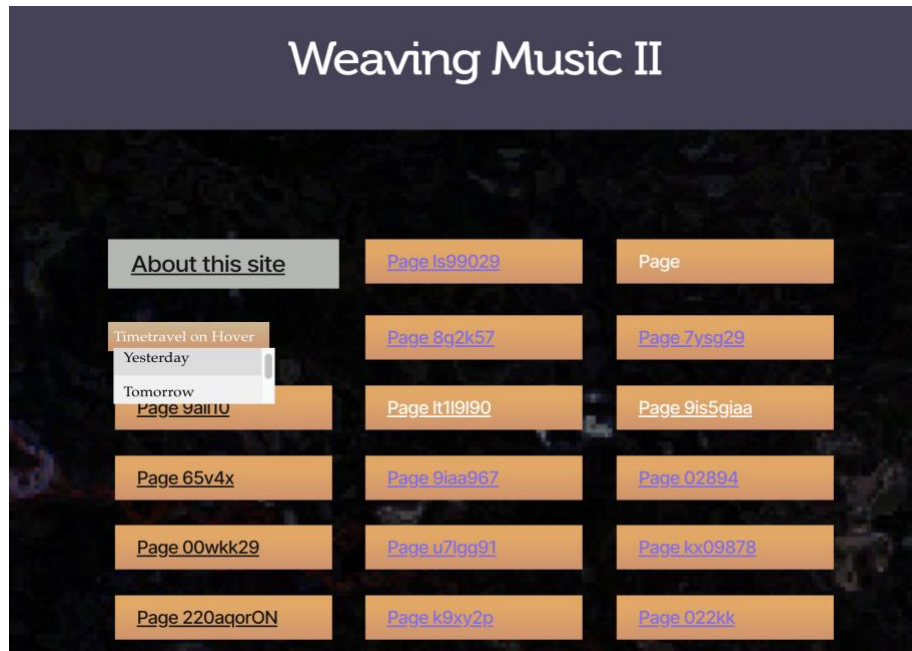

Fig. 1. The Weaving Music II home page.

"Time Travel on Hover" leads to a series of website copies made at random moments during the course of the creation and development of the site. These are continually edited, added to, and often adorned with (imaginary) mistakes, producing an improvised quasi-fictional account of the site's history and future, and allowing for an ongoing re-formatting of the page link order found on the homepage database. In this sense, the website formatting playfully questions the structural spectrum in database and archive-based art traditions between what Anne Nigten describes as "pre-defined and domain-specific applications" on the one hand, and "dynamic environments" on the other (7–8). Rather than coding an environment where user interaction changes the formatting or "real-time" causality and directionality of visual, sonic, or textual content, the WordPress platform has been "hacked" in simple ways so as to re-define website surfing as an unpredictable and active archival digging—a navigation of an artistic space whose presents, pasts, and futures are in an unpredictable flux that can only be parsed, discovered, and remembered via similarly shifting and playful journeys across pages and hyperlinks.

The process of domain-application and definition is also in flux at the level of the site content itself. Once a user/listener clicks on a specific main page link, they are taken to the corresponding sub-page where users/co-authors have created various media. To date there are sixteen active co-authors who have been granted full editing access to the site; the community of co-authors is continuing to grow and editing capabilities can be granted to any user/listener via email request. Editing capabilities include media uploading, hyper-linking, and page and post creation—the only constraints made explicit by the website designers being a request not to delete any content. The instructions provided to users/co-authors include specifics about how to perform various WordPress actions but also convey a wide breadth of possibilities in terms of what authorship entails. As the instructions note:

> Home page links to "Pages" can be added and embedded with video, audio or image material from idioms . . . there are no pre determined [*sic*] constraints in that regard— examples might include a musical score, a poem, an essay, a recording of a musical improvisation, a novela, a tele-novela, a mixtape/dj set . . .

