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Virtual Harp of Bach : Baroque.me by Alexander Chen between Net Art and Myth of the Great Composer

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Abstract

In his projects, Alexander Chen (b. 1981) unites experiences as a programmer, designer, violist and indie rock musician. His *Baroque.me* is a virtual, audiovisual interpretation of canonical *Prelude from Cello Suite No. 1 BWV 1007* by Johann Sebastian Bach. Like most of Chen's projects, it is based on the code which he wrote in 2011. The fruit of the code is—in his own words—“a virtual string instrument”, “an interactive plucked instrument” or “an impossible harp” that is out of classification in terms of traditional typology of musical instruments. Grounded in mathematical fundamentals of musical string, it presents them in an attractive manner and unveils hidden geometrical beauty of well-known items.

Baroque.me could seem to be too traditional, nostalgic and naive, lacking in deeply critical approach towards postmodern society and deeply attached to premodern understanding of beauty. Its user-friendly interface, appearance typical for contemporary websites and elements of gaming suggest that Chen's work is made just for entertainment. However, it

is exquisitely interesting as an example of contemporary phenomenon, which Paul Elie called “reinventing Bach”. *Baroque.me* merges various layers of Bach reception: romantic, modern, and finally postmodern, which connects intimacy, entertainment and—characteristic for Bach himself—fascination of science and new technology. Two possible modes of contact with the Chen’s work, that is passive contemplation of the old masterpiece and/or (inter)active disruption of its harmony, can be associated with the ethos of the net artist who uses new technology to entertain people and provide intellectual reflection at the same time.

Keywords

Johann Sebastian Bach, Alexander Chen, net art, reception of Bach

In 2002, when considering the problem of internet art from the traditional aesthetics’ point of view, Bartłomiej Gutowski asked a question:

Is it not the fact that the technological development—which causes the greater opportunities of an artistic expression—provokes net art to come back to the traditional art, art, which aesthetic values are more significant than the technical ones, or at least are of the same importance?¹

During the next fifteen years, the technical development reached the level, which was probably unpredicted by Gutowski. The rapidly advancing technification of life, the widespread internet owing to, among others, mobile and wireless devices, the boom of Web 2.0, which stimulated the user, and, what is connected with former factors, the omnipresence of web in all spheres of life caused that the post-internet culture and art appeared, negating the borders between the real and

¹ B. Gutowski, *Sztuka sieci czyli net art*, “Artifex” 2002, No. 4, [online] <http://www.artifex.uksw.edu.pl/art.htm> [accessed: 10.07.2017].

virtual word.² On the one hand, such deep changes seem to—contrary to the assumptions made by the researcher at the beginning of the 21st century—distance the users of the internet from the traditional aesthetics and consolidate the position of technology in their life. Next, this leads to the problematisation and the critical view on the “technical values”, mentioned by Gutowski, shared not only by the engaged internet’s artists, but also the creators of the popular culture; it would be enough to mention the huge success of the British TV series *Black Mirror* (2011–). On the other hand, it is possible to notice the flourishing of the generally accepted categories of remake and cover, and, most noticeably, the culture of nostalgia,³ which through continuing repetition of comebacks to the past responds to the longing for the past order and traditional values, also in the field of aesthetics.

What interestingly relates to these tendencies is the net art work of Alexander Chen (born 1981) from 2011, known as *Baroque.me* or *Bach*,⁴ accessible on the internet as www.baroque.me. Choosing the canonic work of the high culture from the Baroque era, which is *Prelude from Cello Suite No. 1 in G major* BWV 1007 by Johann Sebastian Bach, Chen significantly crosses the borders of time, which have been drawn by the usual view on the past of the mainstream popular culture. Turning back on the avant-garde prehistory of internet art: Futurism, Dadaism and Marcel Duchamp is even more ostentatious in the artist’s attitude.⁵

² Vide e.g.: M. Pisarski, *Sztuka post-internetowa. Wprowadzenie do pożegnania z nowymi mediami*, “Korporacja Ha!art”, [online] <http://www.ha.art.pl/felietony/2613-mariusz-pisarski-sztuka-postinternetowa-wprowadzenie-do-pozegnania-z-nowymi-mediami.html> [accessed: 11.03.2018]; R. Demidenko, N. Sielewicz, *Ja po internecie*, the interview conducted by I. Zmysłony, “Dwutygodnik”, [online] <http://www.dwutygodnik.com/artykul/5577-ja-po-internecie.html> [accessed: 11.03.2018].

³ This phenomenon—on the example of the second season of *Stranger Things*—is brilliantly described by Maciej Jakubiak on the platform [Dwutygodnik.com](http://www.dwutygodnik.com). Vide: *idem*, *Słonecznik, powtórz, tęcza, pamiętaj*, “Dwutygodnik”, [online] <http://www.dwutygodnik.com/artykul/7466-slonecznik-powtorz-tecza-pamietaj.html> [accessed: 11.03.2018].

⁴ In Alexander Chen’s statements (e.g. in the description on www.chenalexander.com/Bach [accessed: 11.03.2018]), the project is called interchangeably *Bach* and *Baroque.me*. In the other authors’ comments, the second name appears much more frequently, therefore it is used in the following article.

⁵ Vide: E. Wójtowicz, *Sztuka Internetu wobec tradycji artystycznej*, [in:] *eadem*, *Net art*, Kraków 2008, pp. 141–190.

