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Social distancing is a central (un)word of the pandemic year 2020. Now, music culture thrives on performative 'liveness'—even in classical music, where live experience has become the core of the musical artwork in the age of its mechanical reproduction. At the same time, the history of music can be read as a history of the dissolution of boundaries: from the body (voice), to mechanical instruments, to electronic extensions. Accelerated by regulations in response to the COVID-19 crisis, music culture passes another media transformation, entering new virtual stages. In fact, crisis always implies changes and chances too: economists call it 'creative destruction', artists call it innovation. And indeed, 'social distancing' in interaction with accelerated digitalisation also holds media-aesthetic potential. With the support of new media, and this is the hypothesis of this essay, the contemporary music scene in particular can form new dramatic forms that go far beyond the classical one-way stream: by enabling virtual participation instead of physical co-presence.

Keywords: Virtualisation; Distancing; Immersion; (Post-)Digital; Media Upheaval; Post-Presence

In 1955, the influential German musicologist Hans Heinz Stuckenschmidt formulated epochal considerations on music history: instead of the classical order of eras—from early music and baroque, through the classical and romantic epoch to the age of modernity—Stuckenschmidt attempted to classify music history by using technological inventions—a history of music that leads away from human beings towards the machine.

> The first epoch was closely and intimately bound to the human being itself being the executive organ; vocal techniques were limited by the range of the voice, its possibilities in terms of speed and volume, its colour modulations. […] The second epoch conquered tonality as a means; even here the connection to the human being as the necessary operator of the tonal tool was given, […] while virtuoso

fluency, differentiation and colour, rhythmic complication and extreme volume levels led away from the human being. […] The third epoch, precisely the electronic one, places man only at the beginning of the compositional process, but eliminates him as a mediator. Its 'dehumanised' music is created in the domain of pure spirit. It makes use of the procedures […] from tradition […], but applies them to a radically new matter. (Stuckenschmidt 1955).[1]

Following Stuckenschmidt's reflections, progressive tendencies in musical culture often result from media upheavals: starting from the body, via mechanical instruments, up to the age of electronically mediated music. This relates to the core thesis of Marshall McLuhan's *Understanding Media* (1994). As its subtitle—'The Extensions of Man'—clearly indicates, media can be defined as 'any extension of ourselves': from mechanical prostheses, to virtual equivalents of ourselves in digitised space. (Post-)Modern ages as the era of such dissolutions and amplifications has itself gone through several stages of evolution, which are traced in this article in three acts using the medium of opera as example and structure: Starting with 'radio opera', via 'Internet opera', to 'immersive opera', which reveals indications of another epochal caesura: digitisation, which—also fuelled by the pandemic—can be called a 'post-presence age'.

Overture—From Physical Co-Presence to Virtual Participation

Music culture thrives on 'liveness' (Sanden 2012) and celebrates the performativity of physical co-presence. This applies to entertainment culture, but also to the classical music business. Although opera houses are not exactly known for the excessive participation of their audiences—apart from somewhat ritualised booing or applause (Schürmer 2017)—live experience and participation are essential for opera.

However, opera—like music history itself—has gone through various phases as a result of technological upheavals: from physical co-presence to virtual participation. Of course, this is not a singular effect of the pandemic's acceleration of digitisation and the appearance of non-human presences on virtual stages. Quite to the contrary, it can be traced all the way back to the construction of ever-larger opera houses in the Enlightenment, where the audience in the boxes and the audience on the balconies hardly interacted with each other and were only acoustically connected. Not to mention the radiophonic and televisual expansion of the listening space through audiovisual storage and reproduction media, eventually leading to the formation of a new form of musical theatre: the radio opera, which celebrated its greatest successes in the first half of the twentieth century. Around the turn of the millennium, it was overtaken by another media transformation: the Internet, which has further extended opera and set the stage for an interactive synthesis of the arts.

In fact, COVID-19 accelerated this development enormously and completed the step into a 'post-presence' age—by making 'social distancing' the norm. The restrictions of lockdown requirements not only affected social life, but also cultural life—in ways that threatened artistic livelihoods, but also in productive ways. Crises always

hold opportunities for progressive reorganisation: in evolutionary economics, this principle is called 'creative destruction' (Reinert and Reinert 2006); in artistic and avant-garde circles, it is called innovation (Bergrande 2017). And indeed, the digitisation triggered by the pandemic offers aesthetic options: enabling virtual participation using new and immersive media instead of the much-discussed physical co-presence has consequently led to the emergence of a new music theatre genre.

