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The Politics of Poetry. *Piano Hero* (2011/2017) by Stefan Prins

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Abstract

Piano Hero #1-4 (2011/2017) is a cycle of four piano pieces by the Belgian composer Stefan Prins. The cycle addresses the question of the correlations between technological progress and society through a connection between sounds and video, each of which is reconfigured in the four pieces. In this article I want to argue that Prins does not choose a conceptual approach in the classical sense, but a metapoetic one, insofar as the music itself – meaning its sounds as well as the technologies, agents and practices involved – remains the key medium of reflection. In this way one could say Prins remains true to the formalist aesthetics of the traditional piano cycle to a certain extent, but at the same time gains a socio-political dimension from it.

In the first section of this article, I try to approach the four pieces analytically from a structural as well as from a phenomenological perspective. In the second part I want to develop an interpretative take on the metapoetic texture of the piece by approaching it through five different motifs each of which occupies an essential aesthetic and reflective role within the cycle. These motifs are (1) the role of technology, (2) the role of the sound and music on a conceptual level, (3) the mirror as both a structural and a conceptual motive, (4) immersion as an experiential quality and an object of reflection and (5) the reflective mode of a meta-poetic perspective.

Keywords

audiovisual aesthetics · immersion · stefan prins · technology · piano

Piano Hero is a cycle of four piano pieces by Stefan Prins composed from 2011 to 2017. In comparison to Prins's concurrent works, such as *Generation Kill* or *Mirror Box Extensions*, that can be characterised as grandly theatrical and generally "symphonic", it evokes a calm, intimate, and introspective atmosphere. Moreover, despite its radically modern approach to sound aesthetics and compositional means it is – in a subtle and indirect way – also more traditional.

On a conceptual level, however, Prins' pieces from this period are all concerned with one main question: how can correlations between technological progress and society be addressed by using sound and video? Prins finds various ways to address this question by writing both for and about technology and, in doing so, explores the boundaries of acoustic and technologically produced or reproduced sound. Even though visual and sometimes performative elements are integrated Prins also pays great attention to the phenomenological qualities of sound, its structural and dramaturgical organisation and its expressivity.

The four pieces of the *Piano Hero* cycle take their point of departure from one initial setup: a solo pianist plays a MIDI keyboard on stage, and in pressing its keys, they trigger pre-recorded samples of piano sounds and video. These samples have been pre-recorded while improvising on the open corpus of the piano; in concert they are represented sonically and visually on a video screen. The pianist in the video is depersonalised, as we only see his hands and arms but not his face, and so therefore functions as a kind of avatar controlled by the live performer on stage.

The basic setup is thus a solo performance with the delicate twist that the performer is not responsible for producing the sounds. It alludes to a formerly popular video game, *Guitar Hero*, in which players use a guitar-shaped game controller and have to match the notes of famous rock songs and guitar solos by pressing the right buttons at the right time. Over the course of the cycle, *Piano Hero* becomes increasingly more intricate. The complexity that arises as a result derives in part from a principle which Prins calls «the multidimensional» (2015). He characterises it as

the logical unfolding of an increasing number of perspectives. Some of these perspectives unfold on the sonic level, some of them on the visual level, and some emerge merely on a reflective level. This technique of accumulating several different aesthetic and conceptual layers is one reason why the referential impact of the *Piano Hero* cycle is rather indirect: it takes a critical position but without making claims for itself. In this regard its politics are poetic and subtle. Its meta-poetic quality derives from an examination of the relationship between technology and society and is at once an examination of music, its means, its effectiveness and its material[1].

