

Anti-Spam: Reinventing Data

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ABSTRACT Today, where information is continually transferred in the form of data, the word “information” has all but been exchanged for the word “data.” This shift of terms has aided in effectively transforming the world into a network-world of data. In many areas, and for many professionals, condensing information has become an almost exclusive preoccupation. This need to condense information through selecting and summarizing events—via the use of statistics, infography, visualization software, reports, databases, and animations—has dominated our mental landscape; it dominates the way we structure our perception of reality. Therefore, it is important to rethink what this phenomenon represents and how artists are responding to it.

In this network-world of data spam (which is unsolicited e-mail or electronic data sent en mass) has become one of the symbols representing the flux of disinformation, and/or unsolicited, information. Anti-spam is, therefore, a method of eliminating and screening the source data, a tool I call impedance. If we apply this point of view to contemporary art, we could consider the works of Pavel Braila, R. Luke DuBois and André Sier as anti-spam filters that allow the detection, screening, elimination, and subsequent reinvention of existing or non-existent data. In this essay, I propose considering the fundamental aspects of data mining, data visualization, projection mapping. From such considerations emerges the ability to generate, process, and recreate data from the work of these three artists. Finally, I introduce the perspective of the artist as a data miner, this reinvents its source in the new visual, social and political datascape.

INTRODUCTION

In today’s world, where information is transferred continuously in the form of data, the word “information” has been exchanged for the word “data.” Thus the transforming of our world into a network-world, into a data world. The theory of information that has been developed over

recent decades should also be accompanied by a theory of *disinformation*, a theory of disguise, of the omitted, of the hidden, of rescission and liquidation. Such a theory of disinformation would investigate the features and consequences of these “drifts,” paving the way to a new perception of the world and the reinvention of information.

Disinformation, as discussed here, is not a feature of either recent decades or the last few centuries. The degree of complexity and the methods used in how this disinformation is constructed have increased exponentially. One of the indicators of this phenomenon is the amount of information that circulates on a daily basis, the result of which is a greater screening process that raises questions like: How and when do we use information? How do we process it in our system? How do we transfer it between our biological and technological systems? How do we validate or distort it?

In many areas, and for many professionals, condensing information has become an almost exclusive preoccupation: obtaining, ascertaining value, and preparing information in a condensed, useful form. This need to make information more condensed, more digestible and repeatable, selecting and summarizing events—via the use of statistics, infography, visualization software, in the form of reports, databases, and animations, that has already founded a new field, data-mining—has dominated our mental landscape. It has structured our perception of reality, changing information into a numerical value, whether financial, social, or artistic in nature. At a time when speed reigns supreme and the transfer of data (informative or disinformative), both on earth, and away from it, reaches astronomical levels (abstract levels, given that we have no human notion or reference point that offers us a scale of comparison). It is essential to rethink what this phenomenon represents and how artists are responding to it.

Spam (which is unsolicited e-mail or electronic data sent en mass) has become one of the symbols of the flux of disinformative, unsolicited information. Anti-spam is, therefore, a filter, toward eliminating and screening data, anti-spam is a tool to resist a continuous and unsolicited transfer of data. I call this unsolicited transfer of data *impedance*, through establishing an analogy referencing the field of physics, computer sciences, and sociology. It represents an opposition to a system of ideological dissemination.

In the field of art, anti-spamming is therefore not only a way to block such disinformation, but a way of aesthetically processing and converting data into another sort of artistic visualization. If we apply this perspective to contemporary art, we could consider the works of Pavel Braila, R. Luke DuBois and André Sier as anti-spam filters that allow