Most of all, however, through the user-friendly interface, which is typical for the contemporary website design, “gaming” qualities and the attitude characteristic for the authors of Slow Web,⁶ he comes back to the cultural myth of Bach that is present in the Western culture since the beginning of the 19th century.⁷

Between art and entertainment. The life and work of the artist

Alexander Chen is associated with New York’s institutions: Google Creative Lab and Eyebeam. He co-creates such projects as Chrome Music Lab, which investigates and shows—in the user-friendly way—the basic rules of music, and AI experiments, analyzing the way in which the artificial intelligence is gaining knowledge. In his artistic work, he combines the experience of a programmer, designer, viola player and indie rock musician. His most popular projects—*Stringer*, *Conductor*

⁶ The assumption and activity of the movement, existing for a couple of years, are described, among others, on the website *The Slow Web* ([online] <http://theslowweb.com/> [accessed: 11.03.2018]), in the essay by Jack Cheng ([online] <http://jackcheng.com/the-slow-web> [accessed: 11.03.2018]) and in the interview conducted by Anna Desponds and Caspar Sonnen for “Dwutygodnik”, *Sól powolnej sieci* ([online] <http://www.dwutygodnik.com/artukul/5645-sol-powolnej-sieci.html> [accessed: 11.03.2018]).

⁷ The myth or the legend of Bach is discussed also in the MA thesis of the author, *Mit Bacha w literaturze polskiej XX i XXI wieku*, written under the guidance of dr. hab. Magdalena Siwiec, defended at the Faculty of Polish Studies at the Jagiellonian University in 2017. The myth (called sometimes the legend) is understood in the close way to the definition proposed by Grzegorz Kowal in the book *Anatomia kulturowej legendy*: the judgments of a cumulated semiotics, recognized by the whole, being the part of a common or cultural memory, in the spread of which the power of suggestion of senders and the need of receivers play the important role” (“sądy o spotęgowanej semiotyczności wyznawane przez ogół, będące częścią pamięci zbiorowej lub kulturowej, w przekazie których istotną rolę odgrywa siła sugestii nadawców i zapotrzebowanie odbiorców”, G. Kowal, *Anatomia kulturowej legendy*, Kraków 2014, p. 86). The myth of Bach among composers—summarized in the famous Mauricio Kagel’s words: “not all musicians believe in God, but they all believe in Bach”—is interestingly described by Clythus Gottwald in the text *Mythos Bach*. Vide: C. Gottwald, *Mythos Bach*, [in:] *Bach und die Moderne*, D. Schnebel (ed.), Wiesbaden 1995.

and already mentioned *Bach*⁸—diversely use the code, created by him in 2011, the result of which is—as the author claims—the virtual string instrument⁹ or interactive plucked instrument.¹⁰ It is based on the acoustic characteristics of the string: the sound is created when the plucked string starts to vibrate, wherein the pitch is conditioned by its length.¹¹ What is different than in the traditional chordophones, the number and length of strings—existing only virtually—can be changed constantly and immediately even during one “performance”, and the possibility to modify the mentioned parameters is potentially unlimited. Different for the typical electrophones, not only sound itself but in fact the whole instrument exists only thanks to the electrical impulses, and its functioning, or even its existence, requires the interface.

In the case of the first work, *Stringer*, it is a so-called gesture interface: strings are created on the screen and are vibrating thanks to gestures and body movements of one or many users seen by Kinect.¹² Two later projects, *Conductor* and *Bach*, use graphic interface, characteristic for websites: the starting device are a mouse and a keyboard, the ending one is a screen. The user’s requirement is only to start the website (their addresses function as alternative titles of these works); since that moment, they become to be audiovisual artworks, self-sufficient systems programmed by the author, according to the precise rules taken from the closed systems, which were created before and are independent on the work. In the analysed *Baroque.me* already men-

⁸ The works are gathered by the author on his website: <http://www.chenalexander.com/>. The code discussed above, is also the base for *Les Paul Google Doodle*, *Crayong* and the newest *Harmonics*. Also other Chen’s works connect music with net art: *Piano Phase* is the geometrical visualization of the famous minimalist work of Steve Reich of the same title, and *Beach Bell*—the Beach Boys’ song.

⁹ A. Chen, *Eye to Eyebeam: A Conversation with Alexander Chen*, interview conducted by K. DiPierro, [online] <http://eyebeam.org/blogs/katherinedipierro/eye-to-eyebeam-a-conversation-with-alexander-chen> [accessed: 25.09.2017].

¹⁰ As cited in: [without author], *The Rise of the Side Project*, “Ad Age”, [online] <http://adage.com/article/creative-profiles/rise-side-project/227202/> [accessed: 11.03.2018].

¹¹ To be precise, in reality the sound wave frequency of a string is influenced also by the thickness and strength of pull and the weight of the material, of which it was made. However, these parameters do not matter in the case of the virtual instrument created by Chen.

¹² The co-authors of the work *Stringer* are Tyler Williams and Aidan Feldman. The documentation and the description of the work can be found on Chen’s website: [online] <http://www.chenalexander.com/Stringer> [accessed: 11.03.2018].

