



Bringing back the ‘live’ into the digital: Semiotics on the emergence of live VR in music concerts

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Introduction: Live and virtual?

This paper presents a semiotic analysis of live virtual music concerts in function of the course Cultural Semiotics (B-KUL-F0YS6A). Therefore this text shall focus on the relationship between real-life live music and digitally mediated or virtual live music. The reasons for this research are cultural changes one can observe in our society today. Our society today is dealing with a worldwide pandemic (COVID-19) for almost a year. With this crisis (one of many) the so-called ‘digital turn’ of the 21st century seems to be accelerating. This also seems to influence music concerts and the notion of live music. How can we understand the change of the experience of live music in the virtual era?

Virtual reality concerts are not uniform by any means, but all of them aim to translate a live experience into a virtual, online experience. Oxford Languages defines VR as “the computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors.”¹ Examples like Fortnite, Lost Horizon Festival and WaveXR (see appendix for more info) involve artists/audiences turning themselves into digital avatars and using these projected images to stage a live concert. How can we understand the change from live music concerts to live virtual music concerts?²

Before going on: what does ‘live’ mean exactly in these contexts? Classically we can understand a live-performance as a performance where the audience and artists are physically and temporally simultaneously present. This definition can already be problematic, especially in the case of recorded (live-)concerts, digital livestreams, or ‘live virtual music concerts’. Therefore, in another definition we could interchange the physical criterium for a criterium of (virtual) spatio-temporal coherence, that is to say that a live-performance is where the audience and the performers share the same time and space. This would actually also not suffice. Is a live-concert-recording, a livestream, or a virtual concert still to be called ‘live’? Today ‘live’ is being used more often for real-time (virtual) events. A third option therefore would lead us from ‘live’ to the concept of ‘liveness’ or live experience. Phenomenologically, ‘liveness’ is no characteristic of the object or an effect by a medium, but it is an experiential interaction (intentionality) which is produced, because we are involved with a (virtual) object and are

¹ <https://languages.oup.com/google-dictionary-en/>, [last checked on 2/01/2021].

² Some other noteworthy mentions which precede the pandemic are Second Life and Minecraft, which also host these in-game live audiovisual concerts since the early 2010’s. For more on Second Life see: <https://www.youtube.com/watch?v=2WZnqP7DDpI>, for more on Minecraft see f.e. Coalchella: <https://www.youtube.com/watch?v=2WZnqP7DDpI>, [last checked on 2/01/2021]

willing to accept the claim that it is live. With this phenomenological stance it becomes possible to understand that digital/virtual liveness is not created by intrinsic properties of (virtual) entities or public constructions, but as a specific way of being involved in an event.³

Step 1: Why is virtual live music a good and interesting cultural sign?

A good cultural sign means it is clear, not coded yet, and relevant. Above I made clear what is mean by ‘live VR concerts’.⁴ What the emergence of VR concerts means for us as individuals and as society has not been codified (yet). Everyone can acknowledge that there are a lot of philosophical questions around the issue. It is hard to tell what live VR concerts offer, what they are and bring about, how they differ from real-life concerts, what their potential might be, or what they show us about our changing culture. The relevance of this topic lies in the expanding numbers of VR-events and the growth of interest by consumers and producers of the music industries. The pandemic plays an ‘alarming’ role in the sense that this process of (a)semiosis is speeding up. Will music concerts change forever?

This text therefore analyzes the concept of live VR concerts in the context of multiple cultural semiotic theories. In the next step this text will implement three general theories on structural semiotics: First I will refer to the linguistic theories of Ferdinand De Saussure. Secondly, the narrative semiotics of Julien Greimas (1917-1992) and the semiotic square. Thirdly, the tensive semiotics by Fontanille to focus on the subject and bodily experiences of live VR music. After the structural semiotic analysis step three will shortly touch upon the subject of visual semiotics by the Belgian team Mu, because the visual becomes more and more important in VR live music. Step four of this text shall discuss Peircian semiotics by looking at the process of semiosis, offering a series of interpretations of our sign. Step five will look at the cultural semiotics by Lothman. Here we make the movement from a semiotic sign to a cultural sign and cultural change. Each method/perspective can add something relevant to the analysis.

Step 2: Structural Semiotics:

A) Linguistic semiology: the language of Ferdinand De Saussure

First this text analyzes the phenomenon of live VR concerts in line of the European/continental branch of semiotics, using the structural theories of Ferdinand De Saussure (1857-1913). His theories consider linguistics as the pilot science for semiotic analysis. We start with the very simple operation of considering the studied objects as signs. This means as a set of signs structured following the rules of language. Through these theories we can read culture/society as a hidden structure similar to the hidden structure of a system (such as language). In this way live (VR) music concerts can be seen as signs that are part of complex systems of signs conveying

³ These three definitions are based on the phenomenological work of P. Auslander, f.e. Auslander, Philip, Liveness: Performance in a Mediatized Culture. Londen; New York: Routledge, 1999.

⁴ For more info on these examples: see Appendix of this text.

certain meanings in the form of so-called ‘codes’. In the case of VR we can take this quite literally due to programmers coding software to project meaningful images on a screen.⁵

The Saussurean model defines a sign as consisting of an arbitrary (better: conventional) relation between a signifier and a signified. Simply said the signifier is the material form of the sign. In our case this would roughly be the visual and auditory (or other sensory/material) aspects that could be perceived of the virtual live concert (sounds & images), but one should also consider here the materiality of technologies used for VR-software and hardware, monitors, processors, etc. (computers, etched microchips, pixels on a display...). Is the simulation of VR not already a processed computer-language encoded into an audiovisual system of signs, similar to that of normal live concerts?⁶

The signified is defined as the content of the sign. In our case the signified refers to the concept of the live VR concert, namely. ‘a concert that is live and takes place in a virtual world’. Together the signifier(s) and the signified make up the sign. In our case this means that a live VR concert as a sign consists of material forms (image and sound, pixels, voxels, samples) and out of concepts of what live VR concerts is (concert, live, VR). It is important to note a fourth element in this scheme: the referent. In our case the referent to our sign is an actual event of a live VR concert (like given in one of the examples).

