as the eventfulness of indexical sound affords such a musically responsive approach, the mere presence – and involuntary communication – of their index effects tends to encourage their further remediation and re-appropriation on YouTube and other social media platforms. Hence, with regard to the musical uptake of human speech, even the most musically self-sufficient observations of speech patterns – especially viral ones – further contribute to the normalisation and perpetuation of pleasurable musical engagement with data-captured human (self-)display and are entangled with intrusive practices of musical "indexploitation" – including practices linked to public ridicule and peer-to-peer surveillance. Moreover, they provide the affective cultural production that the platform serves to its users as content. Against this backdrop, the mere use of samples of bodily presence effects can already be conceived of as an act of "expropriation," generating "involuntary labour that's been alienated from its original environment and put into service in a completely other context, creating profit and prestige for another."[73] Thus, beyond this inquiry into aspects of technological acceleration, techniques of musicalisation, and potentialities of affective stimulation by audiovisual aesthetic objects, a further examination of vernacular practices of musicalisation against the backdrop of trajectories of circulation, iteration, and aspirational labour is indispensable.

3.3 Composing with Computational Surface and Interface Effects

As vernacular banalities of networked interaction and relationality, the signs, signals, and surfaces effected by computational interfaces concretely shape the aesthetic objects and figurations of communal (re-)composition on YouTube. Not only does the interface design of social media platforms have a strong curating impact by introducing regimes of algorithmically mediated visibility, but it also obfuscates the performativity of the underlying computational operations happening at a medial sub-surface via user-friendly surfaces. However, in Internet-mediated creative relay, this obfuscation becomes implicitly thematised time and time again, as audiovisual patterns of computational "interface aesthetics" are constantly re-imagined, represented, and reproduced as elements of vernacular expression. The following chapter aims at disentangling the various vernacular practices on YouTube that musically engage with the virtualities of symbolic human-computer interaction, thereby examining

73 Reynolds, *Retromania*, 314.

the ways they represent and meta-referentially bring to the centre the interface effects which fundamentally shape our online experience "from the edges."

In order to facilitate adequate descriptions of the aesthetic and material properties of digital surfaces and interfaces, the following examination of musical composition with – and through – these vernacular banalities of computational surface structures is in need of some conceptual underpinning, specifically regarding the ways in which new media objects are created, composited, and, most importantly, represented and rendered "tangible." Lev Manovich's description of processes of "transcoding" as an effect of human-computer interfaces is noteworthy against the background of the formation of aesthetic objects of vernacular Internet culture:

> "[T]he computer layer and the culture layer influence each other. To use another concept from new media, we can say that they are being composited together. The result of this composite is a new computer culture – a blend of human and computer meanings, of traditional ways in which human culture modeled the world and the computer's own means of representing it."[74]

The cause-and-effect relation between humans and computer interfaces is situated within a symbolic realm of computation, as an "externalised imagination wherein events happen in effect, but not actually," as media scholar Margaret Morse notes.[75] Alexander Galloway similarly hints at the fundamentally fetishistic logic of such an externalised imagination by writing that "[t]he world no longer indicates to us what it is. We indicate ourselves to it, and in doing so the world materializes in our image."[76] His diagnosis of information aesthetics as a "neo-symbolism in which the monochromatic multiplicity of symbols has engulfed all else"[77] equates the symbolic realm of computation with a hyperreal space which, following Baudrillard's notion of the simulacrum, is characterised by the simulation of images and surfaces which do not refer to an "outside." This symbolic recursivity is accompanied by a logic of "spatial montage" linked to the users' interactive movement through – and experience of – the hypertext, opposed to a cinematic experience of montage as modular

74 Manovich, *Language of New Media*, 46.

75 Margaret Morse, *Virtualities: Television, Media Art, and Cyberculture* (Bloomington, IN: Indiana University Press, 1998), 180.

76 Alexander R. Galloway, *The Interface Effect* (Cambridge, UK: Polity Press, 2012), 13.

77 Ibid., 85.

events occurring in time.[78] The naturalised interactive "cyberview" of being able to open multiple frames side by side on the computer screen is consequently also expressed via fragmented graphical software interfaces – a prime example are split-screens in video chat programs, which paradigmatically represent the networked condition.[79] Moreover, one could say that, on a macro level, social media platforms are spatial montages in themselves – YouTube, in its archival function, being a striking example for this. Through YouTube's curation and spatial presentation of historically (and culturally) most diverse video content, both the past and present become instantly accessible and are presented simultaneously, as Simon Reynolds notes: "The crucial point about the journeys through time that YouTube and the Internet in general enable is that people are not really going *backwards* at all. They are going *sideways*, moving laterally within an archival plane of space-time [...] The Internet places the remote past and the exotic present side by side. Equally accessible, they become the same thing: far, yet near, old yet now."[80]