The Cycle

Piano Hero #1

As described, *Piano Hero #1* presents a live performer and a MIDI keyboard that is linked to a screen and speakers via a computer[2]. The keys of the MIDI keyboard trigger video material derived from improvisations of another player striking the strings and frame of an upright piano with a set of separated piano keys. The improvising pianist on video – Frederik Croene, who also commissioned and premiered *Piano Hero* #1 – hammers, rolls, scratches, and throws the wooden keys on the strings and frame. He thereby creates a sound spectrum that seems both mechanistic and organic at the same time. The MIDI keyboard not only triggers these sounds and their corresponding visuals but also allows for distortions by reversing, accelerating and decelerating them; these processes are

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[2] In the following I will refer – also in time annotations – to the recordings by Stephane Ginsburghe for the Kairos DVD production *Stefan Prins, Augmented* (2019), which includes *Piano Hero # 1-4*, Coproduction Muziekcentrum De Bijloke, Ultima Festival Oslo, Internationale Ferienkurse für neue Musik Darmstadt and Institute for Computer Music and Sound Technology (ICST) Zürich.

employed greatly in the score. In this way, a dense, repetitive, and hectic arrangement of patterns evolve that are initially aggressive and loud, at times calmer and taken back, but their escalating tendency is mostly dark, penetrating, and discomforting.

Fig. 1: stage setting PH #1 (photo by courtesy).

The presence of the live pianist is overshadowed by the over-dimensional projection of the pianist's actions on the screen. The depersonalised virtual pianist has taken up the focus of attention. The position of the live pianist's arms and hands seem to be visually in accordance with the virtual pianist serving as his digital counterpart or avatar. Time and again, however, perception is confused when the gestures of the live performer seem to lack visual synchrony with the auditory events and the gestures displayed on screen. For instance, a hectic fast-forward sequence on the screen could correspond to the live pianist holding down a single key on the MIDI keyboard, and a fast

ricochet repetition on one key by the live pianist could sonically and visually result in a sequence of slowed-down actions on the screen (bars 25-32, 1'17"-1'29"). Unexpected synchrony, on the other hand, can also be confusing when, for example, during a slow-motion section the live pianist's gestures unnaturally adapt to the decelerated tempo as if controlled by the same electronic command (bars 100-101, 4'04").

At bar 112 (4'57") a sudden shift in attention happens: the live performer carries on playing, but the soundtrack is suddenly suspended, and the continuity of sounds is interrupted; instead of turning black, the screen shows the silent pianist from the perspective of his back. This finally brings the live performer to the centre of attention, and also addresses the audience by reversing its perspective on the stage setting. This episode could be called a "reflective cadenza", for in terms of the developing drama of the piece the performer is brought into the foreground. In place of the virtuosic piano techniques one might expect from a cadenza, Prins inserts a self-reflective moment. It also reframes the essential question about performance, agency, and authorship: who is actually performing? Is the live performer really in control or is the technological system becoming an agent itself? The notion of the piano as a mechanistic music apparatus, a kind of machine, emerges. The traditional epistemological status of the live music performance, its soulfulness, authentic expression and the magic of presence, are suddenly thrown into question.

Piano Hero #2

In *Piano Hero #2,* the setup is more complex. The video screen is now split into four independent parts: three parts display the pre-recorded samples, and the remaining part displays the image of a live camera filming the pianist. The MIDI keyboard is joined by a grand piano, which is placed at a 90-degree angle and thereby enables the pianist to switch between both keyboards. Some of the piano strings are prepared and the pianist operates two extra pedals: the first one switches the live camera on and off and amplifies the piano sounds, and the other functions as an extra sustain pedal for the MIDI keyboard. The MIDI keyboard can

now also distort, record, or loop both pre-recorded material and the sound produced live on the grand piano. In this way, a complex system of possibilities emerges, which not only brings the performer to his limits but also leaves the audience overwhelmed and disoriented; it is almost impossible to unravel the overly complex polyphony of sound layers and moving images.

On an expressive level, *Piano Hero #2* is more reduced, less wild and hectic, it is more fragmented and less continuous than the first piece. It confronts the pre-recorded sounds in juxtaposing piano tones of distinct pitches with indistinct noise-like sounds from the improvised recordings. Sometimes these pitches coalesce around tonal centres, or even acquire a melodic quality, like the episode that quotes the prominent F-sharp minor motif of the slow movement in Beethoven's *Hammerklavier Sonata*, op. 106, here transposed to F minor (bars 35-36, 1'58").