So far we have not spoken about the meaning of a sign. The meaning of a sign is not the relation between signifier and signified, as this relation can be seen as arbitrary (better: conventional or even iconoclastic). The meaning of a sign is a product between the sign and other signs of the category. The meaning of signs develops by oppositions, differences and in comparison with other signs (and beyond). The meaning of live VR concerts can only be known by comparing it with what it is not; what comes before and after; by thinking in terms of oppositions. One of these basic oppositions could be non-live (recorded) music or real-life concerts.⁷

To do this effectively we can build so-called ‘paradigms’ and ‘syntagms’ of signs. Syntagmatic and paradigmatic relations can be seen as different dimensions of a sign. Syntagm is a horizontal model of relations between successive or juxtaposed elements, and structured from the viewpoint of time or space. Paradigmatic relationships are about vertical substitution. They revolve around a class of homogeneous elements that are obtained by commutation.

If we look at the paradigm of the sign we can relate it to homogeneous elements like real-life music concerts, recorded live concerts, 360° live or recorded concerts, listening to a recorded album, listening to a recorded set on a live setting. These all stay within the frame of music and audiovisual performance/experience.⁸

⁵ Of course there has been a lot of critique on the privilege of language and linguistics, the systemicality, and the rationality of this approach.

⁶ Here we can maybe speak of multiple order signsystems, cf. Roland Barthes in *Mythologies* (1957).

⁷ See also poststructuralism and deconstruction, f.e. Derrida and difference/difference.

⁸ This list can be broadened, but here I will simply focus on the comparison between real-life concerts and VR-concerts.

Temporal syntagm of a live VR concert in comparison with real-life concerts shows more interesting differences. If one looks at the diachronic or linear temporal structure of a VR concert, one could f.e. distinguish the preparation for a concert, going to the concert, the concert itself, the after of the concert.

In the case of a VR concert the preparation is completely different from a real-live concert. You stay at home. You do not need to take a walk, a train or bus to get to a concert hall. You do not need to change your outfit or put on some makeup. You prepare your room and put on a VR-set, f.e. OculusRift and/or OculusTouch+. You turn on your computer and log into your account to redeem the digital concert ticket with a specific code, instead of entering the real venue and giving your ticket to a clerk. No need for extra time at a vestiaire or passing guards (or smuggling in alcohol), though you might lose some time on loading screens. Maybe you use your headset to contact friends who are also online in the event, instead of first meeting up physically and having a drink together.⁹

The temporal aspects during a VR concert are different as well, though it depends on the event. There are more static looking VR-concerts (standard stage, human avatars, rock-pop-indie genres, not much interaction) which have and try to have a similar pace and duration as real-life concerts, f.e. older platforms like Second Life. They mainly seem to offer a similar real-time experience.¹⁰ Lost Horizon, WaveXR or Fortnite events are shorter concerts, fast paced and more dynamic. The concert of Scott (Fortnite) took only fifteen minutes, but a lot was happening during the show. Breaks between songs are uncommon. Applause does not work well with microphones. People spend this time using emotes (as jumping or dancing) instead. During the concert slow motion and fast forwards are perfectly possible. Imagine for example that suddenly the sound during a VR-concert slows down for a couple of seconds and the movement in the virtual world also slows down accordingly.¹¹ Maybe more than in the real world, the virtual world can create these other perceptions of time (and space).¹²

At the ending of a VR music concert people can stay in the virtual world/venue/stage until the servers close. The virtual world can stop and perish at any time (also during the concert actually). The concert hall stays and you can normally return here later. After a normal concert you can have a drink at the bar or have a smoke outside.¹³ In a virtual world, the bars don't give you a real drinking experience. If you want to smoke, drink or go to the toilet with VR you'll probably still have to interrupt your session and do it privately. At the end of the VR-concert you log out your session and take off the VR-set. You don't need to walk outside of the venue, you don't need to take a train back home with your friends. You are in your room (again).

⁹ In Fortnite for example to kill the time before the concert it is common to start massacring each other.

¹⁰ This is not always the case. The makers of Second Life have made a new project of Sansar, which helped create the Lost Horizon Festival, which is very visually pleasing.

¹¹ In electronic music these strange stretches happen all the time, especially when you would expect a drop. The virtual world tunes in and boom, you have another time-perception in real-time.

¹² Phenomenologically this could lead to interesting insights into the different experiences of duration, length, temporality, time.

¹³ You can drink or smoke in a virtual world, but it has no taste, smell, or touch sensations so it is still a bit strange.

Spatially, there are many different aspects of VR concerts. live concerts refers on the one hand to the concert that takes place in the concert hall, on the other hand virtual concerts take place mainly at home behind a computer or with a VR-set, alone. At the same time the concertgoer is immersed into a virtual space that feels nearly as or even more real. This space can contain multiple worlds or areas. you can disconnect from these spaces and they can be reproduced or destroyed. Sometimes there is a stage, sometimes the world itself is the stage. You can walk next to the artist and be on stage. VR can change the location of the participants making them appear in outer space, underwater, in a mix of light beams, literally everywhere during a concert. All possible spaces can be made and they don't even have to follow the laws of physics.¹⁴ Avatars can become huge or objects can become small. It is really like *Alice in Wonderland*. Where you have limited and closed space at a normal concert, you have infinite and open space at a VR-concert. Maybe we can conclude by saying that virtual reality tries to transform space for spectators into a space for participants. But does it try to replace real-life concerts?