Act 1—Radio Opera

Radio offers an acoustically extended stage. Since the 1920s, the radio medium itself has developed alongside its very own opera genre: the radio opera, which was not satisfied with simply transmitting a stage event—today we would say an audio stream—but also incorporated its technical means into its aesthetic production. This genre represents an attempt to adapt operas for radio broadcast or to develop music-theatrical radio plays. At root, it aims to replace the visual side of an opera performance with purely acoustic means and to convey performative actions via the 'blind' radio in an acousmatic way (Kane 2014). Reflections on this can be found in the work of almost all the great thinkers of acoustic media culture. In his 1938 essay 'Music in Radio', Theodor W. Adorno pointed out: 'The idea is that we should no longer broadcast over the radio but play on the radio in the same sense that one plays on a violin' (2006, 39). In other words: the radio medium became an instrument.

Accordingly, the radio opera genre experienced a peak in the first heyday of radio in Germany during the Weimar Republic. Namely *Der Lindberghflug—Ozeanflug*, based on a text by Bertolt Brecht with music by Kurt Weill and Paul Hindemith, was a tribute to the medium itself, which—like Charles Lindbergh's airplane—was capable of bridging vast distances. It is therefore no coincidence that the relationship between human beings and technology was self-reflexively brought into focus here, since the medium of radio formed the specific techno-aesthetic disposition of the radio opera genre (Jeschke 2004). This can be seen, for example, in No. 4 of the radiophonic 'Lehrstück'—*Vorstellung des Fliegers Charles Lindbergh und sein Aufbruch in New York zu seinem Flug nach Europa* [Presentation of the aviator Charles Lindbergh and his departure in New York for his flight to Europe]—wherein the city of New York receives a message from a ship via radio that Lindbergh's flight has been sighted. Even more concise in this respect is No. 13—*Lindberghs Gespräch mit seinem Motor* [Lindbergh's conversation with his engine]—where the pilot enters into a dialogue with his engine, thus bringing the disproportionate interaction of man and machine into focus: 'Are you all right?', the pilot asks the engine thus anthropomorphised, creating a symbiotic coupling of nature and technology by speaking of 'the two of us'. In contrast, Brecht recites the line 'The engine is running' four times, denoting the precision and indefatigability of the machine compared to the fallible human; the phrase virtually invokes the immortality of the machine like a mantra to protect the human steerer from death.

In his radio theory, Brecht formulated the pedagogical, artistic and interactive options of the ethereal radiophonic medium:

> Radio should be converted from a distribution system to a communication system. Radio could be the most wonderful public communication system imaginable, a gigantic system of channels—could be, that is, if it were capable not only of transmitting but of receiving, of making the listener not only hear but also speak, not of isolating him but of connecting him. This means that radio would have to give up being a purveyor and organise the listener as purveyor. (Brecht [1932] 1979)

The unifying effect of radio, however, is much more evident in the *Volksempfänger* (radio receivers) of Nazi-era Germany—which, as their name implies, addressed the '*Volk*' as passive recipients of propaganda messages in a communicative one-way street—so to say the opposite of interactive participation as Brecht had envisioned it.

Nevertheless, radio opera experienced a renewed heyday in Germany after and as a result of World War II and for various reasons: on the home front, radio was part of the armaments industry, providing a valuable means of persuasion to the Nazi regime as perhaps the first true mass medium. In the field, where radio operators were not by chance among the Wehrmacht's fastest-growing troops, wireless communications enabled the command staff to control its task forces without limits. After the end of the war, the bellicose innovations flowed into the bourgeois radio of the post-war period (Kittler 1986; 1988) and formed the technological instruments for the development of electronic music (Schürmer 2014). The technological innovations of wartime armament are the material cause for the boom in radio opera after 1945; in a more socio-aesthetic way of thinking, the genre allowed—in a departure from the monumental staging during the Nazi era—for a more individualised and intimate form of performance and reception. Last but not least, the new radiophonic opera genre was specifically promoted in post-war Germany.