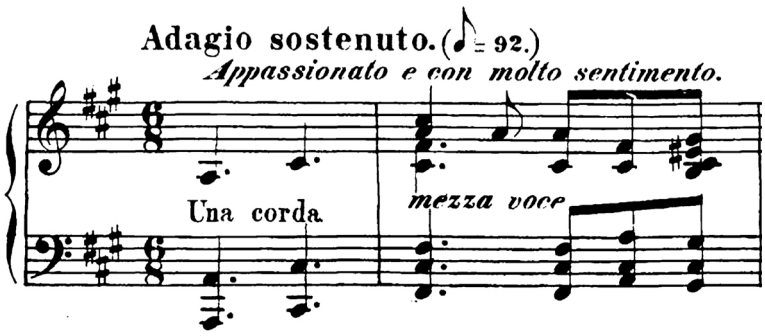

Fig. 2: First bars of Ludwig van Beethoven's Hammerklavier Sonata.

The latent and lingering tonality, and especially the reference to one of the most prominent solo pieces of the classical piano canon, suggest that *Piano Hero #2* is primarily concerned with the antagonism between modern technological sound and traditional acoustic piano sound: the first coming from the recording, the latter produced and experienced in the here and now.

However, the different sound spaces caused by the recorded "virtual" and the live acoustics, do not remain antagonistic but merge into one

another, they coexist, and converge. Time becomes a prominent parameter as a mediator between these different sound spaces. In reverberation, that is, the time span in which sound has given up its ties to its source, acoustic sound becomes abstract or acousmatic. In *Piano Hero #2,* reverberation is repeatedly used to converge electronic and live sounds into a shared third sound space, a space that lies beyond the dichotomies of present and absent, acoustic and electronic.

Once more, the final third of the piece is a kind of "reflective cadenza". From bar 146 on (10'23"), the four video screens turn black for most of the time, the attention shifts to the live performer and the acoustic piano. A cluster produced with both arms on the keys reverberates until there is complete silence and initiates another moment of live "slow-motion": then the pianist's single gesture of lifting his arms and letting go of the keys is stretched over several minutes (bars 155-156, 11'42"-13'56")[3]. The following sound event that interrupts this silence (bar 155, 12'53") is the high B6/B#6 prepared with tuning mutes – a toneless clicking as if produced by a broken key or a dysfunctional button. In the only moment of uninterrupted presence, the technological seems to have taken control over both performer and sound.

Piano Hero #3

The set-up of *Piano Hero #3* seems to reduce the previous complexity to a minimum: the MIDI keyboard is gone and so is the screen, instead, the polish of the open piano lid is illuminated and mirrors the choir of strings inside the piano. One might expect that the hero has regained control over the situation and his piano, but the opposite is the case. Instead of being technically overwhelmed, the pianist hardly seems to act at all. Almost without touching the keys, he is positioned as a bystander in front of the open grand piano. From time to time, he places objects on the strings, manipulates them and removes them again. Miraculously, the piano nonetheless produces low, transparent sine waves, that sound

[3] Just as in *Piano Hero 1* (bars 25-32), only now without slow-motion video.

calmer and more homogenous than in the previous pieces. The audience is not able to locate where the sounds come from.

Only the programme note can enlighten us as to this puzzling process and its strangely beautiful outcome. The sounds are produced by a complex feedback loop between a set of microphones on the piano (two contact microphones and three electro-magnetic pickup microphones placed on the piano corpus and beneath the strings) and one speaker placed directly under the piano corpus. Two filters are embedded in this feedback system and each influences the set of resonating frequencies: (1) The piano functions as an analogue filter since the sound projected upwards into the piano's corpus moves through its body and is therefore filtered by the properties of the body and the strings. (2) A laptop provides a digital filter by means of an algorithm that filters out specific frequencies from the feedback signal.