It is important to note that these components of the page do not have to be finalized artistic products (although they can be). Due to many authors' concerns about not having enough time to make a significant contribution to the project, we decided to make an anti-perfectionist practice increasingly explicit over various Zoom and email correspondences. As one email invitation for a hackathon event remarked:

> Weaving Music II isn't imagined necessarily as a collection of perfect imbibable products/objects (although it easily accommodates them at the same time). For example, once and a while before our daily visits to internet collections of products and categories like Facebook or YouTube we might head over to weaving music ii to see how things are changing, add a link or question or idea or two and then be on our merry ways.

While these hesitancies and correspondences reveal different assumptions about creative/artistic work as well as a general attitude towards the non-normative techniques needed to engage with the site (i.e., interacting with the site as an editor is pointedly different from interacting with sites like Facebook or YouTube), it was especially interesting that the re-definition of the site as a space for unfinished life-like artistic expressions led to a blooming of activity in the form of media uploads and linking. One promising network of editing techniques has emerged specifically surrounding the creation of complex hyperlink webs between different pages within the Weaving Music II site. This creates multiple temporal readings of the site (as

opposed to a simple scrolling from top to bottom), leading in turn to the development of hidden complex navigation loops and "worm-holes" between texts and videos found in different fictional pasts and futures of the site.

There has been a related, if unanticipated, flowering of site "secrets." When the site was conceived it was initially thought that all linking would occur between pages, but when the improvisational making of the site began in earnest *with* the co-authors, an alternative was discovered on the WordPress platform called "posting." These posts, unlike pages, are not being linked to from the homepage, nor do they necessarily have the same naming structure. This led to the possibility of creating hidden pages, or posts, which allowed for the creation of *pages* only accessible through links that exist within other pages—i.e., they are not visible from the homepage.

Opacity and Transparency

While search algorithms and data organization techniques structured around the (pre-)definition of a desire according to specific categories allow us to follow the threads of our various daily desires and needs—take, for example, the desire to find a translation for a particular word—it's evident that the consequences and usefulness of such structures shift according to the context in which they emerge. For example, the operation of these search technologies within the local design structure of social networks on Facebook or Instagram has led to a coveted labour economy where powerful agents like corporations can capitalize on navigations by users. As Crawford and Joler point out in relation to Amazon's Echo AI: "the Echo user is simultaneously a consumer, a resource, a worker, and a product" (VI). The user has to be transparent so as to be both mineable and a worker at the same time.

Civil rights activists, legal theorists, and philosophers have argued for the importance of opacity and privacy to the flourishing of a democratic subject's liberty (see for example DeHert and Gutwirth 67). In short, who gets to have opacity is a question of power distribution: transparency allows for policing, whether it be government and corporate surveillance or the attempts of citizens to limit/hold accountable more powerful agents and agent assemblages (such as institutions, governments, or corporations). When institutions and governments have increased opacity towards the public it can result in a reduction of the individual's freedom and hinder the execution of the law and the enforcement of justice. If opacity is granted to less powerful agents, this allows for a certain degree of freedom in who they are and what they do. Furthermore, Zach Blas points out how the discourse surrounding struggles against mass surveillance often assumes a "generic" subject, implicitly excluding subjects whose very individuality must be accounted for by specific, shifting relationships to opacity and transparency ("Opacities: An Introduction" 150). This points back to Glissant's claim for opacity as countering/resisting both universalism (*Poetics of Relation* 189–90) and the reduction of what it means to be human. Data-mining relies on preconceived notions of how humans behave (and what they are) in the Web (Blas "Informatic Opacity" 2–3).

Search engines complicate this question further by asking the user to relate to themselves and their desires via transparent definitions. When we search for a specific object of desire using a search engine like Google, we have already done the work of producing transparency by identifying our desire with an object inscribed as a searchable linguistic category. As one of the co-authors recently remarked after searching for a movie to watch on Amazon, this leads to a situation where our desire and the potential creative energy contained within the impulse to dig through a corner of the Web-archive is "used up" by the clear one-to-one structure of searchable terms. Not only is what we find parsed by a corporate algorithm but, perhaps more importantly,

we decide to parse ourselves with *searchable language*, entering, in that moment, a transparent zone of correspondences in which where we are going and what we want are trapped within a habitual linking between desire and desired-object.