B) Narrative semiotics: The story of Greimas and the semiotic square

The theories of De Saussure showed insight into binary oppositions (signified & signifier; sign and referent) and oppositions between similar and related signs (syntagm and paradigm). With the work of Greimas we enter the domain of structural/cultural semantics (: the meaning of the sign). Greimas presents an interesting toolkit known as the semiotic square. Two types of opposition are combined into a ‘square’ (see figure below). First you start from a semantic opposition between ‘contrary’ terms, in our case virtual vs real. In the next step you construct logical oppositions between ‘contradictory terms’, in our case virtual vs. not virtual; real vs. non-real. Eventually you end up with a semiotic square. The meaning of our sign can be read through the meaning of the four signs of the square. If we look at the elements in the figure below we can say the following about the meaning of the sign ‘live virtual music concerts’:¹⁵

The first element ‘The Real’ stands for here-and-now experience of music, like during a real-life music performance.¹⁶ This means that the listeners and the artist are at the same time and at the same place present. There is a qualitative opposition with the second element, the Virtual, which can be conceived of aspects of music experience happening not in this world, not here (virtual place, ‘there’) and not necessarily at the same time. This means that the listeners and artists are not physically present at the same place and not at the same moment. An extreme example would be a music concert in a virtual world like *The Matrix* (L&L Wachowski, 1999), where you could select the realtime vs. virtual time ratio.¹⁷ Virtual music concerts can be

¹⁴ Of course there are always laws of physics or geometry implemented. Otherwise it would be impossible to orientate ourselves or make sense of the concert.

¹⁵ These oppositions are also determined by the first definition of Auslander on ‘live’, namely a performance where the performance and the audience are both physically and temporally present at the same time.

¹⁶ Maybe a better example is a small intimate session where musicians play their instruments without any amplification.

¹⁷ For example, five minutes in the real world could be five hours in the virtual world.

precoded, prerecorded or pre-made in a studio (or supercomputer) inaccessible for the user. Real-live music is in this sense unmediated.

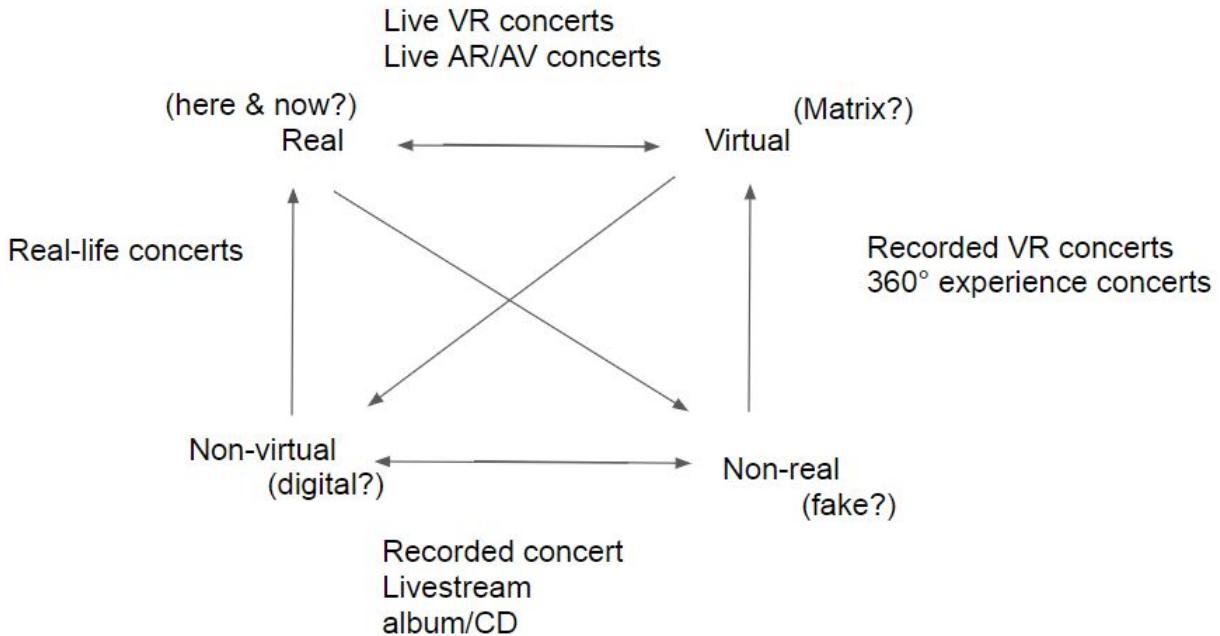


Figure 1: Greimas' semiotic square applied to the Real and Virtual.

The third element is the Non-virtual, which can refer to something as the digital. It can consist of the not-here-but-now of music experience. Livestreaming could fit the description for example, as the artist and audience are not at the same place, but at the same time, mediated through the digital computers. You can watch the concert at the same time and be synchronized, but it also shows a difference of space. The ‘here’ becomes ‘there’. This is the space at home behind the computer. The virtual also becomes a ‘there’, not only behind the computer, but also in a (shared) virtual world. This might indicate that the Virtual consists of a shared ‘there’ which makes it acceptable as a ‘live’ experience, especially because most VR is still real-time.

If we follow the logic of oppositions in the square, the fourth element ‘not-real’ could represent the ‘here’, but not the ‘now’. Audience and artists are at the same place, but there is no real-time experience. This makes an example less easy. To solve the issue we could interpret the Non-real as a concept similar to ‘fake’. ‘Fake’ could mean something as ‘not real’, because it refers to a reproduction and not the original (here and now). Another useful term might be ‘illusion’. An example might be something like a playback concert or even listening together to a studio-album/ studio recording. There is an audience, but there might be no real artist, only a reproduction that shares the same space (in the form of a fake/illusion), and therefore not the same time-continuum. Think for example of the Tupac Hologram concert of 2014.¹⁸ This lack of

¹⁸ <https://www.youtube.com/watch?v=uJE8pfPfVRo>, [last checked on 02/01/2021].

simultaneously being in time (synchronic) here is clear and definitely in opposition with live music or live streams (third element). This also differs from live VR where an artist turns himself into an avatar (a reproduction) that is connected to real time movements through motion sensor suits.

Through the square we can also investigate the meaning of our sign by experimenting with creating ‘metaterms’: between the elements of the (fully) virtual and the complete real one could try to locate our sign, live VR concerts and Live AR/AV concerts.¹⁹ These create a different ‘here’ somewhere else (‘there’), a shared virtual space while being physically apart. You have shared real-time music experience on virtual location.

Between the elements of the non-virtual and the non-real, we find almost imaginary things. Something digital can be non-virtual (not same place but same time) and something non real means it is not shared here or not shared now. Here we could think of a recorded concert, a livestream of it or an album/CD. These do not create virtual worlds, but have digital components. Yet, they are far from real-life concerts because they have something fake in the sense that the artist and audience don’t share the same time and/or space.

