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Critical Studies - Catalogue Essay.

Improvising Systems - Curating Algorithm.

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Introduction: Interaction between technology and culture.

In terms of contemporary cultural activity and production digital media acquires a large field of interest. This can be noticed both in contemporary theory and contemporary practice negotiations. A new paradigm seems to exist in the way that new media is involved in contemporary activity. Moreover, new media appear to affect not only the execution of the tasks but also the articulation and conceptual construction of the tasks.

Long after Marshall McLouhan's 'medium is the message'¹ and Manuel Castells' 'the message is the applications of the medium'², digital media have been incorporated in contemporary culture acquiring the role not only of tools but also of cultural catalysts. In the terms of Castells users have already automated their tasks, have experimented over media and have been acting with them as well as on them.³ Human culture has been re-recording its knowledge, its experience and the intellectual and optical world, using digital data that lead to the formulation of digital databases; of sums of digital data. These databases are the output of this whole procedure but also become the basis of any further negotiation.

These tasks vary from everyday practical matters to more extravagant applications. In addition, this idea suggests that structural characteristics of both technology and culture are mutually exchanged.

The structure that is suggested here refers to the function of a software algorithm which could be applied on relevant databases as a curatorial tool. It is a technical function whose principle rules

¹ Marshall McLuhan, *Understanding Media, The Extension of Man* (Massachusetts: MIT press, 1964)

² Manuel Castells, *The rise of the network Society* (Oxford: Blackwell, 1996)

³ *Ibid*

can be interpreted as a precept for curatorial function both in terms of technicality and content.

These interferences between technology and culture seem to be described in the context of 'mediology'.⁴ This theoretical field can be used as a platform on which technocultural affairs can be developed and moreover be projected on more specific areas such as artistic and curatorial production. In these terms the methodological tools that are suggested can shift from a general field (technology and culture) to more specific ones (technology and curating) and vice versa.

This task in mediological terms relates the functions of two different systems that do not have common codes or rules. This suggestion aims for exploring the possible affection of technical software to cultural matters such as curatorial practice and, moreover cultural production.

The primary aim is not to develop a digital tool per se, but to explore the possible cultural results of its conceptual and technical application as well as the attitude of politics that can be performed through the algorithm.

Software and algorithms: the technical context.

In order to proceed with the above schema the description of a software function would be the technical context of the task: software is based on algorithms. It receives data, it transforms it and produces an output which still remains data; digital information. The way it works corresponds to a sum of orders that execute specific actions upon the input.

⁴ Regis Debray, *What is Mediology?*, www9.georgetown.edu/faculty/irvinem/theory/Debray-What_is_Mediology.html (Aug. 15, 2008)

The user of the software/algorithm is able to select the digital input on which the software will act and is able to adjust the way that the algorithm will act on the input; to adjust its function. The collection of the output of many applications of this procedure is a database; a sum of digital information.

In cultural terms what actually happens is that the comprehensive information that has been translated into digital codes (input) is being processed through the algorithm that has recorded a comprehensive type of task, also into digital codes (software). The result of this activity is the production of new comprehensive material that is -still- in the form of digital data.

Database and Narrative.

What seems to be interesting is the sum of possible output; the databases. This is because they collect the new material of the algorithmic task (output) creating larger groups of information. The form of each database depends on the way the algorithm has functioned and on the material that the algorithm has worked with. These data collections can be easily altered in two cases: if the algorithmic operation changes or if the material on which the algorithm is being applied alters. This assumes a dynamic procedure of a flexible, generative output with multiple possible formulations.

A database remains as static, pure data collection unless its content is recalled somehow by a user. This can only be done via an algorithm which is able to administrate the data according to the user. This is when a database acquires comprehensive content; when

its elements are organized in a selected comprehensive context (postdata).

The notion of database is connected but at the same time is also differentiated from the notion of narrative. A database, as a cultural form, stands for a list of items.⁵ These items are possible to be somehow classified in this list. A narrative, as a cultural object, is connected to what would be perceived as any type of content. The narrative should contain both an *actor* and a *narrator*; it should also contain three distinct levels consisting of *the text*, *the story*, and *the fabula*; and its contents should be a *series of connected events caused or experienced by actors*.⁶ In the case of a narrative there is interaction among the actors and the narrators while in the case of a database these interactions are not activated. The manner in which the user deals with databases enables the possibility of an articulated narrative. The algorithms act on the databases and they rearrange their elements leading on possible narratives.

The possible alterations of the function of the algorithm that affect first the output and then the databases lead to the alteration of the narrative. This procedure is able to lead not only to a specific articulation but to many alternative ones. It is about a flexible formulation that allows the structure of multiple narratives, even in a spontaneous mode. This means that it is possible to translate the output of the procedure into comprehensive material even if that was not among the primary aims of the procedure.

⁵ Lev Manovich, *The Language of New Media* (Massachusetts: MIT Press, 2001), p.199

⁶ Mieke Bal, *Naratology: Introduction to the Theory of Narrative* (Toronto: University of Toronto Press, 1985), p.8

The way databases are linked to narratives is interesting since they do not have the same status neither in cultural terms nor in digital terms.