This sheds further light on our decision to structure the website around a series of randomly named page links. While a search engine can be entered at the upper right-hand corner, the linking scheme and grid-like database formatting offers a prominent alternative. Entering the website via such opaque, serially randomized portals implies a letting-go of pre-defined relationships between what we are trying to find and the process of finding it. Even in situations where the location of a specific weaving of contents has been memorized, the sheer density of the linking and the ongoing editing of user/co-authors mean that specific hyperlinks can only provide a fuzzy snapshot of where they might link to, often leading to listening pathways that implicate the same content or slightly different content in the same or a slightly different series of hyperlinks. As a result, there is always the opportunity for further link-digging, further listening, and further improvisational navigational decision-making on the part of listeners. At the same time, the quasi-anonymous authorship attribution instructions allow the activity of individual editors to remain shrouded in shifting gradations of relative opacity. Accordingly, a close listening for the personality or individuality of specific content(s) must be woven with the process of navigation/listening in order to ascertain the presence of a specific author. This gives all the material and discourses a different sense of authorship than if it were completely anonymous or transparent. There is always a lurking sense that there is an author with individuality, but also always a question as to who they are and whether they are an individual or a group of people. This invitation to listen for personality in the material significantly shifts its potential meaning.

Spatio-Temporal Decoupling and Information

One way to understand the actions involved in content and hyperlink co-authorship, as well as entangled user navigations and listenings, is as a collective creation and (continual) re-definition of different spaces. Semiotic spaces, visual screen-mediated spaces, musical spaces, imaginary spaces, etc., all have the potential to be(come) imbricated within the scales and local operations of the different physical spaces and temporalities of the co-authors and listeners. To take one striking example: An analysis of an instructional TV series uploaded to the site called "Space Travel from Home" is edited with hyperlinks to a wide array of different pages. A hyperlink over the phrase "patiently sifting through the rubble" within a quotation by Kodwo Eshun leads to a page populated by a collection of recordings of a text score that asks performers to play along to a recording uploaded to the page without listening to it first and record the resulting music. One recording combines the original violin recording with solo drums haunted subtly by "Space Travel from Home, Episode 3"; another combines the original track with found objects from a Florida highway. At the bottom of this page, a parenthetical epigraph reads "Are we still humans?" The "still" hyperlinks to a piece called "Still Life #32," the "Still" of which hyperlinks to another page populated by an array of collected YouTube links to recordings like Anthony Braxton and Richard Teitelbaum's "Silence/Time Zones" (subtitled by an anonymous author: "Silence by Wadada Leo Smith, performed by Anthony Braxton Ensemble") and "John Cage Meets Sun Ra" (subtitled "Another kind of silence"). Retracing one's steps back to "Space Travel From Home," one can find another hyperlink over the word "nod," that takes the listener to a silent video of a finger following a poem describing a nod of mutual understanding. Another "nod" hyperlink at the bottom of this video (there are many hyperlink "nods," so it might not be found at first, if ever) takes the listener to the same score for space traveling but now placed symbolically "Tomorrow," with the analysis having been replaced by a "secret" link to a biography of Lee Scratch Perry uploaded to YouTube.

Such a loopy, often dense collection of interlocking navigation routes emphasizes the notion of variation and difference. Each network of interwoven space implies the possibility for multiple listening improvisations to occur—each with potentially unique sequences of navigation and relationships to causality. The decoupling of these improvisational actions from a single time and place so that visitors can always access them separately on their own time can be seen, not as an obstacle to high-fidelity interaction but, in fact, as laying bare the reality that there is no a priori, *real* causally-articulated space-time within which we improvise (Szekely 117)—only shared attempts at creating, simulating, fictionalizing, and hence defining multiple space-times.