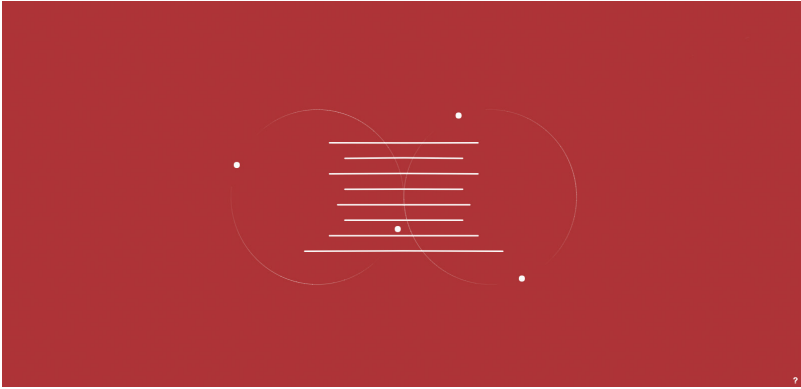
tioned Bach's prelude is the matrix. On contrary, in *Mta.me* (known also as *Conductor*, illustration 1), the most popular Chen's work, the rules are provided by the current New York's subway timetable, and the visual inspiration—by the famous *New York City Subway Map* by Massimo Vignelli from 1972; at this moment, it is worth mentioning that the title “conductor” may refer both to the conductor of a train and of an orchestra. Each colourful line, which is appearing, extending and disappearing on the screen, is a single subway line. Any time when moving lines cross, the visual effect of vibrating appears and the sound is generated, the pitch of which depends on the segment's length, and the timbre is an abstract sound of a string instrument. The whole process begins in the real New York time, and then gradually accelerates, according to the electronic clock placed in the left-bottom corner, next to which the information about the train of the given line's departure from the starting station is shown.¹³



Illus. 1: A. Chen, *Mta.me (Conductor)*.

Source: [online] <http://www.chenalexander.com/Mta-me> [accessed: 11.03.2018].

¹³ The full description of the work used to be accessible in the Chen's blog, non-existent any longer. The fragments of this description are in the following articles: *The Rise of the Side Project*, [online] <http://adage.com/article/creative-profiles/rise-side-project/227202/> [accessed: 11.03.2018]; A. Rutkoff, *Making Music With the Subway Map*, [online] <http://blogs.wsj.com/metropolis/2011/01/31/making-music-with-the-subway-map> [accessed: 11.03.2018]; *New York City Subway System Comes Alive in HTML5 & Javascript [VIDEO]*, [online] <http://mashable.com/2011/01/31/conductor/> [accessed: 11.03.2018].



Illus. 2: A. Chen, *Baroque.me* (Bach).

Source: [online] <http://www.chenalexander.com/Bach> [accessed: 11.03.2018].

Both *Conductor* and *Bach* are potentially interactive works—the artist programmed certain possibilities to actively influence their shape by the receiver. In the first case, there is an option to produce sounds through the active “strings” by clicking and hovering the mouse. In the second one, the user has various options to disrupt the trajectory of the movement of nodes-plectrons, and in this way to distort the canonic Bach’s piece. What is interesting, these possibilities are not necessary for the audiovisual text to function; there are not required or even suggested. The interference takes place only when the receiver himself or herself decides to use the experience as the internet user or the gamer, in order to test the options of the given system and, in the same way, to change the position from being the passive receiver of art to the active user of the application. Many internet commentators of Chen’s multimedia works—not strictly connected with the world of art, defining themselves as “gamers”, “geeks”, “nerds”—indicate these hidden possibilities to interfere with the work as their main advantage.

Indeed, the playful, “gaming” element is a significant component of all Chen’s works. Together with their design, standard for the contemporary websites, the care for the user-friendliness and intuitiveness of the interface and its aesthetic values (which can be described by the traditional category of beauty or by the ironic word created by Gutowski and used for some old net art works—“ładność”, which could

be translated into English as “niceness”),¹⁴ it is possible to situate them on the edge of art and entertainment. It is also possible and relevant to stop at this trivial reception of Chen’s works, best summarized in the bloggers’ opinions: “play with history”,¹⁵ “go fiddle”,¹⁶ “check by yourselves, [...] waste of time won’t just happen”.¹⁷ But it is also possible to start from the work itself as well as the author’s comment on it, and make an attempt to interpret it in the more sophisticated way than just simply describing the workshop or technology. Eventually, it may be possible to ask the question about the sense of placing the works like *Bach* in the field of art, also internet art, as well as about the net artist’s attitude towards the output of the great composer.

Baroque.me—analysis

Baroque.me in its basic assumption is the visualization of the structure of Bach’s musical composition. The sources used by the artist are partly minimalistic. Against the monotonous background of a warm, red colour in a muted tone, there is the animation based only on the simplest geometrical elements and basic proportions: eight lines, four points and two circles, each of them white. Elements create a readable, symmetrical and also unique system (illustration 2). Parallel horizontal lines of the constant position and common axis of symmetry, but changing length, function as strings, and points moving in pairs on two tangent circles (visible thanks to the thin lines mirroring circular trajectory of the movement of points) play the role of plectrons, simultaneously marking the diameters of the circles.

The whole work consists of one page, without the possibility to scroll, and also does not have text. At the beginning, the only point of

¹⁴ B. Gutowski, *Sztuka sieci...*, *op. cit.*

¹⁵ B. Starr, *Baroque.me: An Interactive Look at Bach’s Prelude*, [online] <http://www.visualnews.com/2011/11/baroque-me-an-interactive-look-at-bachs-prelude/> [accessed: 10.07.2017].