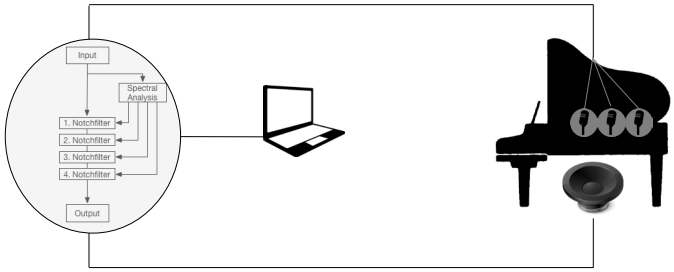

Fig. 3 – set-up and feedback system in PH #3.

The text in the programme note calls this feedback system «chaotic» and «barely controllable» (Prins 2017). The pianist interacts with this sonic perpetual motion system by placing, moving and removing objects on the strings – pieces of wood, a glass bottle, a cigar box, etc. –, by silently pressing the keys or the sustain pedal and thereby influencing the resonance, or very softly pressing the prepared keys. Apart from this, the technologically extended piano "speaks" freely and independently from a human performing body. The idea of the hybrid body of the performer,

being half-human and half-technological, is extended to the objects just as in an augmented reality environment.

On the level of space, two complementary developments take place; the feedback system reduces the resonating space to the body of the piano and at the same time, the surrounding speakers successively open up the acoustic space and engulf the audience with sound. After approximately the first half of the piece (bar 72, 11'58") another cadenza sets in: the feedback falls silent, instead a drilling sound is heard accompanied by sounds of what could be a voice. After a moment of complete silence two medium high frequencies set in. These sine waves, digitally produced and both oscillating around 3.2 kHz, create so-called "difference tones". This psychoacoustic phenomenon creates the cognitive representation of a single, deeper tone in its frequency equal to the difference of the two high sine waves (see Greated 2001). In this case they are constantly fluctuating between 60 and 120 Hz. Since these tones are heard inside the listener's head they cannot be localised. On the spatial level it reduces the resonance space even further to the very minimum, this being the space in between the listener's ears. Sonically, the sine waves pick up the feedback loop, the difference tone matches the strongest frequency of the drilling tone just heard before. It therefore prolongs the audible pitch but turns it into a virtual space: as a ghost-like tone it is mirrored to the inside of our perception.

At 13'04", the difference tones stop, and the listener's attention now shifts towards a soundscape. This is a field recording of an afternoon at *Tempelhofer Feld* in Berlin; we can hear a group of people laughing and shouting with dampened voices and the high-pitched buzzing of what could be a small drone – an idyllic scene from our technologized everyday life[4]. This third cadenza turns one's attention away from the interaction between the human body and technology, from the question

[4] Stefan Prins specifies the voices as coming from a group of Pakistanis playing cricket at *Tempelhofer Feld* in Berlin.

of performance, presence and sound production, towards another reflective level. Sound is no longer employed as something abstract but as referring to reality, which is no longer negotiated within the restricted area of the concert hall but relates to real people and things. Furthermore, something else happens in this moment, something more difficult to grasp and much more captivating and unsettling: the narrow and cryptic sonic space of the auto-reflexive feedback-system between technology and instrument and the even more limited and abstract space of the difference tone suddenly opens up and expands into an overwhelmingly vast space, a real place, that is, however, highly mediated. The listeners are drawn into this sonic space that is both exceptionally concrete and abstract.

Piano Hero #4

The fourth and final "movement" of the cycle takes the role of a classical finale in so far as it picks up on the motifs of the previous three pieces and culminates in a final climax: while the performer loses the last bit of agency, the number of agents involved in the performance process increases. The piece starts with a reference to *Piano Hero #1* and to its cadenza. Again, the avatar on the screen is replaced by what seems to be a live recording of the pianist recorded by a camera positioned behind the pianist's back. Here, as in the first unexpected moment of liveness in *#1,* the sound track is omitted and the pianist plays silently. Presence and immediacy seem to have won the battle against the ongoing virtualisation of the performance, at least at the visual level. Eventually, the sound track is switched on again (1'00"), but to the audience, the relationship between the visual and the auditory is already contingent, so there is nothing disruptive about the audio being heard again. What is new, at this point, is the quality of these sounds. The keyboard now triggers the sounds of a badly out-of-tune piano, and these are sounds reminiscent of a broken acoustic piano.