In general, graphical computer interfaces realise a presentation of the intangible as tangible, fulfilling in its symbolic fetishism the Debordian notion of the spectacle as a replacement of "the real world [...] by a selection of images which are projected above it, yet which at the same time succeed in making themselves regarded as the epitome of reality."[81] Thereby, the spatial montage of graphical interfaces encompasses a representational turn towards what Reynolds calls the "archival plane of space-time." Indeed, with regard to vernacular composition on YouTube which engages with the aesthetic properties

78 See Manovich, *Language of New Media*, 269–273.

79 The cultural paradigm of "windowing" has also remediated our cinematic experience of multi-screens, as Jim Bizzocchi notes: "An audience that is capable of switching among the multiple screens of the computer desktop's standard Graphic User Interface, or the more rapid oscillation between the control and display frames of a video game, is certainly on the way to parsing a controlled and well-crafted multi-framed cinematic narrative." Jim Bizzocchi, "The Fragmented Frame: The Poetics of the Split-Screen," paper presented at the conference *Media in Transition 6 – Stone and Papyrus, Storage and Transmission, Massachusetts Institute of Technology, Cambridge, MA, April 24–26, 2009*, http://web.mit.edu/comm-forum/legacy/mit6/papers/Bizzocchi.pdf.

80 Reynolds, Retromania, 85

81 Guy Debord, *The Society of the Spectacle*, trans. Ken Knabb (Canberra: Hobgoblin Press, 2002), 12.

and effects of computer interfaces, the awareness of computer-mediated spatio-temporalisation and (a)historicity is an accompanying factor that deserves attention in the examples to come. In her phenomenological approach towards digital surface effects, Ashley Scarlett proposes a conceptualisation of digital materiality that includes the aesthetic capacities of digital objects and their ramifications regarding knowledge formations and productions of meaning by users. While acknowledging that the computational "submedial can never be known as such" and its attempted "exposure merely transforms the submedial into a surface effect,"[82] Scarlett considers the situated aesthetic experience and semiotic examination of these surface effects as a way of making digital materiality "accessible through aesthetic analysis."[83] Her approach offers a vantage point from which the shifting discursive and creative practices of vernacular composition can be conceived of not only as indicators of the affordances and constraints of code, but also as integral modes of symbolic interaction and knowledge production aimed at eliciting meta-awareness of the simulative sphere of computation they are situated in.

Media-Reflective Cyber View and "Cyber Listening"

As the following examples are going to show, vernacular aesthetics that point to the computational subsurface do not have to be exclusively or primarily screenic but may discursively invoke and (re-)produce surface effects by musical and sonic means as well. As an Internet-mediated musical microgenre, "vaporwave" could be seen as paradigmatic for such a media-reflective audiovisual aesthetic. Vaporwave is one of many labels that formed in the context of emerging reflective musical approaches to nostalgia and collective popular memory since the late 2000s – other genre labels include hypnagogic pop, chillwave, or glo-fi, to name just a few. Arguably, all these microgenres represent specified offshoots from the broad musical trend of hauntology, which developed in the UK during the 2000s. As the name already suggests, hauntological music draws on Jacques Derrida's concept of Hauntology. In his book "Spectres de Marx," Derrida lays out his concept of a present – or rather "non-present" – which is continuously haunted by linguistic and ideal

82 Ashley Scarlett, "Interpreting an Improper Materialism: On Aesthesis, Synesthesia and the Digital," *Digital Culture & Society* 1, no. 1 (September 2015): 113, https://doi.org/10.14361/dcs-2015-0108.