¹⁶ J. Walker, *Baroque.Me, This Makes Everything Better*, [online] <http://www.rockpapershotgun.com/2011/11/17/baroque-me-this-makes-everything-better/> [accessed: 11.03.2018].

¹⁷ Orig. “sami sprawdźcie, [...] czas się sam nie straci”. K. Sosnowski, *Baroque Me—Jan Sebastian Bach 2.0*, [online] <https://siecmuzyki.wordpress.com/2011/11/18/baroque-me-jan-sebastian-bach-2-0/> [accessed: 11.03.2018].

reference for the receiver is URL address, using Montenegro's domain "me" in order to achieve semantic ambiguity: "Baroque.me" can refer to the topic and intertextual dimension of the work, but it can also be the invitation to influence actively its shape. Only when clicking a small interrogative mark in the bottom-left corner, which function is similar to the signature in the traditional painting, the only hyperlink on the website is activated. It redirects to the author's private website,¹⁸ where we can find his comment on the project together with explanation of the concept of visualization. The author's words about the artistic thought behind the whole project are worth mentioning:

Using the mathematics behind string length and pitch, it came from a simple idea: what if all the notes were drawn as strings? Instead of a stream of classical notation on a page,¹⁹ this interactive project highlights the music's underlying structure and subtle shifts. [...] The user can also grab and throw the nodes off track, and watch the system slowly regain its rhythm. A harp is built around string length, with strings shortening as they ascend in pitch. This piece behaves like an impossible harp, as strings morph to the needed lengths. [...] At every moment, the piece shows a visual snapshot of an arpeggio. It shows which notes change from bar to bar, and which stay the same.²⁰

It is worth paying attention to the specific time course of *Baroque me*. The first phase, happening just after loading the website, is the "self-

¹⁸ As it has been mentioned before, the original hyperlink sent the user to the author's blog, where the more detailed description was available, also explaining the technical specifics and the tools used (HTML5, Javascript, Flash). Compare e.g. F. Visnjic, *Baroque.me [Javascript, Sound]*, [online] <http://www.creativeapplications.net/sound/baroque-me-javascript/> [accessed: 11.03.2018].

¹⁹ Perhaps, Chen makes an allusion to the audiovisual materials, popular among musicians, theorists and pedagogues, which allow to simultaneously follow the score and listen to the composition. Such visualizations of Bach's works are realized e.g. by the project of an academic-popularizing character, Gerubach. The visualization of the composition arranged by Chen can be found on the Internet: [online] <https://www.youtube.com/watch?v=x9lwJPWHpHM> [accessed: 11.03.2018].

²⁰ As cited in: T. Bailey, *Geeks Making Art: Math-Based Interactive Bach in Your Browser*, "Wired" 2012, No. 10, [online] <http://archive.wired.com/geekdad/2012/10/geeks-making-art/> [accessed: 11.03.2018]. The fragment was available in the author's blog, where primarily the hyperlink from *Baroque.me* redirected the user.

creation” of the system or tuning the virtual instrument: against the empty, homogenous background, the subsequent moving points appear, chaotically and without visible rule, as well as metamorphosing horizontal lines. When trajectory of the points’ movement crosses the lines, we hear the sounds, which at this stage sum up in the incomprehensible cacophony. However, gradually the chaotic variability is replaced by ideal symmetry, and the harmony as well as known melody is formed from the random sounds. In this way, spacetime of the work is finally subordinate to the rhythmic structure of Bach’s composition, with monotonous sequence of sounds, repetition of eight-bar phrases, regularity of harmony and melody changes. After the cadence finishing *Prelude*, in accordance with the logic of the traditional, closed work, there is silence. For a short time, points circulate in the emptiness, until the lines-strings mirroring the first phrase of Bach’s *Prelude* appear again on the screen. Changing the browser tab does not interrupt the process—the sounds of the composition are still audible in the background, the work of the once started mechanism continues without the presence of the user. The re-opening of the particular browser window automatically starts the piece from the moment in which the user decided to see the musical construction once more—as if at that time the ideal Bach’s structure still—without the user’s interference—modeled the reality of Chen’s work.

In *Baroque.me* the third phase is also programmed, which happens after “appearing from the chaos” and “ordering the world”—the already mentioned interactive phase. However, the range of changes is not wide. It refers to so-called Lev Manovich’s closed interactivity,²¹ and according to certain researchers it gives only the illusion of interactivity.²² The user can slow down or stop one of the points, hovering the cursor over it, the trajectory of all points can also be changed (so also the rhythm of the composition) through holding and moving one of them—the rest will follow it, disrupting the course of Bach’s work and the ideal symmetry of the system. However, the action of the user does not influence the regular changes of the length of lines-strings, so melody, harmony and rhythm, being the main elements of traditional musical piece. Therefore, the masterpiece of the Baroque artist does

²¹ Vide: L. Manovich, *Język nowych mediów*, trans. into Polish by P. Cypryański, Warszawa 2006, p. 214.