Only gradually does one realise that the live visual performance is not what it seems to be, and that the pianist is, in fact, now miming a

playback to video and sound recordings, which had been pre-recorded by the live performer. The score intentionally induces moments that both increase and disrupt the illusion. The seemingly inconspicuous moment when the "real" pianist scratches his nose and the video pianist does so as well supports the perception of the concert being filmed live (1'18") – the introductory performance notes ask for «at least one *accidental movement*» during the recording of the playback, which is then to be replicated during the live-performance[5]. On the other hand, indications that suggest a fake performance are provided by the tiled floor in the video which contrasts with the wooden stage floor, or the apparent discrepancies between pianistic gestures on video and of those on stage (bar 34, 2'44"). Such disruptions are *trompe l'œuil* moments that serve to unmask the illusionist character of an otherwise very realistic staging. These illusions culminate in another cadenza (bar 98, 6'00"). Still in the playback mode this is a cadenza almost in the traditional sense in as much as the pianist displays the full range of their technical skills, even if these skills are just a means to synchronise with the pre-recorded tones. The recording demands chord repetitions in a literally unplayable speed. Over the course of the cadenza it speeds up to a machine-like tempo that leads the human body to its limits. The demands on pianistic technique reach a level that only technology can obtain.

Over the course of the cycle, the original performance arrangement seen in *#1* – where the live pianist is still in control of both avatar and recordings – changes into its opposite by #4, where the virtual counterpart dictates the actions of the live performer. *#4* not only reverses the roles, it also multiplies the number of agents. The live pianist is merely one element within a network of human and non-human agents that conjoin in a multi-layered texture full of ambiguity. This principle can be seen in the out-of-tune piano sections that consist of a multitude of recorded samples collected, that Prins crowdsourced via social media. These

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[5] Score *Piano Hero # 4*, Performance notes, 1.

samples derive not only from various different pianos, but were recorded by as many different pianists, all using different recording devices from within as many different spaces.

Throughout the piece, even the layers of visual representation increase. Gradually the playback video of the live pianist is cross-faded with images (from bar 41, 3'14") of the already familiar virtual pianist improvising on his open piano corpus. For the moment these pictures merely present a visual accompaniment to the playback and the live pianist, only later are these sounds also heard. The screen now represents two visual spaces and two additional performance situations. Then, once again, the camera perspective changes and the audience sees the original recording situation (bar 89, 5'48"). The video shows the improvising pianist – for the first time one can see his entire body, including his face –, the videographer, and the composer observing and controlling the setting from an outside perspective. What had functioned as a virtual avatar gains body and face, the two-dimensional image turns into a space with a place in time, and therefore the agents involved in this aesthetic process – real people included – increase.

On all levels, the agents, spaces and time layers multiply, yet one moment brings them together (bar 49, 3'57"). The feedback from *#3* reappears, now visually accompanied by the muted live pianist and the improvising avatar on screen, simultaneous to this, three performers and three different reflective perspectives – pianist, avatar and computerised piano – are now heard polyphonically, and sonically merge with the feedback.

This display of simultaneity finally addresses the live situation itself. It is preluded by another hidden quote from Beethoven's Sonata op. 106, this time the grand punctuated opening chords in B-flat major are alternately split between virtual and real pianist and turned into bitonal out-of-tune clusters (bar 100, 8'55"). In a sudden shift of perspective (bars 105-106, 9'18"), the focus of the alleged live camera turns to the different agents present on stage and in the concert hall, these being: the supervising composer on the side-line of the stage, the inside of the open grand

piano, the pianist, and finally (bar 121, 10'37") – in trespassing the 'fourth wall' of the stage – the audience in the auditorium. Sonically, the visual appearance of the audience is again accompanied by a combination of sine waves, causing another difference tone to gradually increase in volume. As the volume approaches an uncomfortable level, the camera shows that some listeners cover their ears with their hands. But only when the live pianist finally covers his ears himself, do the sine waves suddenly stop (11'08"), as if the audience had not heard the difference tone in their own heads – and, one might add, the sounds of the whole piece with their own ears – but had just participated in the performer's perception.