Weaving Music II's formatting and navigational-design structure can be heard as attempting to take this decoupling of space-times even further by articulating a practice of *information* that sidesteps deterministic cybernetic models of meaning, directionality, and causality altogether. On a basic level, this understanding of information, and its interesting implications for post-geographic/post-"real-time" improvisation, points to philosopher Gilbert Simondon's non-cybernetic theory of all information as fundamentally opaque in terms of the causality and directionality of exchanges between individual agents or agent-systems. Because cybernetic models of information require a "sender" and "receiver" operating according to the same code of understanding, they run counter to Weaving Music II's tendency towards complex systems of relations between agents operating with potentially incongruous experiences of space and time. Simondon's argument that there is a fundamental incompleteness and indeterminacy to the sender and receiver helps illuminate how information is prone to an improvisational stance (Bardin 28). For Simondon,

> Information is halfway between pure chance and absolute regularity. . . information is not a kind of form, neither a set of forms, it is the variability of forms, the intake of a variation upon a given form. It is the unpredictability of a variation, not the pure unpredictability of any variation. We shall distinguish three terms, then: pure chance, form and information. (qtd. in Bardin 29)

This informational quasi-causality, this ambiguous "half-way" or in-betweenness, inherent in any (pre-)definition of regularity and chance, leads to a completely different way of thinking and practicing the creation of meaning from Web information. Specifically, it brings us back to the Web's origins in improvisation and creolity, since, if information is not unidirectional but rather a complex entangled patterning, then we have to rethink the internet via improvisational engagements. Our listening must attend not merely to judgements about clarity and usefulness but to the individuality of the pattern's woven threads and their emergent texture. Ultimately, this suggests the providence of Jazz improvisation's affordance for multiple narratives and individualization (Monson 81).

Improvisation and Listening as Technology

Weaving Music II's affordance for multiple narratives is most evident in the webs of co-authored hyperlinks (described above) that allow seemingly stable moments of meaning to be encapsulated within new causal and spatial structures. This use of hyperlinks is, not surprisingly, well within the tradition of Ted Nelson's hypertext coding, which he imagined from the outset as allowing for documents with multiple versions to "be read out of sequence according to readers' line of interest rather than the printed flow of text" (Ryan 106). At the same time, it counters Nelson: since there is no need for easy comparisons of pages to be made, we ignore the well-trodden problem of efficiently organizing and parsing vast amounts of data. This is facilitated by our design which, as noted above, allows a user to choose from multiple possible pathways across pages, each with their own "musical score," or causal structure, offset

from other possible roads (such as other linking or just scrolling down in the page itself). This allows for multiple possible listenings and narratives and, in turn, for greater listener agency to (re-)construct one's own piece (of art). While we have argued that Weaving Music II allows for improvisation *within* a local scenario defined by geographical and temporal decoupledness, the theories and practices of listening that have emerged from it, furthermore, underscore the fact that improvisation itself does not necessarily have to happen in (the same) time, that it can also (re-)create causality/time itself. As Berliner points out, this sort of retro-causality is already central to Jazz improvisation, where past "mistakes" or "accidents" are re-defined and integrated into the present and future:

> Improvisers cannot retrieve their unintended phrases or unsuccessful "accidents." Rather, they react to them immediately, endeavoring to integrate them smoothly into their performances. Mistakes, in particular, they treat as spontaneous compositional problems requiring immediate musical solutions. (210)

This, of course, is related to Glissant's notion of créolité as "open totality," as being whole and not at the same time (*Poetics of Relation* 171); for if something is open and complete at the same time, then with every listening it becomes part of many different/novel temporal and spatial structurings. Future acts can affect the past via the technology of listening. This sort of "spooky action at a distance" is crucial for the ways that Weaving Music II allows for different relationships to time. For example, there is no pressure to edit every day because what was there yesterday can matter again tomorrow through re-listening—which is remaking.

If information and narrative are theorized not as absolute but as creating, similar to Herbeck's analysis of plural-narratives in French-Caribbean literature, a "harmony of disparate voices both linked and separated by time, place and context," and if "the juxtaposition of these sometimes seemingly incongruous pieces is realized *in relation*, finding and asserting broader commonalities that render it possible to acknowledge differences and to present them as nonetheless part of a whole" (Herbeck 174), then we have to rethink the process by which we listen to these assertions of commonality as inherently improvisational; commonalities must be continually found and asserted within the broader web relation by listeners. Listening is the necessary backdrop that allows for the co-making of a space, or web, for dialogic interactions amongst individuals. This space can only unfold if listening is rooted in relationality-making and is, at the same time, opaque and spooky in its relation to time. This haunting quality of listening that *moves time* and *makes time through redrawing what is in time*, is also crucial to Cokes' evoking of listening as technology. For it is in relation to the hauntology of Black life that listening becomes (re)productive. What this indicates is that this kind of listening is a listening that reorients, where orientation is a matter of attributing value and power (after Sara Ahmed). Listening is then not only a productive process—i.e., a technology (Cokes 223)—but also an improvisational remaking of self, other, and the world.