Between the Non-virtual (digital/not here but now) and the Real (here and now) I would actually place a full-production live music concert. It is a shared here and now, but a concert hall mediates the performance through a lot of electronic and digital devices to stage a show. These do not interrupt the live-experience, but rather enhance them. In this sense they are real and non-virtual. Between the non-real (not here or not now) and the virtual (not here and not now) one could locate recorded AR/VR concerts, (live) 360° experience concerts and maybe even hologram-concerts. These have virtual components (virtual space), but lack the real in the sense that they are not sharing the ‘now’ as the performance is prerecorded or preprogrammed. The recorded VR concert and the hologram concert lack the shared now with the artist, the 360° concert lacks a real shared audience.

For the analysis of cultural change the square can be used as a ‘mobile’ system. The system can move from one position to another, according to fixed paths symbolized by the arrows. Through the square we can read the change of these elements and the change of meaning in our sign.²⁰ How does the real transform into the virtual and vice versa? If we move from the real, we first need to go to the non-real, to end up at the virtual. If we move from the virtual, we first need to go through the non-virtual to arrive at the real. The main observation of this square is that the real and the virtual exclude each other at first sight. You can never go directly from the virtual into the real or vice versa.

From the semiotic square we could conclude that our sign of live VR music concerts came into existence through the development of the fake shows, holograms, 360° streams and recorded VR. Our sign is not located at the end of the virtual axis, but actually on top of the square, between the real and virtual. It is a real-time ‘there’ (fake) experience, trying to combine the best of both worlds. This actually makes sense as we see in culture the virtual is getting more

¹⁹ AR stands for augmented reality, AV stands for augmented virtuality.

²⁰ Of course, our semiotic square is only an interpretation and temporal, so it can change over time as well.

real (growing focus on augmented virtuality, the experience of shared here and now) and the real is getting more virtual (augmented reality, adding not here and not now into daily life). We could expect that in the future this opposition will blend into a XR-world, where both are constantly present.

The next step would be the narrative part of Greimas' semiotics. Here it will suffice to create a generative track by going from the paradigm to syntagm and from deep (abstract) to the surface level (concrete). This text will only briefly present this generative scheme of Greimas. At the deepest level we start with the (paradigmatic) semiotic square to the transformations and mobility of the square (see above). In our case this is the distinction between real and virtual, and the movement from the real to the virtual, or vice versa through the square. At the intermediary level we go from lexicalized items to actantial logic. In our case, the figure of virtualisation. For example a real-life music concert becomes virtual live if the 'here' of the concert changes into a 'there' (a virtual world). At the surface level the thematic frame moves into thematic roles. For example Glastonbury festival turned (partly) inspired the VR festival Lost Horizon under influence of the pandemic and new technologies. This way we have built a short narrative revolving around (the negation) of a basic opposition, explaining the virtual becomes the real and the real becomes virtual.

C) Fontanille and tensive semiotics

With the work of Fontanille et al on tensive semiotics we can tackle two weaknesses of the semiotic square (and structural semiotics in general). The first one is the exclusion of the subject (and lack of room for embodiment and individuality). Secondly, the reduction to a binary opposition and the difficulty of analyzing what is gradual and progressive. Tensive semiotics by Fontanille focuses on two of these fundamental dimensions of the sign: intensity characterizes the internal, interoceptive (inwards, i am touched by the world in which i am living) domain. Extension characterizes the external, exteroceptive (outwards, i perceive the world) domain. The correlation between these two domains is the result of the way a specific body occupies a certain place; this body is influenced by the effects of sensory perception; it is therefore proprioceptive (i feel my own body).

If we create a double axis figure with on the x-axis the extension (small or big input quantity) and on the y-axis intensity (weak or strong arousal) we can map out these dimensions of bodily experience in function of our sign. The two axes extension and intensity are connected by the position of the body and its sensoriality/perception of a concert. The body of a concertgoer is aimed inward on own perception and outwards towards the surroundings. This way the body is primarily in relation with the meaning of a (VR) live concert in a proprioceptive way. During a concert the body has all kinds of sensations. A subject gets conscious of his/her own body by the music, contact with the audience and the artist, and the (virtual) world. This creates meaningful experience. Secondly the meaning of a live VR concert is related to the body by what Fontanille calls 'sight' or 'viseé'. This points to how quality is perceived and is

associated with the intensity of the concert. If the quality of the concert perceived by the subject is high, the experience will be more intense. Fontanille describes a third relation between meaning and the body: the grip or ‘saisie’. This is related to the extension since it is about perceiving quantity in terms of space and time. This way we can see how music experience evolves over time by linking it with the specific perception of an agent.²¹

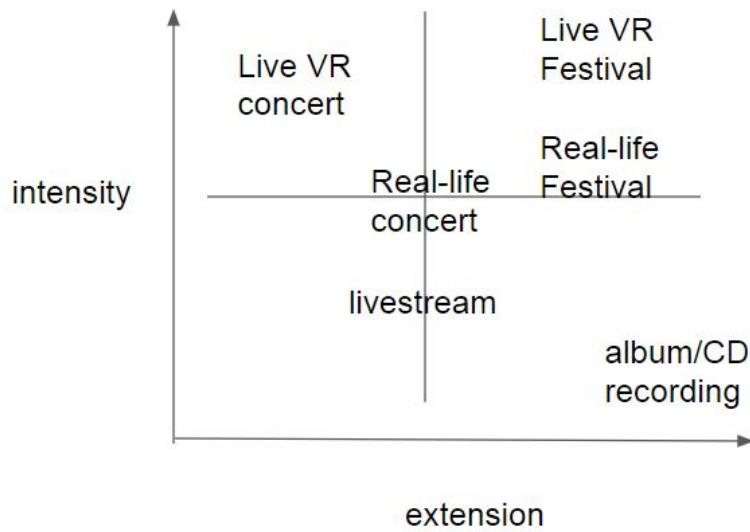


Figure 2: applied tensile model by Fontanille.