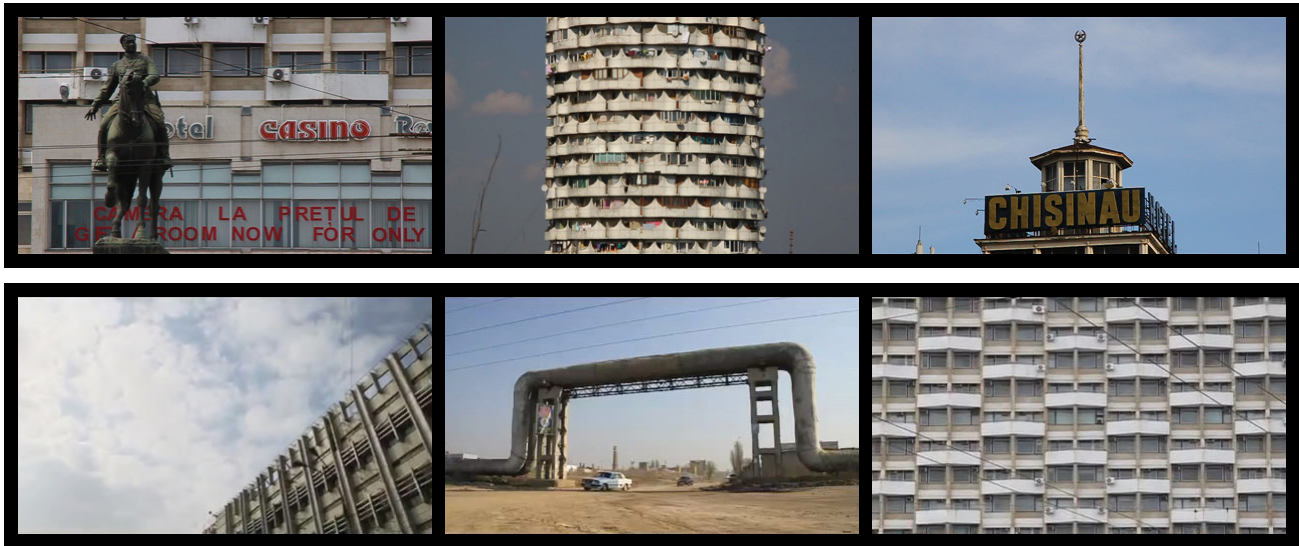


FIGURE 1: *Chisinau—City Difficult to Pronounce, 2010*

the detection, screening, elimination, and subsequent reinvention of existing data in the cases of DuBois and Sier. In the case of non-existent data, Braila. Although the work of these three artists uses different media, its *pathos* is similar: reinterpreting reality while touching on a variety of issues, such as: identity, memory, emotional landscapes, sociopolitical context and virtual reality. What these three artists have in common is the collection, processing, and eventual reinvention of data.

PAVEL BRAILA: THE NON-EXISTENT DATA

Pavel Braila focuses on the lack of a Moldovan documentary archive (films, video, or photographs) since 1986, as a catalyst for the re-creation of a visual memory of his country. Since the fall of the Soviet Union, the Moldovan National Archive has stopped producing and archiving visual material and data. Using these blank pages of recent Moldovan history as a springboard, Braila began his project *Odyssey MD-2011*, which aims to document the *ethos* and the major changes that have occurred in the capital, Chişinau, via a video tetralogy that narrates the city in four different seasons, and is exhibited as a triptych in movement; this approach recalls Braila’s video *Barons’ Hill* (2004), shown at the MIT List Visual Arts Center (2005) and the Neue Nationalgalerie, Berlin (2007).

Chisinau—City Difficult to Pronounce (2010) is the first part of this video tetralogy, which is projected onto three independent channels, but with overlapping sounds as they were recorded on the city streets. As there is no post-production sound, its authenticity composes a real conveyance of the sayable, given by the portrait of the

delay imposed by the Communist occupation and, at the same time, an eerie picture of the *unspeakable*, provided by the historical, social, economic, and architectural scenario that has been hugely transformed since Perestroika. *Kick Off* (2010), an allegory of individual identity projected onto collective identity, continues along the constant trajectory of Braila’s oeuvre—the evidence of the poetic



FIGURE 2: *Kick Off, 2010*



FIGURE 3: *Definitively Unfinished*, 2009

in the mundane, as well as the plasticity created by the moving image and the atypical framework in rotation or of the simply unexpected. Swinging its way back-and-forth against the gate, it is as if the wet ball carries all the stories of frustration of a nation—and, if one dares, of almost all mankind—leaving only transient water marks on the peeling paint. At a first glance, these marks can be aesthetically read. However, this interpretation soon fades, springing emptiness and a repression of that collective imagery.

Definitively Unfinished (2009) deals with history of the public's relationship with cinema, the piece uses the parable of an unfinished script that visually and effectively runs as the closing credits. This work looks at the closing down of cinemas in post-Soviet Moldova, which facilitated the emergence of a new icon of popular culture (video, the new technological medium), a new static space for watching movies in community (the “video-saloon”) and a new dynamic space (the “video wagon”). The “video wagon” was a moving device or interior surface that allowed the viewing of movies, widespread in various Soviet countries, in order to compensate for the absence or scarcity of cinema theatres. The “video wagon” consisted of a railway carriage that was specially-equipped with a video player and television for passengers’ entertainment during their trip. Thus, the moving image was *seen during movement*. This association between the railway carriage and cinema had already been addressed as a theme by numerous filmmakers in the past. One could also find it in the simple framework provided by the train window, with its fleeting image. However, the inception of the “video wagon” developed an exponential function, since the process became *movement of the movement*. With an unfinished script, with the end of “video-saloons” and with the last “video wagon” up in flames (the most iconic image of this

piece being the moment when the white letters forming the word “VIDEO” are on the verge of total combustion), the era of the video player and its medium ironically and symbolically comes to an end.

**R. LUKE DUBOIS: STATISTICS, ENTROPY,
DATA-MINING AND DATA VISUALIZATION**

The theme of cinema icons is also explored by R. Luke DuBois, in *Kiss* (2010),¹ although in a different way than Braila. In *Kiss*, through a process of aesthetically reconstructing² 50 kisses from the history of cinema (Hollywood), the artist highlights the movement of the characters and the imagery that the viewer possesses more than the previously exclusive focus on the kiss and the *voyeur*. DuBois’ oeuvre is distinguished by its entropic, analytical character, by a transfer, mapping, and reinterpretation of statistical data or the average data on lexical (*Hard Data*, *Hindsight is Always 20/20 and A More Perfect Union*), sonic (*Billboard and SSB*) or visual media (*Kiss*), as a source for the reinvention of American identity and memory. In this reformulation of a perspective on the identity of