²² E. Wójtowicz, *op. cit.*, p. 2016.

not lose its identity. What is more, each time when the user stops being active—similarly to the first phase—the system gradually returns to its balance, and introduced change cannot be fixed in any way; also, it does not influence the further course of the work. In other words, interactivity is equal with interference, disruption of the system, which is, however, only the transition state and is programmed by the system.

***Baroque.me* from the perspective of net art and cultural myth of Bach**

From the research on net art's perspective,²³ the value and especially novelty of Chen's work can be doubtful. Indeed, according to the net art principles, *Baroque.me* is a virtual entity, functioning only on the internet, at the edge of art and technology; it is based on the code and its occurrence requires an interface. However, it does not use what is recognized as the highest potential of the internet and (especially) post-internet art: cognitive, socially engaged view on the phenomena connected with the development of the internet, including the criticism. The strength of this discipline of artistic creativity is in studying and making the user aware of the possibilities and weaknesses of the web; in showing the cross-references and (lack) of the borders between the "virtual" and "real" world, as well as their influence on the identity/identities of the contemporary human; eventually, this field has potential to shape the complicated ties between people based on the new communicational models.²⁴ Meanwhile, the Chen's attitude towards technology seems to be clearly positive, lacking the critical potential, auto-reflexive moment or the wish to create the specific tie with the receiver through the art. He creates the work, which is close to the traditional understanding of the term "work of art", deeply rooted in

²³ Texts concerning this topic in Polish have been written for over ten years. The most important work in this field may be already mentioned PhD thesis of Ewa Wójtowicz, published as a book under the title *Net art* in 2008. The further mentioned issue of post-internet art and culture have been discussed by, among others, Piotr Czerwski in the manifesto created during the ACTA protests in 2012—*My, dzieci sieci*, reprinted in "Dziennik Bałtycki" (accessible also online: <http://pokazywarka.pl/pm1ppl/> [accessed: 11.03.2018]) and Mariusz Pisarski in the feuilleton for Ha!art, titled *Sztuka post-internetowa*, *op. cit.*

²⁴ Compare: E. Wójtowicz, *op. cit.*, *passim*.

the traditional aesthetic, sponging on the canon of the masterpieces from the past—according to the Gutowski's assumptions mentioned at the beginning of this paper. In this sense, *Bach* appears to be a sentimental, workshop and nostalgic work.

Paradoxically, this nostalgic or rather creative and thoughtful referring of the virtual text of culture to the great music of the past makes it possible to talk about the originality of *Baroque.me*. It is worth looking at this work as a kind of the intermedial translation, transferring the classical art of sounds into image.

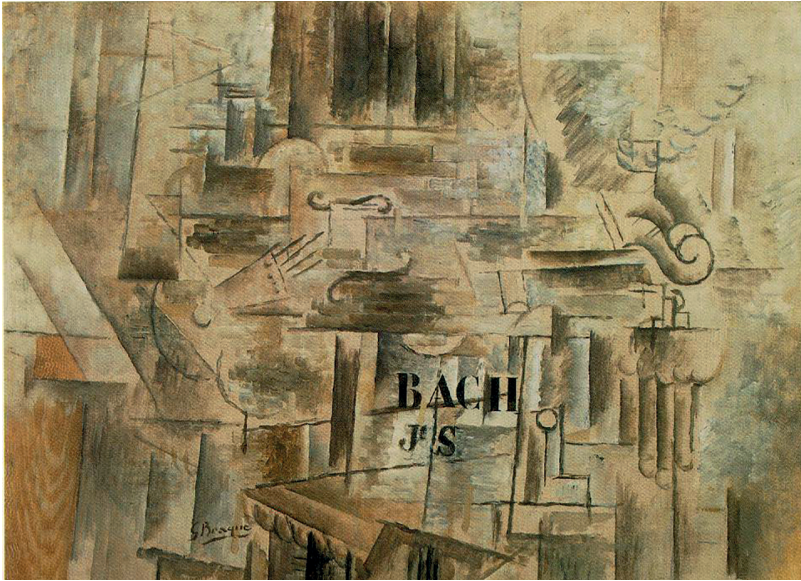
The idea of visualized interpretation of Bach's music is not new—the first ones interested in this topic were the same artists who are regarded as the founding fathers of net art, so the representatives of Great Avant-garde.²⁵ As Peter Vergo displays, the reflection on the complexity of the mathematical structure of Bach's music in the area of painting, recurrent in the abstractionists' work at the beginning of the 20th century, gave the answers for many questions of avant-garde: about the materiality of art, the specificity of its means, possibility of dehumanization, functioning irrespective of figurativism.²⁶ Moreover, it was preceding the similar reflection among the representatives of musical avant-garde. What is equally important in this context is the fact that numerous painting *hommage à Bach* (illustration 3) were created at the time when the certain phenomenon appeared, aptly called by Paul Elie as “reinventing Bach”.²⁷

“Reinventing Bach” in the 20th and 21st century is, as the researcher says, both continuation and opposition to the 19th-century “Bach revival”—the recalling already forgotten composer, compared by Albert Schweitzer to death and resurrection. Reinventing Bach was born at the beginning of the last century together with technology of recording

²⁵ The Great Avant-garde (or the first avant-garde, to distinguish it from the second avant-garde or neo-avant-garde in the 1960s) is the multidimensional artistic formation, characterized by the radical rejection of the former art and the search for the new, shocking forms of expression, which accumulation took place in years 1905–1930. The basic fields of the Great Avant-garde are futurism, expressionism, cubism, Dadaism, surrealism and constructivism. The term appears most frequently in the context of visual art. *Vide e.g.* N.A. Michna, *Czym jest Wielka Awangarda*, [in:] *eadem*, *Wielka Awangarda wobec kultury masowej*, Kraków 2014, pp. 21–32.