83 Ibid., 117.

constructs from the past, thereby questioning the finiteness of history as such. Derrida's thought, derived with respect to the "haunted" history of political and philosophical Marxism can be transferred to any context, as the spectralising linguistic or ideal traces pre-form any human-made concept before it even comes into being – including concepts concerned with interpreting our past. At the same time, every interpretation must be regarded as performative, as it "transforms the very thing it interprets."[84] Inspired by this Derridean concept, hauntological music seeks to reanimate past musical periods through a present-day lens. The trend is focussed on the use of analogue media and recording devices from the 1960s and 1970s, thereby drawing on samples from a vast spectrum of authentic sound sources from the past. This array of musically disparate outcomes prompted the emergence of several microgenres with quite specific musical and sonic approaches to cultural memory, vaporwave arguably being the first one to emerge and stay entirely situated within the fabric of digitally mediated vernacular co-creation. The label's formation, further negotiation and circulation on internet boards like Last.fm or Reddit in the early 2010s secured a wide online audience – and further inevitable offshoots. Like its musical precursors, vaporwave builds on the "re-appropriation of the cultural detritus of a media-saturated capitalist social order"[85] by remixing 1980s and 1990s corporate mood music, including elevator music, lounge jazz, or synth pop. It thereby relies entirely on samples, often entire pieces, which are slowed down, looped, pitch-shifted or otherwise manipulated. Despite the pioneering effort and influence of artists like James Ferraro and Daniel Lopatin, vaporwave is characterised by a pointedly communal spirit with respect to individual creation, which does not aim at attaining stylistic distinction. YouTube serves as an ever-expanding archive for the curation and diffusion of vaporwave playlists and 24/7 vaporwave radio channels based on exhibiting musical and visual "vaporwave aesthetics."[86]

84 See Jacques Derrida, *Specters of Marx*, trans. Peggy Kamuf (New York: Routledge, 1994), 63.

85 Adam Trainer, "From Hypnagogia to Distroid: Postironic Musical Renderings of Personal Memory," in *The Oxford Handbook of Music and Virtuality*, ed. Sheila Whiteley and Shara Rambarran (Oxford: Oxford University Press, 2016), 414.

86 Video titles and descriptions often feature the word "a e s t h e t i c," which serves as a recognisable signal for other insiders. Ross Cole aptly describes its distinctive character spacing as a "metonym for ambient emptiness." See Ross Cole, "Vaporwave Aesthetics: Internet Nostalgia and the Utopian Impulse," *ASAP/Journal* 5, no. 2 (May 2020): 301, https://doi.org/10.1353/asa.2020.0008.

Figure 6: Cover of the album "Floral Shoppe" by Macintosh Plus (released digitally on Bandcamp in 2011).[87] *Macintosh Plus, Floral Shoppe, Beer on the Rug BOTR009, 2011, digital album, https://vektroid.bandcamp.com/album/floral-shoppe.*

The composition of vaporwave tracks has emerged as an exclusively Internet-situated vernacular practice due to low-threshold and quasi-formulaic digital means of creation: besides slowing down the entire track, the "vaporwave sound" is attained by simple additions of surreal reverb effects, subtle pitch shifts, or high and low pass filters, which can be added via free plug-ins in digital audio workstations – or, even easier, by using a free app like

87 The album's second track, "リサフランク420 / 現代のコンピュ," widely popularised the microgenre on YouTube and is often considered a blueprint for the vaporwave sound. See @ChocolateGinger, "MACINTOSH PLUS – 420 / |(reupload)," May 11, 2018, YouTube video, 7:21, https://www.youtube.com/watch?v=aQkPcPqTq4M.

"CD-ROMantic," which automatically generates entire vaporwave albums based on the uploaded original tracks.[88] Different from early hauntological music, no historical technological settings are being re-enacted in order to evoke cultural memory or associations to analogue sound production. According to media theorist Wolfgang Ernst, only the processuality of actually using analogue devices such as tape or vinyl players would transform these historical media into "media-archeological objects,"[89] or even into "active 'archeologists' of knowledge" themselves[90] – an aspect which is entirely missing in the production of vaporwave, as the sound-generating technological setting is completely emulated by automated software procedures to create the impression of "grainy" sound textures or subtle pitch shifts associated with tape and vinyl records. Thus, with regard to the reception of vaporwave, one could detect a disregard of the "media-archeological ear" in favour of an "ahistoric listening." However, this argument misses the point, as it ignores today's overall post-media condition in digital environments of media convergence, which the vaporwave aesthetic reflectively points at by evoking detectable sonic interface effects that are neither primarily linked to historical technologies nor used as a disguise, but rather hyper-affirmed as fetishistic computational surfaces. Thus, the composition of vaporwave appears to be informed by what David M. Berry, with regard to "post-digital" aesthetics, calls the "implicit notion of surfaces as theatres of action and performance […] which highlights the machinery of computation" (and is by no means exclusive

88 MAA FOR APPS, "CD-ROMantic: Slowed + Reverb," Google Play, version 3.2.3d (last update June 19, 2024), https://play.google.com/store/apps/details?id=maa.slowed_reverb.vaporwave_music_maker. Of course, the "trippy" effect of slowing down entire tracks is not without historical predecessors. For instance, the similarities to the aesthetic of the "chopped and screwed" remix technique, which emerged in Houston's hip-hop scene, are noticeable: "Chopped and screwed" remixes became popularised by DJ Screw's mixtapes in the early 1990s and are characterised by slowed down tempos, scratching techniques, and skipped beats, resulting in "chopped and screwed" versions of the remixed tracks. Unsurprisingly, the influence of DJ Screw on the vaporwave genre has been discussed in online boards such as Reddit. See @RockoTreez, "Does the Vaporwave community recognize the influence of DJ Screw?," r/Vaporwave, Reddit, June 11, 2015, https://www.reddit.com/r/Vaporwave/comments/39g95g/does_the_vaporwave_community_recognize_the/.