FIGURE 4: *Kiss*, 2011



FIGURE 5: *Hindsight is Always 20/20*, 2009

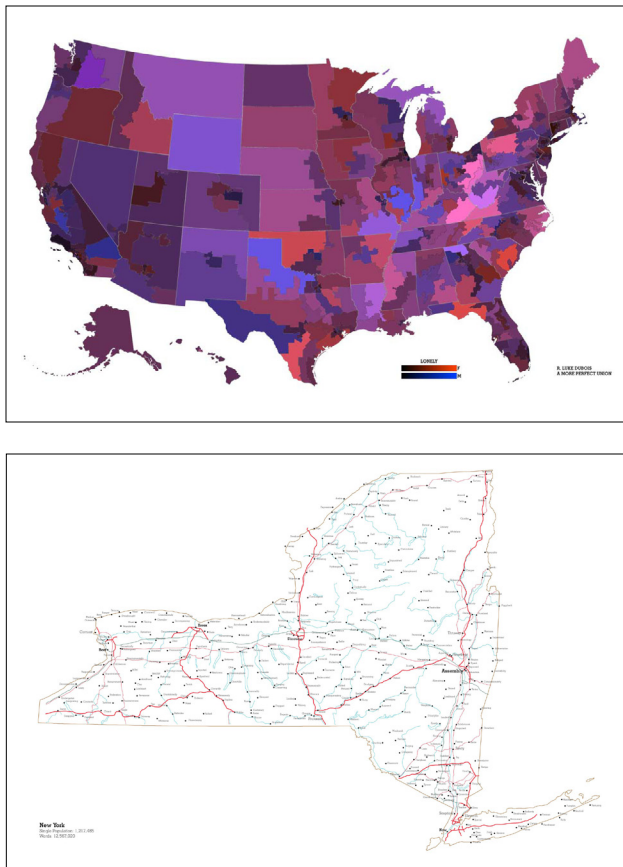


FIGURE 6 and 7: *More Perfect Union*, 2011

a nation and the way a collective discourse is historically constructed, the artist focuses on the American annual State of the Union (SOTU) addresses given by Presidents to Congress, in *Hindsight is Always 20/20* (2008),³ creating eye charts with a keyword recurrence scale for each administration. Besides being graphically well-achieved, the outcome is unprecedented and valuable, as the viewer can have access to an adequate level of understanding of each presidency and administration (those who gave SOTU addresses) with a particular period in U.S. history via a brief visualization.

Still within the scope of political discourse, *ssB* (2008),⁴ a generative sound piece, extends the duration of the United States' national anthem (The Star-Spangled Banner) to 2,102,400 minutes so that it runs the length of an American electoral cycle (a four-year period). The structure of this piece achieves a very lucid degree of irony realized as a critique of political discourse that uses only a one-way identity for the legacy of each presidency, constantly changing for each administration. Therefore, a four-year identity period fragments and denies a solid

position and long-term development of a set of policies and values within the American society. The structure of the work is reflected in its theme, and the theme reflects the feedback of the composition technique.

ssB, like other works one could mention by Wilfred, Queneau, Cage, Finer, or Poundstone, brings into play the confrontation of “observation time” and the “running time”, exposing the concern of the shock—human versus machine. The paradigm shift in the temporality imposed in the artwork—works of long duration or an almost unlimited length—repositions the user in a situation of non-domain of the observation, visualization, or interaction. The observation and experience of these works become a synecdoche, in the sense that the user takes the part by the whole, deducting a holistic interpretation from partial data, from patterns. Moreover, the temporality of the artwork is itself a statement, denying in advance its *téleios*, that is to say, the traditional aim of a complete perception. The machine running time becomes symbolically more important than the human experiencing time. The fragmented technique used in *ssB* relies on algorithms and procedural methods that DuBois calls “time-lapse phonography”. This sonic perception recalls another sound installation, *Billboard* (2006),⁵ that uses as source material the spectral average of the first singles taken from Billboard's Hot 100 chart over 42 years and 857 songs.

Following similar principles, *A More Perfect Union* (2011),⁶ exhibited at bitforms gallery in New York, re-invents the population, social, ethnic and financial data of the American census (that took place in 2010) until it reaches an *emotional census*, a multiple cartography of the average emotional states and the expectation gathered in the online dating profiles of 19.1 million single Americans. The national maps sort the self-written virtual characteristics of the profiles by adjectives and female/male, while the state and city maps provide a road atlas that, instead of the name of all the cities and towns, has “the word use of the higher percentage of people living in that towns and cities,”⁷ i.e., more than 20,000 unique words spread all over the country. This “accumulation of vocabulary”, which DuBois refers to, focusing on the frequency of lexical data sorted from the collected profiles (true or false), using software as a primary tool, activates transducer processes that have the effect of creating a different visualization of a particular raw source of data. The data and its original purpose are suddenly converted into a social and aesthetic target.

In *Hard Data* (2009), a Flash net.art work hosted at turbulence.org, DuBois analyzed the statistical data of the USA's military intervention in Iraq, to reassess and generate a new perspective on the war. Along a six-year timeline,