²⁶ P. Vergo, *The Art of Fugue*, [in:] *idem*, *The Music of Painting: Music, Modernism and the Visual Arts from the Romantics to John Cage*, London 2012.

²⁷ P. Elie, *Reinventing Bach*, New York 2012.



Illus. 3: G. Braque, *Hommage à Bach* (oil on canvas, 1912).

sound. It has meant the individual, creative and visionary return to the attitude characterizing the composer himself, combining imagination with intellect, spirituality with fascination by science and technique. The key personas for the 20th-century phenomenon were great performers of Bach's music, characterized by individuality and specially fascinated by the possibilities of phonography and cinematography: Albert Schweitzer, Pablo Casals, Leopold Stokowski, Yo Yo Ma, and especially Glenn Gould. The far-reaching effect of their activity was, firstly, forwarding the previously exclusive Bach's music towards masses, and secondly, the deep reinterpretation of his oeuvre. Its sense can be characterized through recalling the subtitles of two great monographs, written in the whole century space of time: from "the musician-poet" by Albert Schweitzer²⁸ to "the learned musician" by Christoph Wolff.²⁹

²⁸ A. Schweitzer, *Jean-Sébastien Bach. Le musicien-poète*, Leipzig 1905. A Polish translation of the later version of the text: *idem, Jan Sebastian Bach*, trans. into Polish by M. Kurecka, W. Wirpsza, vol. 1–2, Warszawa 2009.

²⁹ C. Wolff, *Johann Sebastian Bach: The Learned Musician*, New York 2000.

One of the Elie's key examples of "reinventing Bach" (as well as the ancestor of all audiovisual interpretations of the Leipzig's composer's music, with *Baroque.me* among them) is the first part of Disney's *Fantasy* from 1940.³⁰ In this combination of abstract geometry with imaginary sky and light, it was even more deeply rooted in the older, romantic view on Bach as a "fifth Evangelist", the medieval mystic encountering the divine music of the spheres and showing it through its art to an ordinary mortal person. Far more examples can be found in the contemporary audiovisual works on the internet. Most of them, similarly to *Baroque.me*, refer to strictly scientific bases and mathematical structure of contrapuntal works of Leipzig's composer, complying with Leibniz's definition of music: "pleasure, which is experienced by human's soul through counting, without the awareness that it is counting",³¹ moving away the religious dimension in the romantic perspective and substituting it with affirmation of *techné*. They are based on the abstraction and geometry, being inspired by such phenomena as the Möbius strip³² or fractal.³³ But, contrary to *Baroque.me*, the visual layer of the other works functions separately from the audio function and never accomplishes such a high level of unifying with it, preserving the autonomic aesthetic values.

The total unification of many autonomic factors is crucial for Chen's project. What may be striking is the unity of the work, instrument, notation and analysis, achieved through the code, while the persona of performer-interpreter is completely eliminated. As the artist says himself:

People always bring different levels of expression to it [Bach's music—
A.K.]. [...] But what I wanted to let the computer do was just kind of

³⁰ The circumstances of creating *Fantasy* and the relation of the first part of animation and the Bach's work—vide: P. Elie, *Playing Together*, [in:] *idem, op. cit.*, pp. 113–164.

³¹ As cited in: J. James, *Muzyka sfer*, trans. into Polish by M. Godyń, Kraków 1996, p. 184. The relation between Bach's music and the Leibniz's philosophical system was frequently indicated by Bohdan Pociąg. Vide e.g. B. Pociąg, *Bach i Leibniz*, [in:] *idem, Z perspektywy muzyki*, Warszawa 2005, pp. 212–217.

³² J. Leis, *J.S. Bach—Crab Canon on a Möbius Strip*, [online] <https://www.youtube.com/watch?v=xUHQ2ybTejU> [accessed: 11.03.2018].

³³ H. Brothers, *Mandelbrot Fractal Zoom: Bach, Fractals, and The Art of Fugue*, [online] <https://www.youtube.com/watch?v=d6PBFa3VozE> [accessed: 11.03.2018]; T. Plant, *Apophysis Animation: JS Bach Cello Suite #1 In G*, [online] <https://www.youtube.com/watch?v=j04TUKXa4Ko> [accessed: 11.03.2018].

to play in a really neutral way, because what I really wanted to express was how much emotion and intensity is just in the data of the notes themselves. I think that's really where the beauty of the piece at its core is.³⁴

Eliminating the human element—performer-interpreter, substituting him with technology and the support of geometrical visualization, which leaves the linearity of traditional musical notation, perfectly corresponds with modernist myth of Bach, still alive in the culture.³⁵ *Ars* combines with *techne*, the artist with the scholar, aesthetic pleasure with scientific recognition. The essence, the exact content of the work appears to be its internal structure, independent on any once-appearing features, which would result from the particular performance. Naturally in the case of Bach himself, who manifested his views on music in music itself, the issue is more complicated and requiring caution in the evaluation is necessary. What should be included as well is the fact that, contrary to radical modernist reception of Bach, his artistic credo was closely related with credo in the literal meaning. Namely, he had a religious attitude towards the world, he believed in objective and primary harmony made by God, which is irrespective of human, but it is possible to recognize it through the mind and senses.³⁶ Bach's music continues the old, Pythagorean aesthetic thought, which was called by Władysław Tatarkiewicz as the Great Theory of Beauty,³⁷ and by Jamie James in his book *Music of spheres—The Great Theme*.³⁸