The first post-1945 radio opera in Germany was produced and broadcast in the Soviet Occupation Zone (SBZ) on the Mitteldeutscher Rundfunk: Boris Blacher's *Die Flut*. In addition to radio adaptations of stage operas, explicit radio operas were only sporadically produced for the radio programmes of the GDR. Nonetheless, the genre experienced possibly its last moment of glory there: in 1986, the Leipzig composer Friedrich Schenker was commissioned to write a radio opera for the 200th anniversary of the French Revolution. Together with his librettist Karl Mickel, Schenker created *Die Gebeine Dantons*, a highly performative piece that reflects the sociotope of the late GDR days between the lines of music and sound, which was a techno-acoustic bow to the medium of radio itself (Pfundstein 2018). On the other side of the Wall, the Public Broadcasting Service of the young Federal Republic of Germany, with its democratic educational mandate, promoted experimental formats and composers. It was namely Hans Werner Henze who benefited from this, presenting two radio operas in the 1950s with the Kafka adaptation *Ein*

Landarzt and *Das Ende einer Welt*. Both are still on the playbills today—though less on radio stations than in opera houses as concert performances.

'Opera on the couch' (Oehl 2006), 'opera for the blind' (Henze 1955), 'operas from the loudspeaker' (Baruch 1955): descriptions and metaphors like this have been used to account for the specific constitution of the radio opera genre to which all imagery is intrinsically alien. The lack of a visual level may be one reason why the genre was ultimately unable to establish itself. In the end, the radiophonic potentials could not compensate for the losses to the eye. In addition, new audiovisual platforms, such as television or cinema, were increasingly preferred over the purely acousmatic medium of radio (Chion 1994). For these reasons, radio operas are rarely performed, and when they are, they are performed in concert. On the radio today, if at all, one hears conventional operas in recordings and streams from real opera houses. And yet something has remained of these radio-theatrical experiments: the radio drama —a story told with words, sounds, effects, atmospheres, and music, which has long since established itself as an art genre (Krug 2020). And yet, (music) theatre, it seemed for a long time, remained a public affair that was difficult and ultimately unable to make the transfer into the private sphere. This changed with the Internet, which broke down the one-way communication of broadcast media.

Act 2—Internet Opera

At the turn of the millennium, during the dawn of the Internet, Manfred Stahnke's *Orpheus Kristall* was one of the first attempts to process the new global medium in a music-theatrical way. It was presented at the Munich Biennale in 2002, when this important festival for new music theatre was held under the slogan 'Opera as virtual reality'. Stahnke's *Opera in Two Media* was designed as a search and touch game that lets the listener dive into an interactive cosmos—as the programme booklet makes clear (Münchner Biennale 2002): 'When, on May 3, 2002, Orpheus descends for the first time into the Internet instead of the underworld, this event symbolises the increasingly intimate relationship that opera is entering into with this new medium', wrote Georg Hajdu, who developed with quintet.net a computer programme for the production that enabled musicians to communicate with each other via Internet. He continued: 'This makes it possible to combine real stages with virtual ones and to expand the space of the opera event into a global dimension via the Internet'. In a remark, Stahnke emphasised the 'extensions of men': 'It's about transgressing boundaries, suspending the body: we are all looking to escape our organic ridiculousness', thus announcing post- and transhumanist discourses that today cross the border from fiction to fact in the form of augmented reality and virtual avatars.

About ten years after Stahnke's orphic excursion into the underworld of the World Wide Web, another acclaimed Internet opera followed at the Ruhr 2010 festival with *Die Affäre Manon*. In an interview with RUHR.2010-TV, director Michaela Dicu emphasised: 'This is an attempt to bring opera from the stage into people's living

rooms for a change. And not via television'. Production manager Dirk Schattner then explained the concrete project:

> There's a website, internetoper.de, and […] there's a lot on offer. It's about the two pieces *Manon Lescaut* [by Giacomo Puccini] and *Boulevard Solitude* [by Hans Werner Henze], which are both based on the same basic plot […]. These two pieces have been recorded by the Musiktheater im Revier […] and are divided there, I'll say, 'in bits' of three-minute sections. […] As a registered user I have the opportunity to read through this, and then I have to become active. I can download this music, I can make a video contribution to it, and I can put it on the site, where we are totally democratic.[2]

In his statement, Schattner identified two key promises of the Internet: interaction and democracy. The former was confirmed, the latter was increasingly refuted as digitisation progressed: fake news and conspiracy theories are phenomena of unbounded communication, which attained new heights with COVID-19. In fact, the pandemic also helped boost the genre of Internet opera by relegating cultural life to the web: constant live streams and YouTube on demand turned virtual stages into cultural reality. It was only a matter of time before the crisis itself became a topic—namely with *Tag 47*, a digital opera by Gordon Safari about the 'social distancing' of these/those days.