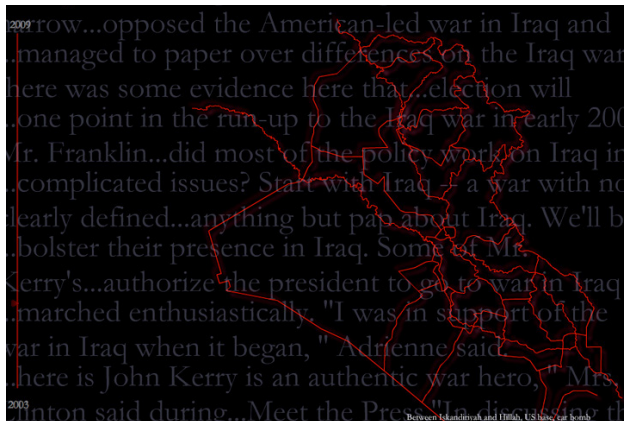


FIGURE 8: *Hard Data*, 2011

from 2003 to 2009, the user has access to an overlapping rereading of several loaded data, ranging from military and civilian deaths, geospatial data, news on the war, to financial reports on the U.S. invasion. Adding several texts with these data, DuBois thus combines the geographic image of Iraq with sound, based on the notion of stochastic music developed by Iannis Xenakis. Being a work with a mutant character—a project of “data-mining, sonification, and visualization”, according to the author⁸—it raises some important points that I would like to stress, since it is paradigmatic on several levels. One level is the dynamic relationship between text, image, and sound as an essential topic to approach and research in electronic literature and digital artworks. Another level is the way the text is read in cyberspace, this has a distinctive mark that concerns several mutant works. In a book the reader has a relatively passive (vision) commanding position, activating the static text, conversely, in a computer the user has an active (vision, hearing, touch, keyboard, mouse, etc.) commanding position, being *activated* by the dynamic text. Regarding the reading shift, this paradox leads us to a distinction between the human voice, that to be “subvocalized” (Hayles 2008:118) in printed media, and the cybervoice, that is multisensory, multitasking, it demands a “hyper attention” (117–19) in digital media, as opposed to the “deep attention” of printed media.

From Judd Morrissey’s *The Jew’s Daughter* (2000),⁹ in which portions of the text mutate according to the user’s action with the mouse cursor rolling over blue words; Giselle Beiguelman’s *The Book after the Book* (1999),¹⁰ that redefines and processes the subject of Borges’ fiction *The Book of Sand*, that “pensa o impacto da internet na literatura [sic] e nas formas de leitura”; Thomson & Craighead’s *Trigger Happy* (1998),¹¹ that showcases an appropriation of the arcade game *Space Invaders*,

redesigning it with conceptual statements; Brian Kim Stefans’s *The Dreamlife of Letters* (2000),¹² whose Flash-based letters start an animation at a programmed speed; Scott Rettberg’s *Frequency Poems* (2009),¹³ a poetry generator created in Ruby; Noah Wardrip-Fruin, Josh Carroll, Robert Coover, Shawn Greenlee, Andrew McClain and Benjamin “Sascha” Shine’s *Screen* (2003),¹⁴ an immersive work of virtual reality created in the “Cave” at Brown University; or from the works by Young-Hae Chang Heavy Industries,¹⁵ to William Poundstone’s *Project for Tachistoscope* (2005),¹⁶ to name but a few, the operating process consists of mutating the text. It is precisely the latter, due to the analogy that Poundstone made with the tachistoscope (a machine and a technique to read subliminal messages that was created in the 19th century and was reintroduced in the 20th century to subvert the unconscious), which provides us with the kinetic characteristics of dynamic texts through the use of words in motion, i.e., “flashy words.”

This recursive feature in the works of digital literature and art (the lesser or greater speed of mutating texts) leads us to the issue of time in the observation, participation, or interaction with an artwork. In traditional media (such as the book or canvas) the reader or viewer dominates without any temporal imposition¹⁷ the duration of its reading due to the static characteristic of the object, however, in digital media, such as those I have just described, the user does not control the duration of its observation. The participation or interaction, given the dynamic nature of process, imposes an intelligibility duration. Taking into consideration what has been presented here, *Hard Data* emerges as a formal essay of these points, as it functionally and aesthetically explores issues, while at the same time making them denser, due to the theme addressed, converting numerical data, once stagnant or forgotten, into a visualization that renews and expands its social and historical impact.

ANDRÉ SIER: THE CODE IN THE NOMINATION OF THE ARTWORK

From Duchamp to Serrano, there is a programmatic line of works whose title operates as the key to its perception. *Fountain* (1917) would have had neither the impact, nor the desired interpretation if it were not for its title, just as *Piss Christ* (1987) would not have allowed such interpretations than purely aesthetic, or else it would be mislead, if it would not be the opening direction provided by its nomination. This opening reveals layers of meaning, information and the use of the *word* as an intelligibility activation of the visual world has a precedent that has marked a division in the way one *views* the artwork.