It does not have to be highlighted that such a view on the world is at least not obvious for the ordinary human being of the 21st century. Meanwhile, in *Baroque.me* (and somehow also in *Mta.me*) Chen revives this classical theory, providing elements of Leibniz's primary order of the world and the active participation in it. It seems that it is not a coincidence that Chen so willingly recalls the metaphor of

³⁴ As cited in: M. Springer, *Visualizing Bach: Alexander Chen's Impossible Harp*, [online] http://www.openculture.com/2011/11/visualizing_bach_alexander_chens_impossible_harp.html [accessed: 11.03.2018].

³⁵ More on this topic: A. Kretkowska, *Mit Bacha...*, *op. cit.*, *passim*.

³⁶ Compare e.g. C. Wolff, *op. cit.* and P. Wierzbicki, *Boski Bach*, Warszawa 2014.

³⁷ W. Tatarkiewicz, *Wielka Teoria*, [in:] *idem*, *Dzieje sześciu pojęć*, Warszawa 2012, pp. 141–147.

³⁸ J. James, *Wielki Temat i romantyczna anomalia*, [in:] *idem*, *Muzyka sfer*, *op. cit.*, pp. 11–26 and 184–191.

“impossible harp”.³⁹ Indeed, it refers to the instrument being the ancient symbol of cosmic harmony. However, it does not mean that the pre-modern concept is reproduced without reflection: in *Baroque.me* the potential (inter)activity of the user, integrity of human individuality and subjectivity is only a disruption, not preserving the perfect, mathematical order.

It is worth underlining that this recalling pre-modern idea of harmonic cosmos from the perspective of mentioned “reinventing Bach” is made only through means, which are specific for metamedium of the internet. Simultaneously, it is happening somehow against the nature of web—against the chaos and hypertrophy of information, lacking the priority hierarchy, the excess of incentives aiming at the growth of popularity, against the necessity to constantly actualize the content. This enables us to perceive certain relation between *Baroque.me* and ideas being the foundation of Slow Web movement.⁴⁰

Conclusion

It is hard to question the fact that *Baroque.me* created by Alexander Chen is not the turning point for the (post)internet art and culture, and is not the criticizing reflection on the (post)internet, although it uses the means of critical net art. This project does not include rebellious tendencies characteristic for net art, or exploring the disappearing border between “virtual” and “real” life, characteristic for art “after the internet”. The artist meets expectations and habits of the average user of the internet: he does not give up what Gutowski called contemptuously as “niceness”,⁴¹ he uses interface, which is typical for websites, and even introduces the interactive, “gaming” element to his project. The originality and value of his work is proved, however, by the perfect use of specific possibilities of new technologies to artistically reinterpret works, which are canonic for the art of the West, and theory of Beauty, which is crucial for history of this art—in spirit close to minimalism or, to some extent, movement of Slow Web.

³⁹ Vide: F. Visnjic, *op. cit.*; M. Springer, *op. cit.*

⁴⁰ Compare: annotation 6.

⁴¹ See: annotation 13.

Baroque.me is also symptomatic for contemporary view on Bach and his music. On the one hand, it is rooted in the romantic myth of the “fifth Evangelist”, so the medieval mystic combining music of spheres in his works, and on the other—in the modernist myth of “great abstractionist”, a composer-constructor respecting mathematical aspect of music over “human aspect”, emotions and feelings. It also composes itself into the movement called by Paul Elie as “reinventing Bach”, originating from the beginning of phonography and new media and being the deep reinterpretation and exploration of the music of Leipzig’s composer through the newest achievements of technology. In the same way, it touches the heart of contemporary phenomenon of Bach: combining technology, intellectualism and intimacy.

Irrespective of the attempts to place *Baroque.me* in the contemporary fields of art it is the fact that this extraordinary intermedial translation of famous *Prelude in G major*, giving the receiver the possibility to freely choose between affirmative contemplation and seditious interactivity, is another proof of the huge artistic potential of metamedium of the web—the potential, which encourages us to think rather of arts than art of the internet. Moreover, in the attitude of musician-programmer, who constantly explores and shows the meaning of music through new technologies,⁴² certain ethos of the internet artist can be found, formulated over ten years ago, so at the time of the optimistic and innocent view on the role of web in the human’s life:

It’s nice to know that on internet you can propose your work outside of ANY art context and that surfers who stumble on it by chance will have some fun, some pleasure, some first-hand emotion without having to relate to any known work of art or to any critical theory. Yet, if your work can still function on that level and offer analytical content

⁴² In the newest Alexander Chen’s works, shared by the artist mainly through his Twitter account ([online] <https://twitter.com/alexanderchen> [accessed: 11.03.2018]), the educational aspect seems to dominate over the artistic one—its main aim is to present the mathematical basis of music through the simple, interactive visualisation, often for the younger receiver (the artist does not hide the fact that the first addressees of his works are his children). It is the character of e.g. *Singing Shapes* ([online] www.singingshapes.com [accessed: 11.03.2018]), and partly also *Harmonics* ([online] <https://alexanderchen.github.io/harmonics/> [accessed: 11.03.2018]).