89 Wolfgang Ernst, *Digital Memory and the Archive*, ed. Jussi Parikka (Minneapolis: University of Minnesota Press, 2012), 177.

90 Ibid., 55.

to screenic interface-centric approaches).[91] All in all, the microgenre meta-referentially engages with the specific hauntedness – or: the "non-past" and "non-present" – of visual, sonic, and musical patterns and textures within a computationally accelerated simulacric (pop-)cultural space. It emerged in awareness of a media environment which continually accumulates images and styles, where the "new spatial logic of the simulacrum," as Fredric Jameson puts it,[92] can fully unfold, condemning us "to seek History by way of our own pop images and simulacra of that history, which itself remains forever out of reach."[93] The visual imagery, which can exist on its own or complement a concrete piece, co-constitutes the modular aesthetic of vaporwave and only reinforces this impression: communal contributions engaged with the co-development of a visual "vaporwave vernacular" typically include motifs from late 90s web design, 3D renderings, classic video games, Japanese letterings, skylines, company logos, and many more, often composed in collage form.[94] The pattern aesthetic of the visuals, in combination with the slowed down and surrealistically manipulated musical detritus found on YouTube and other online archives, aims at evoking a "reflective nostalgia" for a past that never existed[95] – and, through its eery retro-futuristic renderings of aesthetic objects which invoke early cyber-capitalist utopias: for a future that never was.[96]

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91 David M. Berry, "The Postdigital Constellation," in *Postdigital Aesthetics: Art, Computation, and Design*, eds. David M. Berry and Michael Dieter (Basingstoke: Palgrave Macmillan, 2015), 44.

92 Fredric Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991), 18.

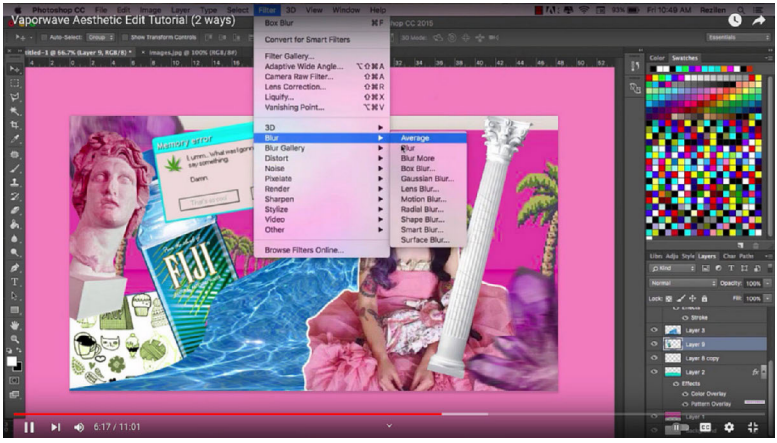
93 Ibid., 25.

94 See this video tutorial on how to create vaporwave collages: @SquishyTutorialsx, "Vaporwave Aesthetic Edit Tutorial (2 ways)," July 1, 2016, YouTube video, 11:01, https://www.youtube.com/watch?v=OmZUIuxAYB8.

95 See Svetlana Boym, *The Future of Nostalgia* (New York: Basic Books, 2001), 49.

96 The link to Derrida's notion of hauntology, however, remains superficial. Vaporwave does not represent an "applied theory" of Derrida's writings, since this would require reference to and discursive engagement with the historical layers pertaining to the assembled cultural objects. Rather to the contrary, historical and cultural specificities of appropriated aesthetic objects are hardly retained but rather blurred in mashups guided by demonstrative indifference and hyper-affirmation of the genre's fundamentally ahistorical character.

Figure 7: Still from the "Vaporwave Aesthetic Edit Tutorial" by @SquishyTutorialsx (2016).