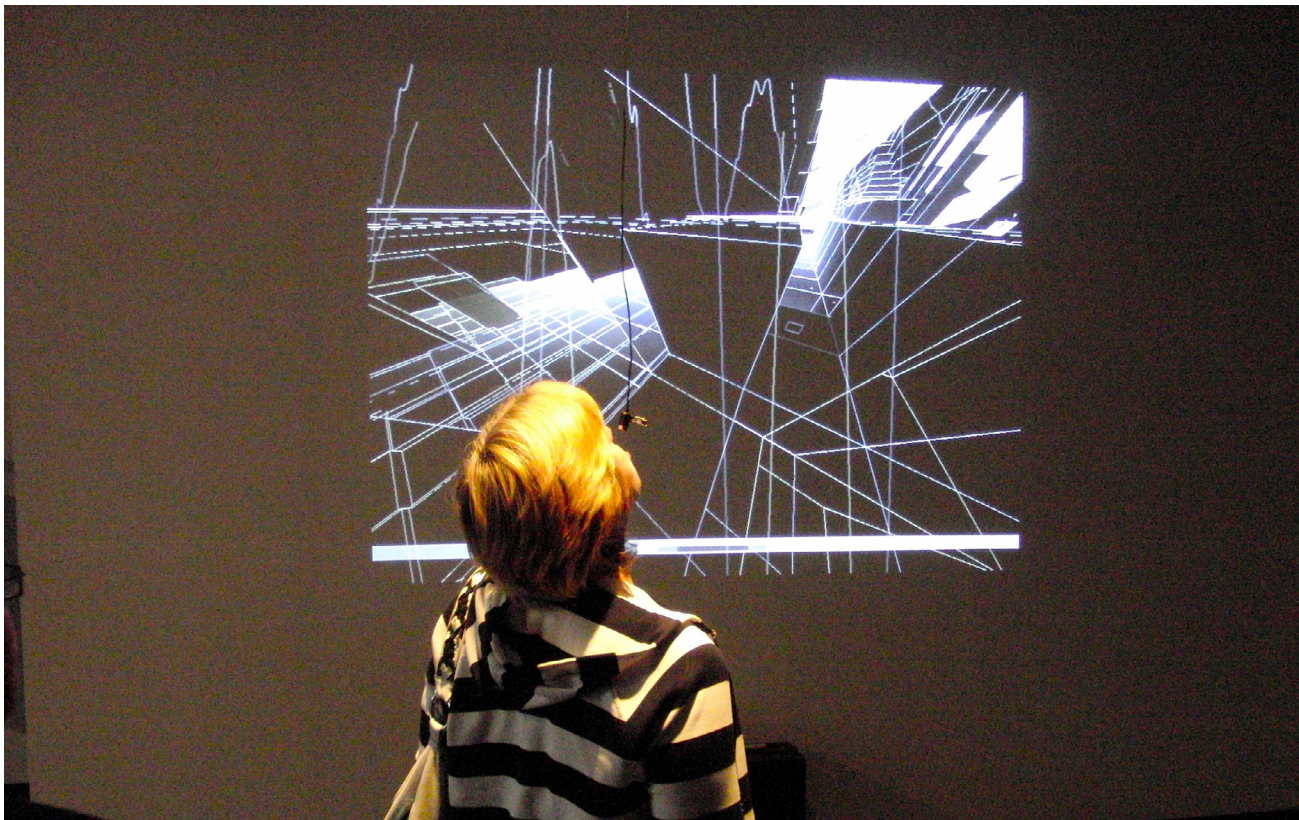


FIGURE 9: *k.~*, 2010

That moment was the nomination of a female nude,¹⁸ not as the traditional Venus or Madonna (the untouched and holy virgin), but as the earthly and plausible woman, for instance, in Goya's *La Maja Desnuda* (1797–1800), Ingres' *La Grande Odalisque* (1814), or Manet's *Olympia* (1863), shifting the focal point of interpretation of an artwork from its composition to its title. Moreover, this incidence in the title, as a way to continue or deny the visual narrative of the work, has found a period in which it was sidelined: Modernism and most of the Abstract art movements. Works such as El Lissitzky's *Composition* (1929), Mondrian's *Composition z VIII (mko9)* (1924), or Moholy-Nagy's *CHX* (1939), among others, raised the burden imposed on its nomination in order to transfer it again to the composition and its radical cut, having abbreviated titles, initials, or the common "composition".

With this in mind, it is interesting to follow what has been happening over the last two decades. Among digital artists, artworks have been increasingly named using elements of programming languages and code. By naming his works as computer files, referring to a new vocabulary, the code applied in programming the pieces, André Sier establishes similarities with the Abstract ruptures. In the *k.* series, this feature is stark, reminding us that the code

has taken control over the nomination of the artwork, claiming its place as a natural language. The *k.* series has been coded and developed using various media since 2007 and was inspired by Franz Kafka's novel *The Castle* (1926), in which the protagonist is *k.*, a land surveyor hired by mistake by the authorities of Count Westwest. The series began with the playable environment *k.* (2007)¹⁹ and is now made up of its derivations: the digital installation *k.~* (2010),²⁰ the hybrid analog-digital installation *k.astelo* (2011)²¹ and the results of the transfers of various processes. These processes include the prints of screen

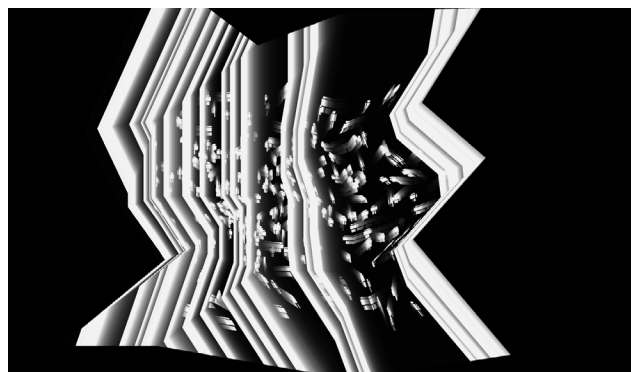


FIGURE 11 A: *k.astelo*, 2010

shots (2009–11) k.00554.tga, k.07250.tga and k.15198.tga, and the topographic sculptures (2010–11) k.001.stl, k.012.stl, k.021.stl, k.110.stl, k.121.stl, k.207.stl2, k.t71.stl and k.001.box.