Pioneering live VR concerts have the least extension as they are short, but are more intense because they have much more extreme visual and virtual elements. Today we can already see that the extension of VR shows is expanding and moving towards VR festivals with very high extension and very high intensity. Real-life concerts are in the middle of the figure because it has moderate intensity and extension: they are less intense experiences in comparison with live VR concerts, but have (at the moment) more extension. They are more intense than livestreams or recordings and have less extension in comparison with a recorded concert or a festival. Of course real-life concerts have a lot of energy, but it is spread over a longer period of time. Yet (VR) recordings have the most extension because they can be listened over and over again, at any time, at any place. Livestreams are less intense than the real-life concert, because you are not really there. At least you can follow it in real-time, which makes it more intense than an album/recorded concert. Listening to a recorded CD/concert has the least intensity. A VR recording can be more intense (not on figure). Every live-set has less extension than a recording, because it is more temporary and perishable.

²¹ Of course the intensity of real-life music concerts changes constantly, the same applies for VR-concerts; what is represented in the figure are general/mean averages.

Intermezzo step 3: Group Mu and visual semiotics

The third step of this text shortly touches the theories of the Belgian group Mu. Here the focus is not on structural language-based semiotics anymore, but on the visual semiotics of reading and analyzing images.²² Group Mu proposes a simple but sharp distinction between two sorts of signs: plastic and iconic signs. Iconic signs are images that represent something you can name, identify or recognize. The plastic sign is a visual representation with no identification of what it actually represents. In structural terms we can think of a signifier without signified. The meaning coincides with the referent. Here there is no distinction between meaning of the image and the meaning outside the image. A second claim is that these two categories are not separate: you can find both in the same representation. How? All iconic signs are also plastic signs, but plastic signs are not iconic signs. They can nevertheless be present within iconic signs. Iconic signs have meaning, but the same applies for plastic signs but you have to add symbolic meaning yourself. For Group Mu the ‘visual meaning’ of a sign consists of a) plastic meaning, b) icono-plastic meaning, c) symbolic meaning.

Without going into too much detail here, this text wants to point out the importance of this theory. The visual plays a more prominent role in live VR concerts than in real-life concerts, but it is also the case that the visual shows complementing music concerts in general are also becoming increasingly important. VR shows add more and more of plastic elements, iconographic elements to be filled with symbolic meaning.

It would be interesting to focus on plastic dimensions of virtual worlds. This meaning of plastic signs can be studied by three generally accepted plastic systems: texture, color and form. VR offers an innumerable amount of possible textures, vibrant colors, forms. Texturemes like textural elements, textural repetition. Coloremes, like chroma, brightness or saturation. Formemes like position, dimensions and orientations.

Step 4: Peircean Semiotics and the alarming sign

Step four of this text is inspired by the American/logic/analytic semiotic tradition initiated by Charles Peirce (1839-1914). Peirce distinguishes two kinds of signs: alarming and satisfactory signs, which can be understood as interesting and less interesting, or codified and uncodified. The one raises problems of meaning and different interpretations, the other doesn’t. The meaning of our sign ‘live VR music concerts’ is ‘alarming’, because the distinction between live music and other forms of music is getting more and more blurred in a digitalised society, and also because of the current pandemics. With focus on open semiosis, this part hopes to recreate and investigate a chain of interpretations (semiosis) for our sign. We start the semiotic analysis with an open and dynamic triadic structure of the sign: at the bottom right is the object (live music concert), at the bottom left the representamen (a sign, live VR music concerts) and at the top is the interpretant (interpretation of sign, f.e. a here and now experience). The person is everywhere

²² This is in contrast with for example language-based visual semiotics, f.e. Roland Barthes in *Mythologies* [1957].

in the triangle. Interpretation can only be done by a subject that is involved in the process of semiosis, never from an objective perspective (the outside). The aim is to know the interpretations by different communities.

Peircian semiotics try to do this with the help of a small set of basic categories, so-called firstness, secondness and thirdness. By firstness, Peirce refers to a property (or quality) of a phenomenon which is considered without any reference of a relationship with another property (f.e. a color). By secondness, Peirce refers to a property which is considered in its relationship with something else, without any implication of or reference to a third element. Secondness actualizes the virtual qualities or categories of firstness (f.e. the red color of a flag). By thirdness, Peirce refers to the effective relationship established between two elements.; thirdness may therefore coincide with a kind of rule thanks to which virtual properties can become actual (f.e. the habit to associate red flags and socialism).

With the figure below, the sign of Live VR music concerts is represented as a process of semiosis.

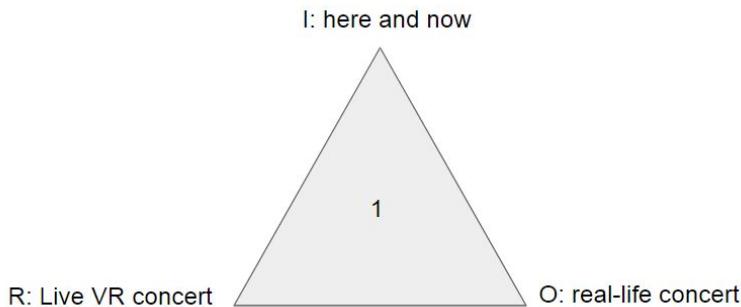


Figure 3: First Peircian triad of semiosis, R: representamen, O: object, I: interpretant.

Live VR concerts are in this context the representamen that refers to the object of a real-life concert, that can be interpreted by subjects as an experience of a here and now. The representamen is the live VR concert as a form of firstness, because it is not yet a real sign so long as it does not refer to anything else. This means the sound and images of virtual avatars, instruments and virtual worlds.²³ The object is a form of secondness. The real-life concert relates to the live VR concert in the sense that Live VR concert refers to the object, so that the combination of avatars, virtual audience, instruments, and stage represent a concert. The interpretant of the sign ‘live VR concerts’ is the ‘here and now’-experience and a form of thirdness. The here and now is the first meaning or interpretation of the live VR concert and refers to the effects this sign creates on subjects.