Curatorial procedure: the cultural context.

There is a similarity between the basic function of an algorithm - software and the cultural functions such as curating. If we tried to analyze the curatorial procedure in such terms, we would imply that the curator has to deal with some curatorial input, then to proceed with his curatorial decisions and, finally, suggest a curatorial product. It means that he would administrate a selection of elements of his knowledge and experience -regarding art production- aiming for a possible formulation towards a curatorial product. The implied analogy is that the input is the information that is connected to art, the algorithmic function is the curatorial design and the output is the product.

Each possible product -each possible combination of the curatorial content and elements- would be like a database able to become the realized product after the final decision.

In this case there is an abstract analogy which highlights the structural similarity of a cultural task with a technical task. This similarity does not proexist but comes up after the conceptual renegotiation with both the function of algorithms and the function of curating. This assumption is based on the technique of both practices and not on the media that these practises use. Moreover, the assumption aims for using the digital media of algorithms in order to develop the curatorial software.

Curatorial software: The technocultural interrelation.

In order to proceed further with the above assumption a simulation of the curatorial procedure through a software is suggested. In these terms important decisions that would deconstruct the parts of a curatorial procedure should be made. This task would demand the collection of any possible curatorial input (artists, artworks, texts, philosophical questions etc) that would form the general input. Then, in terms of procedure, the possible curatorial attitudes should be defined and organized in specific methodological categories. If that could be accomplished, then the application of one of the possible methodologies upon the input would lead to the output: to the curatorial suggestion. That would be the establishment of an abstract mechanism similar to the ones that were mentioned above.

If the three parts of the mechanism were digitalized and the curatorial methodologies could be recorded in forms of algorithmic structures, then we could imagine the basis of the curatorial software; a transfer of data processing model to curatorial practice. The whole attempt might lead to the formulation of databases that would be able to include possible narratives as described before.

New perspectives of production.

In terms of curatorial narratives, as they appear to be produced while dealing with the idea of databases, a new possibility in meaning construction appears. The curatorial procedure seems to be able to suggest a whole new variety of products via that new tool. This variety seems to be much more extended and even unpredictable

according to the algorithmic function. The new mechanism seems to apply a digital technique into a cultural field.

This correlation can be further explored in two contradicting ways. The first one is that a new curatorial tool is produced in order to facilitate the actual role of the curator. A mechanism that would organize in digital systems the global artistic production and context; that would record all the possible curatorial strategies and that would be able to enrich the curator's task.

On the other hand, the implication of curatorial software would be critical towards the notion of the curator itself. The automation of the curatorial task after the completion of a relevant algorithm might suggest the evolution of the role of the curator from the one of cultural producer/administrator to someone that would update and use the curatorial databases.

Extended possibilities of meaning construction.

Semiotics is an aspect that might be useful for a deeper understanding of the idea of extended narrative production; of extended possibilities of curatorial negotiations.

The structure that Ferdinand de Saussure has suggested regarding the interpretation of signs is based on the dipole of the signified and the signifier that are strongly connected to each other.⁷

On the other hand, Charles Peirce proposed a triadic sign system. Pierce suggests that a sign or representamen 'is something which stands to somebody for something in some respect or capacity'.⁸

This reminds Saussure's definition of the signifier. The sign that

⁷ Ferdinand de Saussure, *Course in General Linguistics* (London: Duckworth, 1987)

⁸ Charles Peirce, 'Division of signs', in Charles Hartshorne, ed., *Collected papers of Charles Sanders Peirce* (Massachusetts: Harvard university press, 1958), p.135

the representamen creates is called 'interpretant' of the first sign.⁹ The interpretant stands for the object in reference to a sort of idea in 'a sort of Platonic sense'¹⁰. It is the meaning that comes out of the sign. This meaning might be Immediate, Dynamical or Final:

My Immediate Interpretant is implied in the fact that each Sign must have its peculiar Interpretability before it gets any Interpreter ... The Immediate Interpretant is an abstraction, consisting in a Possibility.

My Dynamical Interpretant consists in direct affect actually produced by a sign upon an Interpreter of it [...] it is that which is experienced in each act of Interpretation and is different in each from that of the other [...] (it) is a single actual event.

My Final Interpretant is [...] the effect the sign would produce upon any mind upon which the circumstances should permit it to work out its full effect.¹¹

There seems to be a fluid dynamic in the way that a sign can be interpreted after the schema of Peirce. The negotiation with signs seems to depend on a series of circumstances that involve the perceiver or creator of these meanings. This idea seems to allow a less solid relation of the signified to the signifier than the one that Saussure suggests.

We may say that the function of the curatorial algorithm as described before aims for a dynamic possibility of meaning creation;

⁹ Ibid

¹⁰ Ibid

¹¹ Charles Peirce, *Representamen*, <http://www.helsinki.fi/science/commens/dictionary.html> (Aug. 15, 2008)

a dynamic negotiation with the available input providing us with more possibilities of meaning formation.