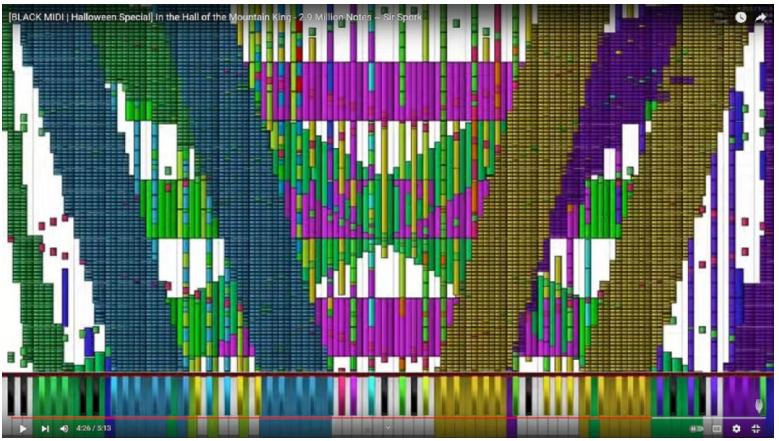
Banal Interfaces and Musical Events

Notwithstanding the fact that the visual pattern aesthetic of vaporwave at times includes representations of concrete computational objects and frames (see Figure 7), the symbolic remediations of technologies and their aesthetic properties – for instance through the use of automated surreal colourisation/saturation/blurring effects or, on the musical level, vinyl pitch shifts and crackles – render perceptible the properties of the used software filters and plug-ins in a rather *implicitly* interface-centric fashion. In contrast, the phenomenon of "Black MIDI" on YouTube can be characterised as an *explicitly* interface-centric musical practice. Black MIDI, as a term, emerged in 2009, when the first compositions were uploaded on the Japanese video-sharing platform Nico Nico Douga (since 2012 known as Niconico).[97] It denotes compositions based on MIDI files that include an excessive amount of notes, up to millions or billions, in the form of MIDI signals. Written out in musical notation, the score would appear "blacked out," hence the name. While the first Black MIDI compositions included an accompanying screen recording of the playback by a notation software, the convention shifted to solely record the

97 See, for example, @白鷺ゆっきー, "【East】I tried to black the score of the modified version of Final Savage Sister Flandre S.," July 27, 2009, Niconico video, 10:41, https://www.nicovideo.jp/watch/sm7764460.

playback by virtual MIDI piano softwares around the time Black MIDI became more than a niche phenomenon and started to spread on YouTube – one could thus argue that Black MIDI, in its current visual representation, emerged as a YouTube-specific vernacular musicking practice. Musically, arrangements of pre-existing musical pieces are far more common than original compositions, ranging from video game music over anime soundtracks to famous pop songs.

Figure 8: Still from @Sir Spork's Black MIDI arrangement of Edvard Grieg's "In the Hall of the Mountain King."



By becoming Black MIDI, the musical material is enriched to the point of not only becoming impossible to play for humans, but also challenging with regard to the processing capacities of the computer. Transparent and "consumable" sound patterns are enabled by distinct MIDI sounds, while dissonances are somewhat contained by their low volume and their balanced distribution across the whole frequency spectrum – however, this impression does not last long, as the tracks usually escalate into a barrage of notes, letting the tone-noise ratio tilt by introducing loud "mega clusters" and decreasing the temporal intervals of repeated notes.[98] The graphical user interfaces of the playback

98 See, for example, this Black MIDI arrangement by @Sir Spork with 2.9 million notes: @Sir Spork, "[BLACK MIDI | Halloween Special] In the Hall of the Mountain King – 2.9 Million Notes ~ Sir Spork," October 31, 2017, YouTube video, 5:13, https://www.youtube.com/watch?v=YXRPchyPXfI.

software – such as Synthesia or Virtual MIDI Keyboard – furthermore suggest concrete visual creations, as both the spatial arrangement of the visualised MIDI signals and the possibility of displaying them in different colours often result in intricate visual creations which complete the multimodal experience.