In *Tag 47*, the monitor as a stage presents the lives and problems of four people during the lockdown: a lonely woman paces around in the same room over and over again with a hysterical soprano; another, sounding resigned, has locked herself away from her violent husband, while a gay couple maintains their relationship via video chat. Isolation, domestic violence, separation—in other words, real problems that emerged during the pandemic, are the subject of *Tag 47,* and prove to be veritable music-theatrical material. The audiovisual language of the digital opera not only uses the new media atmospherically, but also processes it aesthetically. On the auditory level, it is recommended to use headphones 'for the best sound result'—and indeed the music, composed by means of MIDI orchestra and oscillating between instrumental avantgarde and digital 8-bit sound, only acts as an effective mediator in this way, i.e. the listening act requires technological mediation in order to express itself adequately. In this sense it is the opposite of opera singing, which, when it is technically mediated, is always only an echo of the live experience: as such representing the loss of the 'aura' of *The Work of Art in the Age of Mechanical Reproduction* (Benjamin 2010). On a visual level, close-ups of the protagonists' faces and camera-technical cross-fades in split screens—which are not by chance reminiscent of the aesthetics of video conference situations—paint an oppressive picture of social distancing, which is mourned at the end with a choral swan song. Social distancing not only produces human isolation, but also banishes physically-present musical experience into digital dissolution—where the genre of opera has taken another step of extension onto virtual stages: as media opera that open up new, immersive worlds.

Act 3—Immersive Opera

With the help of new media, and this is my hypothesis, the contemporary music scene in particular can form new dramatic forms that go far beyond the classical one-way stream by enabling virtual participation and thus also dissolving the hierarchical disposition of classical opera.

One impressive example of this is Alexander Schubert's 'Real Live Computer Game' *Genesis* (see Figure 1), which was live from 27 April to 3 May 2020—despite COVID-19, because this kind of art knows no 'social distancing'. In an interactive game mode, the audience can transmit their perspective in real time via the Internet using VR glasses and thereby remotely direct live performers. Listeners become players by controlling their avatar—who is actually a live performer—just like a first-person computer game. As the title *Genesis* already indicates, the game's goal is the creation of a new world, which initially only consists of an empty factory floor. This is done by allowing the audience, which has mutated into gamers, to select three items from an inventory list, which their avatar retrieves from storage and places in the room during the hour-long game: screens and paint, music machines and instruments, furniture and food, toys and entertainment objects filled the creation space with life during the project phase of one week. The supposedly only virtual existence of the avatars/performers was communicated via chat, with status displays signalling to the players how the avatars' energy level was in terms of hunger, thirst, or fatigue: 'It's also such a digitally reduced version of the real human being, a quasi-image of the avatar'.[3] This statement echoes post- and

Figure 1. Photo of Alexander Schubert's 'Real Live Computer Game' Genesis © Gerhard Kühne. Reproduced with permission.

transhumanist discourses of a virtual world beyond the human—and points to post-digital performance concepts, on which Alexander Schubert focuses in his artistic research:

> I propose the examination of my compositional strategy in the context of a post-digital perspective and present my artistic method as a tool for visualizing and sensually experiencing digital effects in the analogue world. This approach is based on the assumption that, today, the use of digital tools and representational forms is no longer the exception but the rule, and that this circumstance nowadays significantly influences our interactions, views and body images. In particular, these approaches address the question of whether, in this newly established constitution, our view of the analogue, non-digital environment has also changed. 'Post-digitality' is to be understood here as a shift in perception. (Schubert 2021, 11)

The composer actively discusses the interweaving of the analogue with the digital and their interplay. He is interested in the friction between immersive physical settings and their virtual counterparts to reflect the subjective, social und sensual confrontation of man with the extensions of technical reality. In 2021, Schubert won the Prix Ars Electronica for his work *Convergence,* where an A.I. learns from human musicians in order to become creatively active itself on the basis of human input.[4] His projects *AV3RY* and *CRAWL3RS* aim in a similar direction: the former is 'a virtual persona based on an A.I. system that can generate poetry, texts, images and music. It is an entity hosted on a server that can interact with humans and, based on this interaction, refine its parameters and update its creation of artistic content'.[5] *CRAWL3RS* is 'an anonymous bot collective that works secretly on the internet to scrape data, crawl user pages, steal information and images, and then create an alternative social network with distorted truth and altered facts'.[6]

Virtual reality technologies and the artistic exploration of artificial intelligence are decisive tools of Generation Y: socialised analogue and at the same time the first digital natives, their representatives (inter)act at the hybrid interfaces of a media-aesthetic order that no longer wants to distinguish between pop and art, reality and virtuality, entertainment industry and the seriousness of life or music. This generation, which grew up with music television and computer games, is scouting out new, immersive terrain in the best avant-garde manner, opening up audiovisually animated and interactively modelled spaces of possibility with a healthy dose of playfulness: artful artificial worlds (Schürmer 2021a).