Thus, listening becomes an improvisational process. It unfolds and refolds over time and is constituted through negotiation, dialogue, disagreement, and adaptation, meaning that the spaces, times, and environments in general are involved in this process of listening. As a technology, improvisational listening implies production and reproduction, a reprocessing of what it means to listen where what is encoded and carried in memory is always already a creolizing meeting between listeners who are being changed by each other. Hence, encoding a form of re-orientation of the world, self, and other, and inscribing one's listening into the space produced by such a redefinition of what is valuable, to whom, and why, allows for the individuality of each *listening-technology* and, in turn, for the positing of different pasts and futures. Our way of navigating and hearing amounts accordingly not merely to a personal

"sound," as mentioned by Lewis ("Improvised Music" 117) but, furthermore, an assertion of *a personal way of listening to the world*—the traces of our technological and personal entanglements with historical, social, and geographical spaces. As Lewis himself notes: ". . .we can understand the experience of listening to music as very close to the experience of the improvisor" ("Improvising Tomorrow's Bodies").

Ultimately, an aspect of listening crystallizes here that also became apparent after our first hackathons. New techniques of listening are being developed via the act of discussing one's own approach to listening with others. Another moment of creolization emerges where individuals with distinct listenings invite each other into their listenings, effectively changing, enlarging, distorting, and redefining each other's listening experience through a further collaborative improvisational meeting. In this way, multiple different causal and spatial listenings can exist and, at the same time, be relationally entangled with others—as Herbeck notes about créolité:

> Old identities are not summarily erased upon contact with others as in the all too reductive melting pot analogy but, quite to the contrary, incorporated into a new depth of expression—an identity that, much like a mosaic, or the allegoric "tresse" proposed in *In Praise of Creoleness*, retains visible evidence of the elements that have contributed to, and are indeed in many regards responsible for, its form. (163)

Such listening together (listening specifically as developed in this paper) that creolizes across different spaces, participants, and opacities—that in turn shifts and transmorphizes our listening—is at the core of this project. Namely, what it allowed us to do is to listen together and for each other. It was a short-term antidote for our pandemic-produced social and professional situations; a way and space to reflect on the values of improvisatory meetings. Never eternal, it only exists during the time of its making, leaving only remnants or traces like this essay and the memories in the participants' and listeners' minds. A new life form continues to emerge via these reflections, too: *personalized ways of listening to the world*—ways of coming together through relation and fiction retelling, where opacity is mobilized in the face of the demand to make our listening labour predictable, economic, capitalizable. These listening life forms are, accordingly, wasteful and messy; they include misunderstanding as a possibility and they undo their own boundary conditions. Listening in this sense moves beyond intended uses and control, remaking itself along the way. It is not a matter of vibrations arriving on a surface, then, but a matter of revibing/reviving what hasn't been listened—a sounding matter of non-sound or a sounding what has been unsounded or an unsounded sounding: an information paradox; as in *black* holes, listening loses old information and new information evaporates. Each individual's listening is a meaning-making that requires others to listen, other directions of listening. This sort of holographic technology makes itself anew, interfering and scattering the re of relations: *sounds of listening*.

Notes

[1] The editors do not have to add their names to content they contribute, although they can if they choose to do so. At the same time, all of the editors' names are retrievable on the "About this site" page of the website.

[2] Berardi's primary concern here is not agency per se but what he calls the "obliteration of experience singularity," which references a specific rhizomatic semiotics where "meaning emerges from a vibration, which is singular in its genealogy and can proliferate and be shared" (17). While this approach is useful, we discuss below the importance of Glissant's

understanding of créolité (as well as Spivak's) which allows for a thorough consideration of how differences between such singularities are produced by the violence of capitalism and empire.

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