In order to build *k.*, Sier programmed a source code with 5021 Java code lines. The navigation in this net.art work allows the user to travel in 4,294,967,295 different spaces, the castle of Count Westwest is to be found in just one of them. When *k.*, the avatar, collects squares—like gathering information of pixels, such as Kafka’s *k.* does in several conversations with the villagers—the user changes level, having access to new territories containing buildings, spirals, voids, or new squares. This playable environment is procedurally generated, giving form to stochastic spaces based on an algorithm. *k.* was selected by the Portuguese institute DGArtes for their virtual gallery of net.art. Its design and online upload turned *k.* into an allegorical Trojan of its hosting entity, a critical malware positioned with a surgeon acumen in the domain (URL) of that public institute whose function is to promote and support the arts, in spite of having blindly accepted and allowed the invasion.

“Below the electronic surface” (Heim 1987:173) of *k.* are the parameters developed by Sier in Processing²³ (branching all the series), merging computer programming, geometric and abstract scenarios controlled by the mouse,



FIGURE 11 B: *k.astelo*, 2010

and, according to its author, a generative “proto-game”. This concept of a hybrid application cancels the idea of a strict game in itself, with the only purpose of amusing, but provides us with its procedural features and its affiliation in ludology (the study of games/gaming), which is of particular interest when confronted with its epigraphic reference: “press space, commander”, from *Elite* (1984) by Acornsoft. In *Elite*, the “space key” is a command that orders an increase of speed. In *k.*, the “space” key orders the avatar to jump or fly. On the one hand, this comparison reminds us of the constant acceleration and vertigo that the user finds in *k.*. On the other hand, it leads us to the acceleration and vertigo *k.* finds in *The Castle*. In the Kafkaesque village, *k.* is a “strange” character that comes from the outside, arriving at a bichromatic and hostile world of the black, associated with the castle on the mountain top, and the white, associated with the houses and the narrow streets covered by snow. In the Kafkaesque village, *k.* finds an infinitely bureaucratic and formal system, organized in a severe and rigid hierarchical structure of servants and superiors, even though the face of power—that is mirrored in the lords belonging to the castle—is ironically unreachable and untouchable, revealing a perverse structure. This feudal hierarchy of social stratification runs in parallel with a lack of hierarchy in establishing the causes of an error. In the Sierian village, the user becomes *k.*, an avatar that runs through a labyrinthine and acentric space in the constant quest for access to the castle of Count Westwest. In the Sierian village, *k.* moves in a grid of hyperspace, which replicates the reading experience of *The Castle*, as well as its spatial and temporal misleading dimensions, as an openwork that is simultaneously dizzying and claustrophobic.

In the digital installation *k.~*, although the source code is the same, the navigation process differs, as the commands are activated by the sound captured by the microphone in real-time. It is a site-specific installation, an organism that feeds itself sonic data, a self-reproduced body through assisted means. The different sound frequencies and modulations react to the reverberation in the exhibition space and trigger the interaction with the piece, in which the avatar quickly flies over the 3D spaces.

In *k.astelo*, an interactive and hybrid installation consisting of structural elements, such as cardboard boxes, and digital elements, such as the projection. The collection of site-specific data is done through a webcam that returns the user’s movement through projection mapping. The projection onto the boxes mixes and maps the user’s movement with other avatars (the villagers) generating geometric patterns. In this sense, *k.astelo* is the rematerialization of a

surveillance space—the big brother/the all-seeing authority—a theme that was pioneered by Kafka years before Orwell. Therefore, the user’s performativity is inherent in the piece; there is a game of dual identity: one that controls and one that is controlled. With the prints and sculptures of the avatar *k.* and the sectioned territories, Sier achieves a diversification of media that contrasts with the dynamic and interactive works because of its statism, and by placing the user in the role of viewer, allowing a new interpretation: refocusing the plasticity of the playable environment through the images and the 3D elevation of its topographic map.

André Sier’s works thus have a transformative and transducer effect—the transfer between different media and themes, the transfer and conversion of data, and the transformation of the user into viewer and vice versa, these given due to the interaction that his works require. However, it is not by chance that Sier describes *k.* as a “pseudo-infinite” work. In fact, the “almost infinite” space is limited by its source code. This is why authors like Joyce (1995) and Aarseth (1997) have analyzed the concept of “interactivity” as a dubious function, because it is still incomplete. Objectively, the goal of an interactive function in which the behavior between the system and the user simultaneously takes place—and in the same generative level—is getting closer. André Sier’s oeuvre, with its human input, establishes an important mark in the exciting and feared autonomy of the machine.