Despite unarguably being an Internet-born and YouTube-situated musical practice, Black MIDI, in its embrace of the material agency of computational interfaces within a distributed human-software system, has an analogue ancestor, namely the Studies for Player Piano by Conlon Nancarrow. For his Studies, which he composed between 1948 and 1992, Nancarrow manually punched piano rolls for his self-playing piano, creating highly complex rhythmic proportions that exceed human playing capabilities and, quite often, notational possibilities. The spatiality of the piano roll and the automatic playback afforded a new temporal control, most apparent in his proportional canons that would imitate the melody or entire scores at different speeds – an approach that arguably climaxed with his Study 41c (composed 1969–1977), a double proportional canon for two player pianos with the ratios $\frac{\frac{1}{\sqrt[3]{\pi}} / \sqrt[3]{1316}}{\frac{1}{\sqrt{\pi}} / \sqrt{23}}$.[99] Whereas, in Nancarrow's case, the piano roll can be detected as the human-machine interface which enables and shapes the musical rendering, the determination of *the* corresponding human-machine interface with regard to the digitised vernacular practice of composing or arranging Black MIDI proves to be futile. Merriam-Webster's definitions of interface as "the place at which independent and often unrelated systems meet and act on or communicate with each other" and "a surface forming a common boundary of two bodies, spaces, or phases"[100] help imagine the *mise-en-abyme* structure of human-computer interfaces: The Musical Instrument Digital Interface (MIDI) itself, as a communications protocol, can only be accessed and implemented by physical interfaces – such as controllers, mouse, and keyboard – in combination with visual software interfaces. Moreover, following the above-mentioned definition, the signaletic sound event that occurs when a MIDI file is triggered could be defined as a sonic interface by itself. However, commonly it is the *visual* interface which is mistaken for "interface" as a whole, as it is that what we permanently perceive as "workable" when operating the computer – it is within the frame, seemingly

99 See Margaret Thomas, "'Not Exact, but Near Enough': Complexity and Playfulness in Nancarrow's Study No. 41," *American Music Review* 42, no. 1 (Fall 2012): 10–13, http://www.brooklyn.cuny.edu/web/aca_centers_hitchcock/AMR_42-1_Fall2012.pdf.

100 *Merriam-Webster*, s.v. "interface," accessed March 30, 2023, https://www.merriam-webster.com/dictionary/interface.

not operating from "outside." Alexander Galloway calls this kind of interface the "intraface," as it can be defined "as an internal interface between the edge and the center but one that is now entirely subsumed and contained within the image."[101]

Yet, in terms of Black MIDI compositions, the intraface of the used playback software, which we get to see in the YouTube videos is merely used as a means of visualisation and succeeds the actual programming of the MIDI files. The example of the software Synthesia, which has become the aesthetic standard for Black MIDI visualisation, helps clarify this: Synthesia is a software aimed at the gamification of keyboard practice, encouraging players to press their keys following a visualised MIDI file which moves from top to bottom. The software, which was released in 2006, combines the conventional visualisation of MIDI files known from digital audio workstations with the already widely popularised design of the game Guitar Hero – Synthesia is therefore also known as "Piano Hero." For its clean "MIDI look" and its gamified "Guitar Hero aesthetic," which increases the impression of "workability," the intraface standard set by Synthesia represents a vernacular banality which, due to its immediately palatable design, has become the most spreadable template for the representation of Black MIDI. However, the actual MIDI file is programmed using digital audio workstations or MIDI sequencers and then transferred to the playback software like Synthesia,[102] the intraface of which then visualises the playback of MIDI signals. Along the lines of what media theorist Joanna Zylinska noted with regard to visual retro-fetishism in digital art, the symbolic fetish of the "MIDI interface aesthetics" is knowingly embraced "as a construct and figuration, without relinquishing a desire for it."[103] The audiovisual surface of Black MIDI is shaped from the edges, yet it does not aim at bringing about notions of "autonomous machines." Rather, Black MIDI can be seen as a playful compositional practice deliberately aimed at pushing the envelope of computational processing capabilities. Here lies the irony – or the humour – of Black MIDI: the "banality" of the used MIDI sounds and the intraface is in stark contrast to the high demands that are made on the computer's performance in terms of RAM and processing speed. In order to avoid performance

101 Galloway, *Interface Effect*, 40–41.

102 To attain different colours different colours, one can create multiple tracks within the MIDI file itself.

103 Joanna Zylinska, *AI Art: Machine Visions and Warped Dreams* (London: Open Humanities Press, 2020), 70.

issues, a high-performance system is needed; additionally, lags can be avoided by recording the playback slowed down and speeding it up again in the video editing process.[104] Although the underlying computational operations are disguised, the represented interfaces, as naturalised and banal aesthetic objects, become concomitantly de-banalised over the course of a video, as they set the stage on which Black MIDI's characteristic "aesthetic of impossibility" unfolds: conventional forms of MIDI usage linked to the qualities normally ascribed to MIDI, such as low data volume and operational reliability, are taken ad absurdum by the sheer quantity of processed signals, the musical and visual outcome of which theatrically represents human and material agencies fostered by human-computer interfaces.