Indeed, it is not only Alexander Schubert who refers to the world of gaming as a tool of audiovisual performances, which can also be understood as interactive music theatre or immersive opera. Marko Ciciliani worked on this topic between 2016 and 2020 in his project *Gamified Audiovisual Performance and Performance Practice*—acronym GAPPP—at the Institute for Electronic Music and Acoustics at the University of Art in Graz/Austria. He conducted a kind of artistic research, which began with the assumption that player interactions and game strategies offer as-yet unexplored models that can be used in live audiovisual works. On his website, this

approach is made explicit: 'Game-interaction offers a large potential to create a liveness quality of a novel kind. This does not only concern the performer who is interacting with a responsive audiovisual system but can also engage an audience as "backseat-players"'.[7]

The research was conducted from various perspectives: new compositions were created, performance practices were tested, and theory formation took place on this new musical playing field. The theoretical output can be found in the anthology *Ludified*, which itself can be described as playful: 'It is a double book that can be read from both sides by turning it. The sensual level of this "Acoustic Research" is conveyed by a USB stick that makes the material immediately accessible—and at the same time functions as a bookmark'.[8] In the book itself, co-editor Barbara Lüneburg defines the audiovisual compositions created as part of the project as.

> […] multimedia artworks that use game elements and possibly allude to game aesthetics; however, musically they belong to the world of contemporary (art) music. They usually incorporate at least one decision-making player who performs within an interactively-designed computer system in a concert or installation setting. The system offers a musical and visual environment, a set of (game-related) rules, and often specifically designed interfaces, while giving the performer creative agency to musically, visually, and performatively shape the artwork and the concert experience. (Ciciliani, Lüneburg, and Pirchner 2021, 14)

One of such pieces is Marko Ciciliani's *ANNA & MARIE*, an audiovisual and intermedial performance installation for an electric and a baroque violin as well as real-time generated sound synthesis, video projections, and light design. Depending on the chosen path through the story about two eighteenth-century female anatomists, the performance can last from 10 to 45 min. Each variation of the story eventually leads to an audiovisual situation that remains as a walk-through 3D environment. In her introduction to the book, Lüneburg writes: 'In both the concert version and the installation, the narration unfolds in a sensorially rich and immersive situation that speaks to various senses' (Ciciliani, Lüneburg, and Pirchner 2021, 17)—and thus names a central phenomenon of gaming culture as well as a key concept of the 'extended opera': immersion.

This term, immersion, has flourished in recent years, and it means the multisensory descent into a virtual world and thus the totalisation of aesthetic reflection. While immersion is often discussed with regard to computer games, sound is particularly capable of the phenomenon, as Helga de la Motte has made clear: 'being there, is most easily achieved with the ears' (2010, 28). Even more specifically, Canadian theatre scholar Adrienne Wong addresses acoustic immersion:

> Surely the sound waves that surround us affect our bodies in some way, even if we are not aware of them bouncing off us or passing through us. We are like fish, and sound is our aquarium. We don't really notice it until someone knocks on the aquarium. Whether we hear it or feel it, sounds affect us, our thinking, our emotions. (Wong 2018, 48)

This effect brings down the fourth wall in the (music) theatre of the (post)digital age: the audience is (inter)activated and listeners become players—as such, the composers of Generation Y further extend opera. Alexander Schubert, for example, uses 'immersive strategies' (Schubert 2017) to mediate the switch between the analogue world and digital environments under post-digital, post-presence, and post-human conditions:

> The effects of immersion and an 'overwhelming aesthetic' appear regularly in many of my compositions. The basic aim is to deeply involve the audience in a setting and to make a reality or perspective experienceable and perceptible. This creates a mode of perception or perspective which isn't viewed from the outside, but which one can adopt oneself for a period of time. […] I often use means of immersion and overwhelming aesthetics to implement the experimental character and generally to establish a drop height. This often involves an exacerbation of the stimulus density—both in its intensity and in its quantity. Most works are characterized by a high density of images, sounds and information. The audience is deliberately exposed to an intoxicating maelstrom, a 'stream of consciousness' or an oversupply of information. This makes it difficult for listeners to escape the flow of the piece. […] The immersion is sometimes very intense, and a strong engagement develops in which the participants partially forget time, space and themselves. (Schubert 2021, 86, 129, 139)