The live performance ends here. But when the pianist finally leaves, the camera also leaves both stage and concert hall (bar 126, 11'32"). Just as in the field recording in *#3*, the experienced space is expanded once more, if now in a more sensual way. The audience, who had just been addressed as a part of the aesthetic process, is now brought to a landscape of a steel blue sky above the ice-covered green of what can now be identified as *Tempelhofer Feld* in Berlin. The only sound coming from the speakers is that of the wind in the microphone; one can almost feel the cold. The camera shifts to the ground and shows a human shadow pointing back to the camera. The cameraman, apparently equipped with a head-mounted camera, films his own shadow and finally turns the camera to his own hands. Just as the view of the camera gains hands and therefore a body, the virtual in-between space suddenly gains a location and a face.

Five Meta-Perspectives

Evidently, any attempt to summarise this complex structure and to unpack the abundance of reflective dimensions into a fitting narrative must fail. Moreover, I am convinced that such an attempt would go against the concept of the cycle. Instead, I would prefer to select five motifs that may help to follow some of the fine lines in this intricate network of ideas,

sounds and images. These motifs are (1) the role of technology, (2) the role of the sound and music on a conceptual level, (3) the mirror as both a structural and a conceptual motive, (4) immersion as an experiential quality and an object of reflection and, finally, (5) the reflective mode of a meta-poetic perspective.

Technology

Obviously, technology and its interaction with humans and society lie at the core of the cycle's concept. Technological means are omnipresent; they deconstruct the traditional piano and performance situation, they take control, reproduce themselves, and unfold new virtual spaces. At no point in the cycle, however, is technology merely a functional tool. From the very beginning in *Piano Hero #1,* it is a reflective medium, for it provokes thoughts about control, agency, presence and virtuality. The comparably clear and simple one-to-one-setting in the first piece might suggest a goal-oriented perspective, but the multiplication of dimensions over the course of the pieces that follow rework the structure into a complex rhizomatic network of agents and spaces, which abandons any clear direction or goal. Given this, the reflective dimensions of *Piano Hero #4* – the loss of control, the multiplication of sources, agents and spaces, the blurring of the boundaries between the virtual and the present – are already implied but not yet explicated in *Piano Hero #1*. References to the role of technology outside musical contexts are obvious: digital media pushes into our everyday life and experiences, it allows us to experience computer-generated virtual spaces, to build extensions of our bodies, and to create hybrid objects and entire augmented reality environments. Prins' work critically reflects on these developments. It doesn't commit itself to a one-directional and techno-critical approach, but addresses the mechanistic, machine-like, and the technological aspects in the analogue, the present, and the unmediated. The mechanistic aura of the piano, with its hammers, levers, ankles, weights, keys, and its comparably limited human influence on the sound production, provides a great reflective object in this regard. The many great technical and

cognitive demands also raise the question of whether human performers really act as freely and as self-determinedly as is generally considered, or if traditional pianistic contexts also tend to force the performing body to take on machine-like qualities. Throughout the cycle, the relationship between technology and human society is never a one-way path but a co-dependent interplay.