Software Glitches and Aesthetics of Failure

Despite the exploration and exploitation of processing capabilities towards an "aesthetic of impossibility," the software's functionality is preserved in Black MIDI produsage. Moreover, although the surfaces attain a theatrical function, the performativity of underlying code is not brought to the centre of attention, as, ironically, the explicit interface-centricity of the Black MIDI aesthetic obfuscates the underlying *mise-en-abyme* of interfaces. In comparison, the aforementioned aesthetic ascribed to the microgenre of vaporwave consists of sonic and visual surfaces which do not render the submedial layers legible either, but, as deliberately "poor images" engaged with their own "non-past" and "non-present," implicitly refer to the computational regime of spatial montage and the accompanying simulacrum of "haunted" pop-cultural images that are collectively imagined as tangible and desirable. A third option of musically re-imagining, representing, and reproducing vernacular audiovisual patterns of computational "interface aesthetics" can be found in approaches concerned with revealing the computer's functionality through technological limitations and "failures." As composer Kim Cascone points out, an "aesthetics of failure" in the digital realm is concerned with exploring "[t]he data hidden in our perceptual 'blind spot' […] by capturing and examining

104 See Sam Reising, "The Opposite of Brain Candy – Decoding Black MIDI," *NewMusicBox*, April 15, 2015, https://nmbx.newmusicusa.org/the-opposite-of-brain-candy-decoding-black-midi.

the area beyond the boundary of 'normal' functions and uses of software."[105] The disruptive moment of temporary dysfunctionality created by exploiting software "glitches" – i.e. provoked or unprovoked computational errors – is central to any computer-related "aesthetics of failure" in that it marks a perlocutionary effect with transformational potential: it renders those interface effects recognisable that elude direct recognisability. Hence, Lori Emerson asserts that glitch "defamiliarizes the slick surface of the hardware/software of the computer and so ideally transforms us into critically minded observers of the underlying workings of the computer."[106] Although technically, a glitch is defined as a result of an error, sometimes the default functions of a program can be exploited to bring about unpredictable and unintended changes. Thus, Olga Goriunova and Alexei Shulgin point out that "[w]hat users might perceive as 'glitchy' can arise from a normally working function of a program."[107] In the following example, the term "glitch" is applied in such a colloquial manner.

In his YouTube video series "JOTW" ("Jam of the Week"), Simon Fransman creates crude performances of jazz standards by 3D animated virtual personas that are synchronised by instrumental recordings or voice synthesis,[108] often embedded in bizarre voice-over narratives which are focussed on character development and situated in contexts connected to jazz and meme subculture on and beyond YouTube.[109] The audiovisual compositions in this series make de-

105 Kim Cascone, "The Aesthetics of Failure: 'Post-Digital' Tendencies in Contemporary Computer Music," *Computer Music Journal* 24, no. 4 (Winter 2000), 13–14, https://doi.org/10.1162/014892600559489.

106 Lori Emerson, "Glitch Aesthetics," in *Hopkins Guide to Digital Media*, eds. Marie-Laure Ryan, Lori Emerson, and Benjamin J. Robertson (Baltimore: Johns Hopkins University Press, 2014), 236.

107 Olga Goriunova and Alexei Shulgin, "Glitch," in Software Studies: A Lexicon, ed. Matthew Fuller (Cambridge, MA: MIT Press, 2008), 111.

108 See, for example, Fransman's "JOTW" video featuring a rendition of Antônio Carlos Jobim's bossa nova/jazz standard "Wave"(2015): @Simon Fransman, "Wave – a Jam of the Week Tribute," October 21, 2015, YouTube video, 2:06, https://www.youtube.com/watch?v=qRvEy2YE8cs.

109 In Fransman's JOTW video "How To Play Funk with Mr. Magic," which features fellow jazz musicians Rob Araujo and Joe Albano as animated avatars, Araujo presents his "dank 420 synth" that "comes pre-programmed with 120 dank memes," before referencing famous jazz pieces and clichés in his playing, such as the opening phrases from Charlie Parker's "Scrapple from the Apple" and Sonny Rollins' "St. Thomas" – and, of course, the inevitable "lick," a diatonic phrase that keeps reappearing in jazz records and is often used with comedic intent, particularly in the context of online

liberate use of the eventfulness of random or unpredictable glitches that the used software concomitantly afford. For instance, in order to attain his vocals, Fransman exports a MIDI file of the arranged piece into the musical notation and rendering software "Melody Assistant" and, depending on the respectively performing virtual persona, selects a different vocal synthesizer and a different set of sung words or syllables – in the case of the character "Bom Bom," he chooses a bass voice, the syllables "bom bom," and a Finnish language preset.[110] In addition to the comical effect of the synth voices, often increased by the programming of humanly unsingable passages, Fransman makes use of the unpredictable lags in playback mode, which the software is known for, thereby generating autonomous musical events that intersperse the vocal parts and result in counter-intuitive, stumbling micro-rhythms. The musical rendering is accompanied by "glitchy" 3D animations created with the software iClone 6: the avatars' facial and bodily expression settings and "morph animations" allow for bizarre movements like uncontrollably flailing arms, bobbing and rotating heads, or postures and slides that defy the laws of gravity. In tactically precipitating these musical and visual events of computed chaos, Fransman aims at exposing and, in a manner of speaking, de-automating the underlying automated procedures. Given its aesthetics of failure and profanity, his compositional approach towards creating his virtual performers can be seen as a discursively vernacular performance, contrasting the commensurability of animated Vocaloid pop personae – like the virtual anime character Hatsune Miku – which are tailored to become smoothly embedded in industrially standardised production chains, including music videos, live concerts, merchandising, etc.[111]