MACHINE AND SITE-SPECIFIC DATA

As stated, André Sier works with machines, collecting site-specific data of the sonic or spatial interaction of the public through the artworks, as a proposal for a new cosmogony—an abstract social alternative. The *uunniivveerrssee.net* series (2011) appears in this context and is a simulated, shareable, and collaborative work, generated by networked users within the museum space itself as well as on the Internet. Starting from a big bang void and moving towards a virtual “set of groupings of races and planets, who are born, who live, who mutate, combine and expand in the synthesized universe” (as Sier says) the experience consists on mimicking a growing organism that is fed by large sets of data. Among other works, this series includes 32-bit Wind Machine (2011), the installation Non-Newtonian (2011), and the interactive projection of The Great Wall (2011) onto the façades of buildings, recently displayed at the S. Roque Museum in Lisbon. This work inserts the agents of the *uunniivveerrssee.net* database in interaction to the people walking in the street. In 32-bit Wind Machine, Sier uses site-specific data on the speed and direction of wind in Lisbon. The sets of data are detected by a wind sensor and uploaded at pachube.com/feeds/19842. This sensor provides input data to the system via a transducer function, converting them into output data. In this sense, it is significant to rename it as an actuator, resulting in a final set of synchronization full of

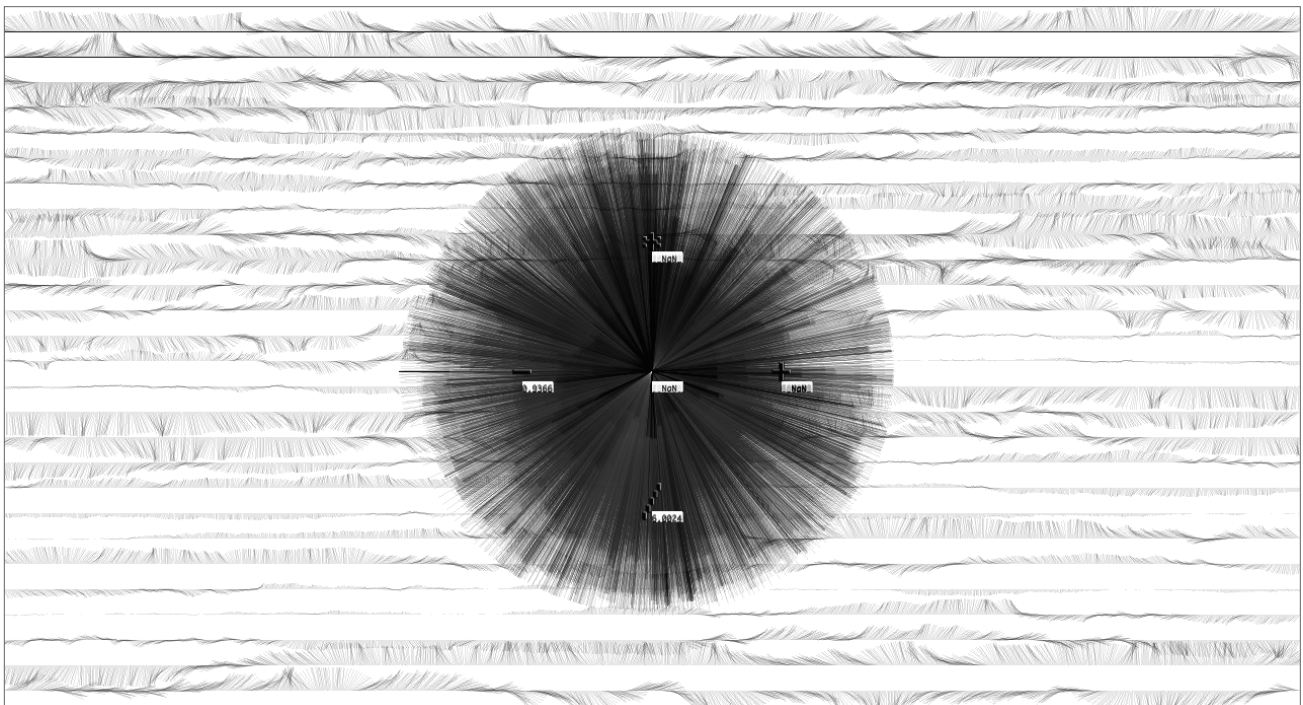


FIGURE 12: 32-bit Wind Machine, 2011

non-Newtonian liquid based on real-time instructions of each user (or “galaxy editor”), according to the distance between eight planets belonging to the online database.

As a last example of another relevant work in the thematic and procedural relation to Braila and DuBois is *CsO* (2008). *CsO* (Corpo sem Órgãos/Corps sans Organes) or *BwO* (Body without Organs) is a generative video²⁵ that speeds up the entire reading of the text by Deleuze & Guattari (1980), “Comment se faire un Corps sans Organes”, whose expression was originally created by Antonin Artaud in one of the verses of the radio broadcasting of November 28, 1947. In *CsO*, the visualization of the words of the text recalls Ben Fry’s software *Valence* (1999), due to the 3D dataspace visualization and mapping that connects the words by lines. In *CsO*, the data visualization maps all the words of the Deleuze & Guattari’s text, which took 2:43 hours in a human reading time, but only 1 minute in a machine reading time, corresponding to the running time. The fact that the entire text is dismembered,²⁶ word by word, and its unification only takes place on a cybernetic level, through the use of code, (not on a human level)—converting it in a cybertext—emphasizes the difference in the processing speeds between the machine and human beings, between a CPU (Central Processing Unit) and a human brain. It is due to this gap, the time-lapse differential of two execution speeds, through which the very interpretative reading of this work takes shape.

CONCLUSION

The *impedance* artistically responded to by Braila, DuBois and Sier have been a great source for artists throughout time. To address the challenge of impedance is to transform the real and recreate our visual world. With the advent of software and new visualization protocols, such as data-mining, data visualization, and projection mapping, artists are able to generate, process, and recreate data in multiple new ways. Their collective reaction to disinformation and unsolicited massive amounts of data can be seen as anti-spamming.