Sound and Music

The impact of technology on the human condition is reflected by musical means. In many regards, the *Piano Hero* cycle deals with the mediality of sound, addressing the implications of acoustic, psychoacoustic, acousmatic, edited, distorted, accelerated and repeated sounds, as well as out of tune sounds, single tones, clusters, chords, tonally arranged patterns, auratic noises, "natural" sounds like voices and birds, and the noises of technological objects like drones or electric drills in the Berlin S-Bahn (both in *#3*). Yet, the four pieces do not only grapple with sound, but also with the cultural and historic framing of sounds as "music", specifically within the Western tradition of piano music. This engagement becomes most evident in reference to cyclical classical and romantic piano genres and their formal and expressive structure. One could, for example, interpret the four pieces and their different expressive functions – *#1* and *#4* being rather extroverted and determined, the middle pieces *#2* and *#3* rather tentative and sonically held back – as a reference to the sonata form. But critical is also the virtuoso performer, the spectacle of the performance, the voyeuristic view, the expectations of the audience, and finally, the pianistic techniques – the *ricochet*, the arm clusters, the chord repetitions – that have their part in constructing the discourse of 'piano music' that spans the centuries, these being styles, and aesthetic ideals between the eighteenth century and now. The *Piano Hero* cycle reflects on this discourse, on the history of a certain genre, its performance practice, its listening situation, its specific techniques – and even on concrete pieces like the *Hammerklavier Sonata* (as in *Piano Hero #2* and *#4*).

Mirrors

The motif of the mirror addresses a structural aspect. The *Piano Hero* pieces constantly present dichotomic structures – body vs. technology, presence vs. virtuality, human vs. machine – without ever reducing these structures into binary poles. They always seek the one in the other: on the one hand, the human performer and the acoustic components are technologized, on the other hand, live presence is unmasked as mediated, the technological is humanised (in acquiring faces and hands), the virtual becomes present, and – as in the last sequence of *#4* – the most mediated moment is also the most sensual one. The mirror is an image for this reciprocal structure; it is both a proto-technological illusionistic medium and an early instrument for extending the functions of the human body, in a medical as well as in a mechanical sense. In line with Marshall McLuhan, who prominently defined media as «extensions of man» (1964)[6], we can consider the mirror as a kind of original medium, for it extends the human body only by self-reflection.

The idea of the mirror as an extension of the human body also plays an essential role in the pieces *Mirror Box (Flesh and Prosthesis #3)* and *Mirror Box Extensions*. In *Piano Hero #3,* the illuminated lid of the grand piano turns into a mirror and replaces the video projection. At the same time, it indicates the extension of the acoustic instrument into the technological realm. Other, less obvious moments of mirroring can be found in multiple places throughout the cycle. The German mathematician and physicist Georg Christoph Lichtenberg (1742-1799) called the echo an «acoustic mirror» (Lichtenberg 1811, 280), and in *Piano Hero,* reverberation is used in that exact way: it reflects acoustic sounds back onto the abstract,

[6] See the title of his 1964 publication. While McLuhan provided this significant formulisation, the conceptualisation of technology as a body-related phenomenon dates back to early technology theories from the nineteenth century (Kapp 1877) and is, of course, still a core interest of media theory. It still resonates with the ideas of hybrid bodies and media as prostheses which play central roles in many of Stefan Prins' compositions, as indicated by some of their titles: *Flesh and Prosthesis #0-2* (2013/14), *Hybridae* (2012) or *Fremdkörper #1-3* (2008/2010).

distorted, source-less sounds of the recording by cross-fading them. Another drastic example of mirroring is the camera focus on the audience in *Piano Hero #4.* The mirror reminds us that in looking into a mediated context – contexts of virtual as much as of historic media – we always find ourselves.

Immersion

The subtitle of the *Piano Hero* cycle is: «an immersive cycle for MIDI keyboard, grand piano, live-cameras, video and live-electronics». The term "immersion" describes the process of diving into a mediated environment and the supposedly contradictory state of presence in the virtual[7]. Stefan Prins introduces it in his programme note for *Piano Hero #1*[8]*.* On the level of effect, *Piano Hero* does indeed have its immersive moments, but interestingly not as much by overwhelming and enveloping the listeners with sounds as by dragging their attention from one abstract, dislocated and unknown sound space to the next. Most effectively, this shift happens by reduced means like the low, distant, and incomprehensible field recordings in *Piano Hero #3* that make it impossible not to listen closely, and in that way almost lure the listeners into an abstract dislocated sound space. The spatial collapse evoked by the difference tones is another example of this immersion in spatial abstraction: the enveloping sound of the surrounding speakers – a setting that is usually linked to the idea of sound immersion – is inverted by its line of travel from the surrounding outside to the inside of the body, even towards the perceiving mind: the listeners now perceive the sound inside their own heads.