Fransman's "JOTW" videos are influenced by the cultural dialect of "Internet Ugly," which is most prevalent in visual Internet memes and rooted in an ethos of "voluntary constraints and affected visual carelessness" and the re-functionalisation of software tools originally "meant to smooth and

jazz communities. Simon Fransman, "How To Play Funk with Mr. Magic – FEAT. ROB ARAUJO & JOE ALBANO," July 29, 2016, YouTube video, 6:49, https://www.youtube.com/watch?v=QoN5MNPhTzk&t.

110 See @Simon Fransman, "How Bom Bom Is Made – Step by Step Tutorial," November 27, 2017, YouTube video, 2:06, https://www.youtube.com/watch?v=eKTJIZMwvSs.

111 See Holger Schulze, "Das sonische Kapital," 21.

beautify."[112] In his videos, an authorial function is bestowed upon the glitch itself in order to bring about a "not-entirely human-produced reality, […] not one-hundred percent compatible with customary human logic, visual, sound, or behavioral conventions […]."[113] In embracing – and provoking – random aesthetic effects of seemingly dysfunctional computational procedures, the failure of (computational) performance becomes a performance of failure at the same time. A glitch does not actually render legible the computational subsurface, yet it perforates the audiovisual surface with aesthetic effects that hint at the underlying performativity of code, thus marking a medial transformation which potentially encompasses discourses and evidences *within* and *about* the architecture of software interfaces.

Figure 9: Still from a "JOTW" video by Simon Fransman, featuring a rendition of Antônio Carlos Jobim's bossa nova/jazz standard "Wave" (2015) – "Bom Bom" is playing guitar and singing the bass lines, an unnamed singer is unnaturally bobbing her head.

112 Nick Douglas, "It's Supposed to Look Like Shit: The Internet Ugly Aesthetic," *Journal of Visual Culture* 13, no. 3 (December 2014): 337 and 315. https://doi.org/10.1177/1470412914544516.

113 Goriunova and Shulgin, "Glitch," 115. Goriunova and Shulgin thus call glitches "a manifestation of genuine software aesthetics" (ibid., 111).

As the examples in this chapter show, contributions engaged with the exposure of computational surface effects hold the potential to invoke, in their own ways, an ethos of Internet-situated vernacular creativity through the remediation, de-familiarisation, and perforation of implicitly or explicitly interface-centric audiovisual figurations, which are collectively (re-)imagined as elements of vernacular expression. Against the background of the domestication of personal computers and the accompanying obfuscation of interfaces, the (re-)composed surface and interface effects call attention to the underlying (im)material agencies which afford the collective imagination of new media objects as "tangible." As Diane Gromala and Jay David Bolter note, in the institutionally territorialised symbolic realm of computation the user is expected "to focus on the task, not the interface itself […] If the application calls attention to itself or intrudes into the user's conscious consideration, this is usually considered a design flaw."[114] Yet, interface-centric vernacular (re-)compositions gain authority by actually pointing to – and developing – the screenic and sonic repertoire of interface effects, becoming meaningful exactly by way of implicit and explicit meta-reference to the all-encompassing symbolic realm with institutional imprint, the computational procedures of which are realised by a below-surface dimension that renders itself invisible. By way of co-creating productive and playful aesthetic experiential renderings of computational surface effects, aimed at their re-domestication within communal or community-oriented practices, vernacular compositional practices invoke an ethos of bottom-up cultural making. Thereby, they potentially afford a certain accessibility – through discursive and aesthetic examination – to forms and agencies of digital materiality which, by subsuming and informing any communicative and creative networked practice, shape our aesthetic online experience and concomitantly accelerate the proliferation of images and aesthetic patterns attributed to popular and digital culture.

114 Jay David Bolter and Diane Gromala, *Windows and Mirrors: Interaction Design, Digital Art, and the Myth of Transparency* (Cambridge, MA: MIT Press, 2005), 375.