Thus, the work of these three artists guides us towards a reinterpretation of iconic creative material that is part of popular or erudite culture, altering the speed of completion or interpretation of a work—*SSB* and *Billboard* by DuBois, or *CsO* by Sier,—a reinterpretation of the history of video as a medium and cinema as a cultural phenomenon—*Definitively Unfinished* by Braila and *Kiss* by DuBois,—or, finally, the perspective of the artist as a data filter, a data miner, a collector, and interpreter of matrices. Their artistic endeavors transfer, convert, and reinvent the source itself and turn it into a new visual, social, and political datascape.

BIOGRAPHY

Álvaro Seiça is a writer, researcher, editor and curator. He holds a M.A. in Contemporary North American Literature, having received a summa cum laude for his thesis “Transduction: Transfer Processes in Digital Literature and Art”. With Gaëlle Becker Silva Marques he founded *BYPASS*, a nomadic editorial and curatorial project. He currently resides in Malmö, Sweden.

NOTES

- 1 The video is online at <http://vimeo.com/13792228>.
- 2 DuBois is a multidisciplinary artist and has been working on the development of visual programming languages and software extensions for video, including Max/MSP/Jitter, used as a tool in many of his works, making easier the data transcoding.
- 3 The project can be accessed online at <http://hind-sightisalways2020.net/>.
- 4 The work can be heard at <http://www.bitforms.com/r-luke-dubois.html#id=72&num=18>.
- 5 <http://www.bitforms.com/r-luke-dubois.html#id=72&num=20> or <http://lukedubois.com/>.
- 6 <http://perfect.lukedubois.com/>.
- 7 Citations from H. Paul Moon’s documentary film “R. Luke DuBois: Running Out of Time” (2011). <http://www.youtube.com/watch?v=FWq4lk9JYBM>.
- 8 <http://www.turbulence.org/Works/harddata/>.
- 9 <http://www.thejewsdaughter.com/>.
- 10 <http://www.desvirtual.com/thebook/index.htm>.
- 11 <http://www.triggerhappy.org>.
- 12 http://www.arras.net/RNG/flash/dreamlife/dreamlife_index.html.
- 13 http://retts.net/frequency_poetry.
- 14 Download a QuickTime file from the directory of *Electronic Literature Collection* Vol. 2, that has been recently released, containing a video with one user reading and

playing *Screen*: http://collection.eliterature.org/2/works/wardrip-fruin_screen.html.

15 <http://www.yhchang.com/>.

16 <http://williampoundstone.net/Tachistoscope/>.

17 This argument is easily refutable if one considers the case of performance arts, cinema, or the medium of video in art, since the stipulated duration attributed by the author may or may not be obviously completed by the viewer. This factor is intensified and becomes an impossible matter, if the artwork has a long-term end, such as the case of permutational and generative works that I have analyzed in another essay, “The Factorial Literature”.

18 It is interesting to compare this analysis with the first “computer nude” which was the first computational image to be considered a “work of art”, according to André Favilla (2007). This female nude, *Studies in Perception I* (1966), was composed by electronic symbols, similar to ASCII (American Standard Code for Information Interchange) characters, developed in 1963 and later appropriated in the ASCII art of the 90s, by artists such as Vuk Ćosić, that coined the term “net.art” in 1995. In the particular case of *Studies in Perception I*, these electronic symbols were transferred from binary code. Kenneth C. Knowlton and Leon D. Harmon conceived the work at the Bell Labs. Being a moment of cleavage, as the one I mentioned about the shifting paradigm in the nomination of the female nude from the divine to the mundane, this work becomes even more significant due to its theme, which is invariably the female nude, dragging the iconological history of art that Favilla relates to Albrecht Dürer’s *Draughtsman Drawing a Nude* (1536). This engraving has also clearly influenced the works by Goya, Ingres and Manet I refer to. Therefore, there is an ongoing citation line here.

19 Access <http://s373.net/projectos/k/> to play, running the application in Java. Or, watch a video of the game running at <http://vimeo.com/1916202>.

20 <http://s373.net/projectos/k~/k~/html>

21 <http://s373.net/projectos/k.astelo/k.astelo.html>

22 The 3D printing process in abs plastic, built with Blender, a freeware for .stl files exports, can be seen at <http://vimeo.com/21830214>.

23 Ben Fry and Casey Reas founded the Processing software, “a programming language [open source], development environment, and online community” (<http://processing.org/about/>) in 2001 at the MIT Media Lab, with the aim to program images, animation, and interactions. Their work also carries transducer principles, focusing on the process as a major element of digital art. In literature, Scott Rettberg’s generative fiction *After Parthenope* (2010) is also built with Processing.

24 <http://uunniivveerrssee.net/x/32bitwindmachinestudie/>. The work hosted in this domain is a study, not having the final arithmetic operations overlapping the black hole that load the game.

25 <http://vimeo.com/2716919>

26 Daniel Haines’ definition in Malpas & Wake (2006), after reading Deleuze & Guattari’s oeuvre, attests the position I sustain here: “A ‘body without organs’ is a body that exists and coheres without the structuring articulations which reduce the plurality of its parts (or organs) to the unity of a single organism. It is not a body defined in terms of the identity of a *subject* [sic] or object but solely by its power to affect or be affected in a variety of different external relations. In other words, like a *rhizome*, a ‘body without organs’ is a pure multiplicity of *unconscious differences* which constitute desire in an active process.” (156)

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