These effects can be subdivided into three kinds of interpretation. The level of firstness is the emotional interpretant or feeling caused by the sign. In the case of a live VR concert, these can be very divergent like exciting, surprised, happy, heart-whole, even sad. On the level of

²³ It can be seen as similar to the signifier by De Saussure.

secondness of interpretation we speak of an energetic interpretant. On the one hand this is a mental action to grasp that a concert is ongoing. On the other side this mental awareness relies on a physical activity, like dancing, singing, looking and walking around, etc.. On the level of thirdness of interpretation there is a logic interpretant, which also is subdivided in three aspects: the immediate, the dynamic and the normal. The immediate is a form of firstness that refers to the interpretant represented or signified in the sign. This means that live VR concerts give a good impression to fit the aspects of the interpretant ‘here and now’. The dynamic is a form of secondness that gives knowledge that ‘the effect (of here and now) actually produced on the mind is by the sign. That the live VR concert reminds us of a here and now experience. The normal refers to the habit in a specific context with which we are familiar to give the certain meaning to a certain sign. This makes consensus about reality happen smoothly in a communicative context. This shows the final interpretation is determined by social parameters. The ‘here and now’ is indeed an interpretation which is given to live (VR) music concerts and contributes to the concert experience.

This process of semiosis does not stop here if the sign is not satisfactory and leaves possible space for a new evolution of meaning. The ‘here and now’ as interpretant is still problematic, because with Greimas this text showed that the physical ‘here’ of a live concert, turns into a ‘there’ with the sign of live VR concerts. To arrive at an interpretant that solves this problem The interpretant ‘here and now’ of the first process becomes the new representamen and sign for a new process of meaning/interpretation. The object of the sign ‘here and now’ becomes live VR concerts. The meaning of the interpretant is in this case transformed into the ‘there and now’ experience of live VR concerts. This interpretation is already more satisfactory. This is represented in the figure below:

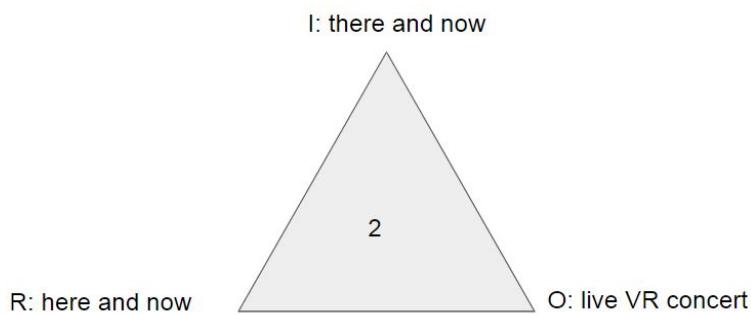


Figure 4: Second Peircian triad of semiosis.

Personally this interpretation/meaning is not satisfactory yet, so this text continues the process of semiosis (see figure below). In this third triadic structure the previous interpretant ‘there and now’ experience becomes the new representamen. The object to which this refers, becomes the programs of VR concerts/Festivals. Organisers (Horizon, Fortnite, WaveXR) do not seem to offer these programs a surplus or extension of the concert experience, but the interpretant can be interpreted as a substitute for real-life events (especially during the current lockdowns and

Covid-measures). Live VR concerts are consciously being framed as at least equivalent (and/or better/different) by the organisers. They are not presented as just a consolation.

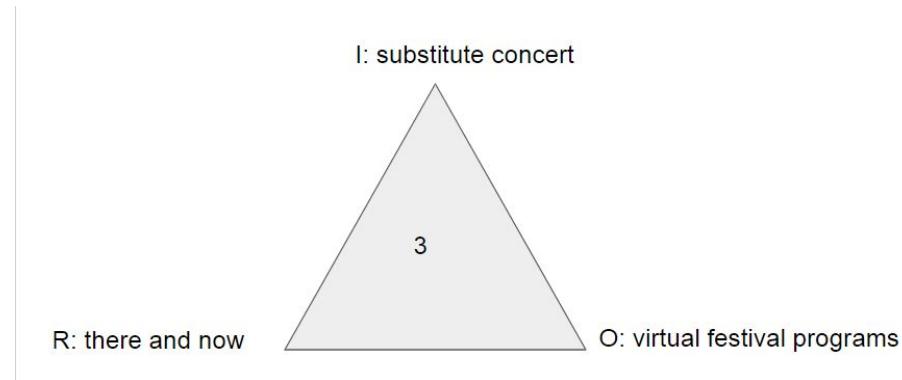


Figure 5: Third Peircian triad of semiosis.

This text is not convinced that this is the full or right meaning/interpretation of live VR concerts yet and looks further for a fourth interpretant. The figure below shows our latest interpretant ‘live VR concerts as a substitute of a real-life concert’ as a new sign and representamen. The object to which this sign refers are VR festival design teams. A live VR concert can be used as a substitution for a real-life concert, but this is not the only meaning of them. Organizers of VR festivals such as Fortnite, WaveXR or Lost Horizon do not seem to (only) want to substitute real-life events. Already with Greimas this text indicated that they want to create experiences that go beyond here and beyond now. They want to create new experiences of time and space. This means they want to create new kinds of communities for new kinds of music experiences. This interpretation seems much more satisfactory as we see a rising number of VR-platforms who experiment with all kinds of new experiences without thinking of substituting real-life concerts.

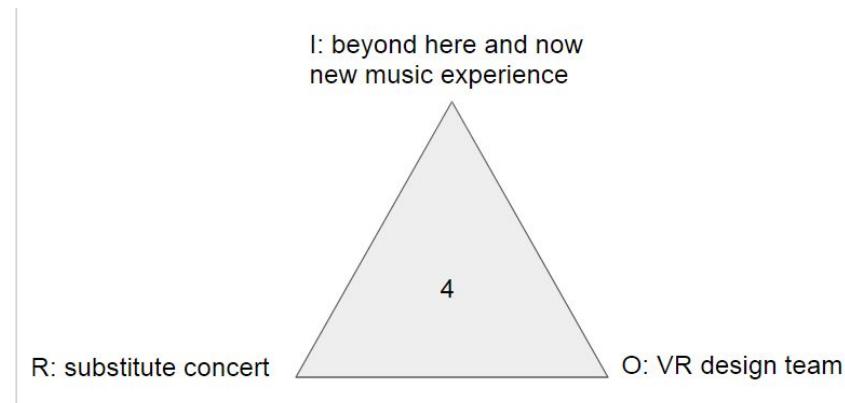


Figure 6: Fourth Peircian triad of semiosis.