Finale—Nostalgia

Concepts from gaming culture such as immersion and interaction have utopian potential for the digital extended opera, which received a real boost with COVID-19. At the same time, the early video game era became a nostalgic reference point for some composers of this generation, a phenomenon which Schrey (2017) describes as 'analogue nostalgia in digital media culture'. This is plausible: in 1984, German broadcasting became dual, shortly after the compact disc replaced the analogue long-playing record and the world went digital. That same year, Nintendo launched *Tetris*, ushering an era of moving gaming toward the mainstream, which also led to playful short-circuits within the experimental music scene. The sound of those old game consoles, like the C64 and Atari, then a little later the Gameboy, shaped the 8-bit era with their characteristically bleepy sound aesthetic, chiptunes that have kept concept composer Johannes Kreidler busy, for example:

> In my piece *Requiem,* I collected the melodies from computer games from the 80s and early 90s that you hear when the hero or heroine dies. So, the question was of how death was musicalised with these very limited means of an 8-bit-beepy computer sound, and whether it was then, for example, simply an ascending melody, or a descending one, or constant. Whether the hero ascends to heaven or descends to hell, or simply dissolves into nothingness, so to speak—there are whole philosophies of life or death in there in just a few tones. (Keidler cited in Schürmer 2021b)

Composer-performer Julia Mihály has an interesting view on this: for the 'Nintendo Generation', the computer game represents an interactive music theatre, with Super Mario as an 8-bit version of classical opera heroes:

I base my thesis on Super Mario Land, in which the protagonist has to fight his way through the world in order to save the princess, who is being held captive in a castle, when he wins the game and defeats all the enemies. And at the end, when he frees her, they can escape together—of course, this has a certain theatrical component, it could also be material from an Italian opera. In terms of gender, of course, we're very far behind in terms of content: the helpless woman who is actually totally passive and waits for the man to free her, there's also a certain parallel that you can find in Italian opera, for example (Mihály cited in Schürmer 2021b)

If operas can be described as audiovisual *Gesamtkunstwerke*, Generation Y expands the toolkit to include new media—in this case, props from gaming culture—and seriously crumbles the fourth wall with interactive tools which unquestionably expose virtual worlds. If classical operas have been further described as 'stages of politics' (Müller and Toelle 2008), this also applies to Alexander Schubert, whose works thematise control and surveillance in the digital age, while Johannes Kreidler's conceptual compositions could be located in this analogy as musical buffa comedy: his *Requiem* satirises Alexander Kluge's description of opera as a 'powerhouse of emotions' (2001, 101) by playfully touching on the two central topoi of opera history: dying and love. In his introduction to the piece, Kreidler declares: 'Death is the death of postmodernism. You must die, Tristan'. But what follows postmodernism? If Pierre Boulez already verbally blew up opera houses in 1967—and nevertheless conducted Bayreuth's 'Centenary Ring' in 1976—, the audiovisual *Gesamtkunstwerk* opera can live on in the music-theatrical reflections of computer games. It is not without reason that Lara Croft—the most famous female action hero—fights her way through a semi-destroyed opera house in the fourth level of *Tomb Raider II*, and that the classic hero Super Mario can be considered an 8-bit version of Tristan in his hopeless love for Princess Peach.

Game Over, or: (Virtual) Curtain Closed

Disclosure Statement

Notes on Contributor

Dr. Anna Schürmer is interested in discourses, mediality and aesthetics of contemporary music culture. As a journalist, she regularly publishes and produces in print media as well as in radio and online formats. As a media scientist and musicologist, she researches in the field of sonic cultures and sound studies. Her particular focus is on interference potentials of sound (noise, glitch, imperfection), new music and avant-gardes, aesthetic scandals, post-/transhumanism, gender and ludomusicology. Since completion of her dissertation *Klingende Eklats. Skandal und Neue Musik* (Transcript 2017), she has been working on the epochal aesthetics of the digital era: *De|Human?!* (www.interpolationen.de).

Notes

[1]   All quotes from German sources are translations by the author.
[2]   https://www.youtube.com/watch?v=AQI0aJJ8rss.
[3]   Personal communication.
[4]   https://youtu.be/laoV7cGXUNo.
[5]   https://soundcloud.com/soundmaking_podcast/soundmaking-ep22-alexander-schubert-av3ry.
[6]   https://youtu.be/ANBGpvldheg.
[7]   http://www.gappp.net/.
[8]   Personal communication.

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