to those who have an artistic or intellectual background, if your work can be approached on several levels at the same time, then you know you have the right frame of mind.⁴³

Bibliography⁴⁴

- [without author], *The Rise of the Side Project*, "Ad Age" 2011, No. 18, [online] <http://adage.com/article/creative-profiles/rise-side-project/227202/>.
- Bailey T., *Geeks Making Art: Math-Based Interactive Bach in Your Browser*, "Wired" 2012, No. 10, [online] <http://archive.wired.com/geekdad/2012/10/geeks-making-art/> [accessed: 25.09.2017].
- Bursik E. van, *Baroque.me, Baby*, [online] <http://evolver.fm/2011/11/17/baroque-me-baby/>.
- Chen A., [online] <http://www.chenalexander.com>.
- Chen A., *Eye to Eyebeam: A Conversation with Alexander Chen*, interview conducted by K. DiPierro, [online] <http://eyebeam.org/blogs/katherinedipierro/eye-to-eyebeam-a-conversation-with-alexander-chen> [accessed: 25.09.2017].
- Cheng J., *The Slow Web*, [online] <http://jackcheng.com/the-slow-web>.
- Demidenko R., Sielewicz N., *Ja po internecie*, the interview conducted by I. Zmyślony, "Dwutygodnik", [online] <http://www.dwutygodnik.com/artukul/5577-ja-po-internecie.html>.
- Elie P., *Reinventing Bach*, New York 2012.
- Gottwald C., *Mythos Bach*, [in:] *Bach und die Moderne*, D. Schnebel (ed.), Wiesbaden 1995.
- Gutowski B., *Sztuka sieci czyli net art*, "Artifex" 2002, No. 4, [online] <http://www.artifex.uksw.edu.pl/art.htm> [accessed: 10.07.2017].
- James J., *Muzyka sfer*, trans. into Polish by M. Godyń, Kraków 1996.
- Kluszczyński R.W., *Internet—nowe terytorium ekspresji*, [online] <http://www.kapuscinski.hg.pl/index.php> [accessed: 25.09.2017].
- Kowal G., *Anatomia kulturowej legendy*, Kraków 2014.

⁴³ P. Luining, *Interview with Mouchette*, [online] <http://about.mouchette.org/rhizome-interview-with-mouchette/> [accessed: 11.03.2018].

⁴⁴ The date of access of sources online in the bibliography: 11.03.2018 if another date not has been indicated.

- Kretkowska A., *Mit Bacha w literaturze polskiej XX i XXI wieku*, MA thesis, Faculty of Polish Studies, Jagiellonian University, Kraków 2017.
- Piękno w sieci. Estetyka a nowe media*, red. K. Wilkoszewska, Kraków 1999.
- Pisarski M., *Sztuka post-internetowa. Wprowadzenie do pożegnania z nowymi mediami*, "Korporacja Ha!art", [online] <http://www.ha.art.pl/felietony/2613-mariusz-pisarski-sztuka-postinternetowa-wprowadzenie-do-pozegnania-z-nowymi-mediami.html>.
- Pociej B., *Bach i apogeum dzieła muzycznego; Bach i Leibniz*, [in:] *idem, Z perspektywy muzyki*, Warszawa 2005.
- Sonnen C., *Sól powolnej sieci*, the interview conducted by A. Desponds, "Dwutygodnik", [online] <http://www.dwutygodnik.com/artukul/5645-sol-powolnej-sieci.html>.
- Sosnowski K., *Baroque Me—Jan Sebastian Bach 2.0*, [online] <https://siecmuzyki.wordpress.com/2011/11/18/baroque-me-jan-sebastian-bach-2-0/>.
- Springer S., *Visualizing Bach: Alexander Chen's Impossible Harp*, [online] http://www.openculture.com/2011/11/visualizing_bach_alexander_chens_impossible_harp.html.
- Starr B., *Baroque.me: An Interactive Look at Bach's Prelude*, [online] <http://www.visualnews.com/2011/11/baroque-me-an-interactive-look-at-bachs-prelude>.
- Tatarkiewicz W., *Piękno. Dzieje pojęcia; Piękno. Dzieje kategorii*, [in:] *idem, Dzieje sześciu pojęć*, Warszawa 2012.
- The Slow Web Movement*, [online] <http://theslowweb.com/>.
- Vergo P., *The Art of Fugue*, [in:] *idem, The Music of Painting: Music, Modernism and the Visual Arts from the Romantics to John Cage*, London 2012.
- Visnjic F., *Baroque.me [Javascript, Sound]*, [online] <http://www.creativeapplications.net/sound/baroque-me-javascript/>.
- Walker J., *Baroque.Me, This Makes Everything Better*, [online] <http://www.rockpapershotgun.com/2011/11/17/baroque-me-this-makes-everything-better/>.
- Wierzbicki P., *Boski Bach*, Warszawa 2014.
- Wolff C., *Jan Sebastian Bach. Muzyk i uczony*, trans. into Polish by B. Świdarska, Warszawa 2011.
- Wójtowicz E., *Net art*, Kraków 2008.