This interpretation is already very satisfactory. It seems logical that the organisers of VR festivals want to present them as going beyond the here and now and create a new music experience, but maybe this is also not a fully satisfactory interpretation/meaning. This text will

create a fifth and for now final interpretant. Live VR concerts can certainly function as an extension of concert experience (maybe AR is more suited), but this is not the only meaning that can be attributed. In the figure below we can see live VR concerts as a transgression to new music experience, beyond here and now as a new sign and representamen.

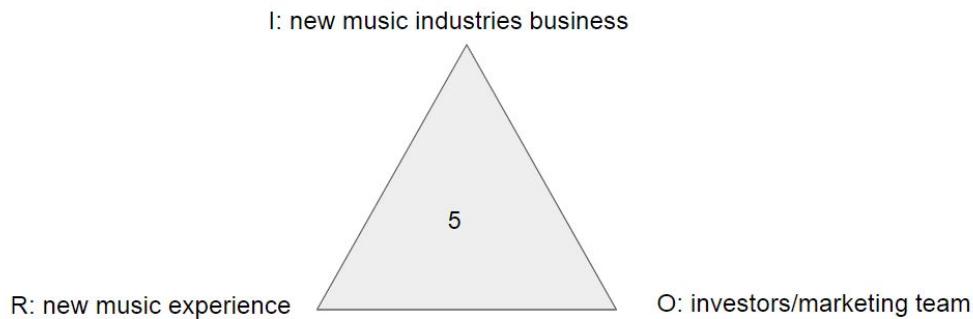


Figure 7: Fifth and last Peircian triad of semiosis.

In this triad the representamen represents the investors in VR concerts and related marketing teams as their objects. Eventually live VR concerts could serve as promoting new forms of music industries and business, because the extent of this medium is huge and not only aimed at music. These kinds of music concerts can not only reach a bigger audience, potentially the whole world, but it can easily be combined with other virtual events. For artists it can be perfect for promotional ends, but most of these artists who do live VR concerts are also famous for doing real-life sets. The semiotic process ends with the satisfactory interpretation of live VR concerts as a means by artists, organisers and investors to create a new kind of music industries with new kinds of music experiences.²⁴

Step 5: Lotman & cultural semiotics

In this final step this text looks at the work Yuri Lotman. With his work we can analyze how one can make the transition from the analysis of signs to the analysis of culture. Secondly one can examine not only the diversity, but also the very change of culture. For Lotman human society is a semiosphere (an environment built by human-made signs). Cultures are texts.²⁵ Lotman also gives a definition of culture as non-hereditary memory, differentiating it from a set of codes/texts and from biological physical memory (innate, genes). How does live VR music concerts appear/disappear in culture and memory?

²⁴ This Peircian analysis was strongly inspired by Troch, Lana, *Wat betekent live-muziek in een gemedieerde samenleving? Een semiotische benadering van live streaming*, Kuleuven, 2012.

²⁵ A cultural text is defined by 3 major characteristics: expression, delimitation and structure. Expression forces us to consider the text as a realization of a given system. In the Saussurean antinomy of language and speech, the text will always be at the side of speech. Delimitation refers to the difference of a text from all signs that do not fit its system. A text has a distinct limit mark. Structure refers to the internal organization of a text, which makes it an organic whole.

Lotman distinguishes two societies of meaning in the semiosphere. A society of expression and a society of content. The former refers to material forms as they are passed from one generation to another and are harder to change in form. The latter, the spirit of the forms is their cultural meaning. If we look at live VR concerts we can say that the society of forms consists of VR-sets, computers and monitors. These contain information on how to construct virtual stages and digitalize artists and make the whole thing work similar to a real-life concert. They enable live concerts with live music, a live artist, a live audience, and more. The form is virtual, the size can become bigger than real-life music concerts, and there is more scenography. In this sense the content of the live virtual music concert is a kind of postprint or postproduction, trying to do something ‘post-original’. It entails reinforcement in the sense that it aims at wider circulation and attenuation because it filters or selects music performances that are more or less suitable for VR. In this sense it is a cultural mechanism because it produces an anti-culture.

Lotman elaborates on different terms of culture/anti-culture/non-culture. Culture can be interpreted as real-life concerts, anti-culture as virtual live concerts, non-culture as no music concerts. This way live VR concerts are formed by digital communities who do something else with a similar idea of having a concert. On the one hand we can say that anti-culture influences culture as its popularity rises, but, on the other hand we could also say that culture is invading anti-culture. Once it becomes too popular and generalised, live VR concerts might not be offering the same revolutionising music experience. Interesting to note is that virtual concerts also influence non-culture: more and more people who could not properly participate in a concert (f.e. people with disabilities, geographical restrictions) now create their own avatar and can meet anyone in the whole world through VR.

Secondly, specifics of culture that can change are formulated in terms of center and periphery. Live VR concerts can be seen as a form of periphery. In games virtual realities are developing for quite some time, but music concerts only really started with Second Life around 2008. Even then it was pretty underground and niche; unknown. The last couple of years more and more platforms arise to offer all kinds of (live) virtual music experiences. Since the start of the global pandemics (Covid-19) earlier this year, the new decennium might bring live VR concerts to the center of music experience and music culture. The question remains if this is only temporary. Power mechanisms and institutions seem to reinforce these changes. Also the capitalist society seems to be thriving on commercialisation and popularisation of new ephemeral music experiences and new music business to exploit.²⁶ Companies are already increasingly investing in giant visual shows supporting real-life concerts. Live VR concerts are also interesting for users in building new communities and networks all over the world, regardless of background. These advantages include democratisation and globalisation of culture. It can easily include even people with disabilities, transhumanists and cyborgs.