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[7] The term has been widely discussed among media studies, literary studies, game and film studies. For a systematic overview of the different academic attempts to theorise the term, see Thon 2008, 29-43; for a more recent systematisation in German, see Hochscherf – Kjär – Rupert-Kruse 2011, 9-18; for a theoretical and methodological take on musical immersion see Holzmüller 2020, 4-18.

[8] «Immersion is the state of consciousness where an immersant's awareness of physical self is diminished or lost by being surrounded in an engrossing total environment, often artificial. This mental state is frequently accompanied with spatial excess, intense focus, a distorted sense of time, and effortless action». Source: Wikipedia (accessed 29/6/2011), Prins [2017].

On a phenomenological level, the term "immersion" describes a change in the relationship between object and subject, the experience of one's embodied presence in the other, a transgression of borders, and a loss of distance and critical perspective[9]. It is all the more remarkable that *Piano Hero* manages not only to evoke immersion, but to reflect on the immersive states of perception in technology and art. Reflection without critical distance sounds like a contradiction. Yet, it can succeed due to the multi-layered, disruptive and oscillating structure of the piece. *Piano Hero* constantly dislocates the audience from its standpoint of perception. Usually, the immersive experience replaces this lost standpoint with a new one: after decentring the spectator or listener he is re-centred in an alternative reality, in either a digital or a musical environment. In *Piano Hero*, however, there are many conflicting spaces. Rather than affirming one of these spaces, it leaves the audience hanging somewhere in between, and from this state of confusion and dislocation, the listener regains a critical perspective.

Poetics and politics

In his essay *Luft von diesem Planeten* from 2014, Prins declared himself a decidedly politically engaged composer (2014, 85-89): «as an artist I want to be involved in a personal, straightforward, critical and complex confrontation [with this world], in the most communicative way possible». The *Piano Hero* cycle is politically engaged, but at the same time it is also a highly self-reflective piece of music. Prins manages to reflect on technologized society as well as on sound and music; he addresses technological principles as well as principles of music in the full range of its historicity and cultural contingency.

Such a double reflexion can succeed because Prins continuously addresses the technological and the human in music. The *Piano Hero*

[9] This phenomenological core definition of the immersive experience is at the basis of the work within our research project which addresses immersion as a mode of listening and experiencing music in various historic contexts (see footnote 1 above).

cycle reflects on the technological character of music, its various forms of media, and on the virtual character of acousmatic sound. It does so in questioning both the soulfulness, corporality and the epistemology of presence and the coldness of dehumanised technology. In consequence, the music doesn't only reflect on the role of technology in society but also on its own epistemological and aesthetic preconditions. Prins' multi-layered system communicates something about music by the means of music. This conceptual leverage turns it into an auto-referential communicative act. On a more general level, the term "meta-reference" indicates works of art that reflect on their own medial and aesthetic preconditions[10]. Where literary studies use the term "meta-poetry", German literary studies refer to "poetological" poetry, a term even more concrete about the specific mode of metafiction: not just as a reference to the medium itself but to its underlying poetics[11]. As a case of meta-poetic music, *Piano Hero* reflects on sound as its medium and on its poetics, its aesthetic strategies and effects, its formal conventions and the social codes and practices connected to it. At the same time, this kind of meta-referential take on music also communicates something about the interrelation of humans and technology. Thereby, the cycle touches on a sensitive overlapping area that raises essential aesthetic questions as well as questions about life in an increasingly digitalised society.

The result of this meta-poetic and political reflection is abysmal, complex and deeply moving: it emphasises and withdraws, it overwhelms with an incredible amount of complexly correlated stimuli and is at the same time almost solemnly direct, it oscillates and levitates. The political engagement does not incriminate this aesthetic interplay but seems only to add another layer to it. The reflective dimensions themselves become genuine aesthetic agents.

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[10] For various case studies of meta-reference in the history of music and literature see Bernhardt 2010.

[11] See among others Hildebrand 2003.

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