Of course there are also problems: the first is the refusal or impossibility of anticulture. This means possible social exclusion because of lack/price of VR-technologies. A second problem can be the blurring of the boundaries between different systems/codes. Commercial

²⁶ Think of possible new forms of immaterial labour or capital to create new means of value.

motivations can cost the quality or ‘uniqueness’ of the new music experience. Ofcourse investing money in these technologies can also improve these experiences. A third problem is so-called ‘desemiotisation’; a) any music concert can become a virtual concert. Then there is no longer a distinction between culture and anti-culture. Here we can imagine an AR/AV standard for all music concerts. Virtual and real would become inseparable. b) the music concert becomes a visual object to be seen, instead of really listened to.

Conclusion: a series of steps

In five steps this text tried to convey a semiotic analysis of the phenomenon of ‘live VR music concerts’. Through this paper it became clear that the meaning of live music and virtual live music is not always clear. Virtual does not want to be like the real. It does not intend to create the same music experience. It is a globalising trend that seeks to go beyond. In contrast, maybe the real becomes more like the virtual. Experimenting with virtual experiences results eventually in the dissolving of the boundaries between the real and the virtual. The meaning of live music is changing and is strongly interpreted in the context of culture. Pandemic culture insinuated the interpretation that VR is just arriving, but actually it was already here for a while. With the semiotic square we analysed the virtual and real through the ‘here and now’. It is the ‘here and now’ (authenticity?) that gets questioned in live virtual concerts. It is legit to present a live concert in other ways, because that is one of the aims of VR. The virtual concert does not necessarily want to substitute real-life concerts. Peircian interpretations led into new kinds of music experience and new music industries/business models. A virtual concert experience constructs experience of identities of experience of collectivity that are real. Even in a manipulated or determined world the emotions that music creates are real. ‘Liveness’ shows the (intersubjective) power of music.

Appendix: some examples of live VR music concerts

- 1) **Fortnite:** the game Fortnite (EpicGames) hosted a series of live music events including artists like Marshmellow²⁷ and Travis Scott, respectively in 2019 and 2020, reaching record numbers of more than 10 millions attendees each. For the last concert the entire Fortnite island was the stage. During the opening song a giant Scott trampled around the island, while players could run around the map and interact with each other. As the tracks changed, so did the visuals. At a certain point the ‘stage’ got lit and Scott turned into a cyborg. Later everyone got transported to what looked like the movie *Tron* ([Steven Lisberger](#), 1982). After a hit song, the crowd was submerged underwater, along with a giant spaceman. There were rollercoasters and psychedelic effects and at the end players were literally flying around the planet.²⁸
- 2) **Lost Horizon festival:** For the first time in its 50 years of existence, event organizers were forced to cancel the 2020 Glastonbury Music Festival due to concerns over the ongoing COVID-19 outbreak, hence something new was created (by the renomated Glastonbury Shangri-La team²⁹). They have teamed up with VR Jam³⁰, Sansar³¹, Orca Sound Project³² and Beatport³³ to create the world’s largest independent music and arts festival in virtual reality, Lost Horizon³⁴. Horizon Festival took place on the 3rd and 4th of July 2020 and was a completely interactive event with multiple stages. The ‘festival site’ could be accessed by computer, a VR-set, or through a mobile app (iOS & Android). It also got streamed by Beatport, Facebook, Twitch and Youtube. After this festival Horizon kept organising multiple events up to today. Horizon describes itself as a deep multi-layered music experience and as a multiverse where you can meet with your friends and make new ones, chat, dance and explore together by fully customisable avatars which can transcend gender, colour and the limitations of the body. It follows in the footsteps of Second Life VR live music venues, which has existed for more than ten years, and partly shares the same developers (through Sansa). The initial festival attracted around four millions visitors.
- 3) **WaveXR:** WaveXR³⁵ is a platform to enable VR live music concerts. It provides one-of-a-kind VR concerts, called ‘waves’.³⁶ Wave concerts are live, immersive, interactive and social. WaveXR combines cutting-edge gaming and broadcast technology with an interactive concert experience to help fans and artists more deeply connect with

²⁷ <https://www.youtube.com/watch?v=NBsCzN-jfvA>, [last checked on 2/01/2021].

²⁸ <https://www.youtube.com/watch?v=NBsCzN-jfvA>, [last checked on 2/01/2021].

²⁹ <https://www.glastonburyfestivals.co.uk/areas/shangri-la/>, [last checked on 2/01/2021].

³⁰ <https://www.vrjlive.com/>, [last checked on 2/01/2021].

³¹ <https://www.sansar.com/>, [last checked on 2/01/2021].

³² <https://www.orcasoundproject.com/>, [last checked on 2/01/2021].

³³ <https://www.beatport.com/>, [last checked on 2/01/2021].

³⁴ <https://www.losthorizonfestival.com/>, [last checked on 2/01/2021].

³⁵ <https://wavexr.com/>, [last checked on 2/01/2021].

³⁶ <https://www.youtube.com/watch?v=2aGx091XNcw>, [last checked on 2/01/2021].

each other and express themselves in innovative ways. The concerts are also live-streamed through Youtube, Twitter, TikTok, Facebook and Roblox. Especially interesting events on the platform of WaveXR are the VR Burn Festivals, organised by VR ART Live! and TheSabbyLife.³⁷ It could be seen as an alternative for the renounced yearly (real-life) Burning Man Festival. Other recent examples of cool ‘waves’ are the show of John Legend³⁸ or Lindsey Stirling³⁹: here you can see the artists' real-time movements in a studio, mapped to an avatar by motion sensors attached to the body and instruments of the artists. The concertgoer wears a VR-set (f.e. Oculus rift and Oculus Touch+), also has its own avatar and can interact with the other avatars in the audience. The user has control over his surroundings by voting or donations. The aim of these projects is live concert experiences where artists become avatars performing in virtual worlds, where one can attend on gaming and streaming platforms, and where you can chat with artists, play mini-games with other fans, vote on scene changes, all of this with global audiences up to more than 10 million at a time.

³⁷ <https://www.thesabbylife.com/vr-burn-festival>, [last checked on 2/01/2021].

³⁸ <https://www.youtube.com/watch?v=eGy64l9Yuuw>, [last checked on 2/01/2021].

³⁹ https://www.youtube.com/watch?v=Lk_o83x_Kk4, [last checked on 2/01/2021].

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