What Peirce suggests as a structure of possible negotiations with signs is connected to the way that the algorithm functions upon the available database; upon the narrative creation. The different ways that the same elements of the databases can be treated by the algorithm lead to potentially multiple negotiations with the signs. In terms of curatorial negotiation the same available material (the input) can be processed in various ways allowing multiple suggestions; multiple narratives that can be generated from the same material.

Related art practice.

In this context there seems to be two cases of algorithm connected production that can be recalled as generative cases that extend and resume the above theoretical assumptions.

The conceptual construction of the algorithm recalls digital functions but the primary assumption, as mentioned above in terms of 'mediology' is to explore mutual ways of interaction between technology and culture.

In this case the following examples of art practice are not simply investigated as cases of digital/algorithmic production but as cases that perform cultural interrogations in relation to the algorithms.

The case of Jodi.org's practice is one that seems to incorporate specific elements that can adopt their practice to the above context. Jodi.org is composed of two members, Joan Heemskerk (b.1968) and Dirk Paesmans (b.1968). They started working around

1994 and they are considered to be among the first ones that dealt with 'pure technological abstraction'.¹²

Jodi.org's digital practice is usually presented on line having the form of web sites. This relates their work, due to the medium they use, to the idea of algorithms. Nevertheless, the interesting point to discuss is the way their work interferes with the algorithmic structures and the impact they have on matters of content and narrative.

Jodi.org's practice appears as a continuum of errors that take place on the computer screen. Their work <http://www.jodi.org/> appears as a green text that flickers on a black screen. Any click on the screen leads the user to a series of other screens that seem to combine text elements, diagrams, pixellated images etc. The screens often loop, confuse the user and create the idea of an error since there is no obvious visual material.

What seems to be of great interest is the constructive layer of the work. If someone viewed the page source of the first screen, he would notice that the source code creates the image of a bomb. What usually happens in web design when HTML (Hypertext Markup Language) is used is that the source code creates what the user experiences and sees on the screen. The code, composed of typed characters, builds the way that the web page appears and is organized.

In this case jodi.org played with what the code looks like in its genuine form and presented the random image that this code created. Jodi in this mode deals with the idea of the structure of an algorithm suggesting an interface whose narrative is adventurous. The narrative is different every time. It seems that the idea of

¹² Rachel Green, *Internet Art* (London: Thames & Hudson: 2004), p.41

links and connections, that are usually clear and stable for a user while he navigates, is fluid and different every time.

The challenging point here is not simply the interface of the work but the narrative which comes through this interface. The idea is not about a narrative that is complicated and dispersed -via combining linear and non linear formulations- but about its multiplicity that is founded on technical and conceptual efficiency. Jodi.org declare that the way they deal with digital works is by hand; that digital is manual. This suggests the idea that the algorithm, and moreover the structure that appears on screen, is carefully scheduled to appear the way it does. The idea of repetitiveness and improvisation is interesting to them, but not the one of free acting algorithms.¹³

Jodi.org seem to improvise in many levels assembling different systems. They allow things to alter in an unforeseen way every time both in their visual and constructive logic. In this case the idea of dynamics in the interpretation of signs, that Pierce suggested, seems to be formulated. The interpretant every time flows, reformulates, transforms or repeats itself according to a series of actions on the screen. These actions come after the interaction between the viewer/user with the code of the algorithm that appears through the interface of the work.

Another case to be pointed out is the one of Mark Napier (b.1961), a media practitioner whose background is painting. Napier produced the works *Shredder 1.0* (1998) and *FEED* (2001) -available at www.potatoland.org- that are close to the algorithmic functions and databases in a heretic way. These two works act on existing web objects by entering the relative url. Both works use existing web

¹³ Jodi.org, email to the author (Jan. 15, 2008)

sites as databases to act on transforming their code and, consequently, transforming their content.

In the case of *Shredder 1.0* Napier using a script (a sort of a programme) of his own creation transforms the web sites that his work is directed to in a similar way. The result, in terms of appearance, is usually similar. Nevertheless, parts of the original content -such as visuals, texts, and links- can be discriminated. After the end of the transformation, that is different every time, the modified wed sites remind of the paintings of Hans Hoffmann and Gerald Richter.¹⁴ The alteration of the code appropriates the data of the web, transforming it into a parallel web. 'Content becomes abstraction, text becomes graphics, information becomes art'.¹⁵

The interesting in this case in terms of the code structure of the work is that the source code is not able to be seen as in the case of Jodi.org. This is because the wed page of the work every time refers to the one of the wed site that is due process.

The work *FEED* functions similarly decomposing the content of existing web sites into charts and diagrams after reading every byte of its texts and images. The comprehensive information is dissolved into informational visualizations that organize temporary databases with specific visual methodology.

In both cases there seems to be an attempt to focus on the innovative character of an algorithm to another one that is external and pre-existing. The transformation is happening in the field of this intruding algorithm. In terms of time and digital space these performances happen in real time and are temporary.

This mode of commenting and acting on digital data distribution can be generally seen in this phase of Napier's practice that was

¹⁴ Mark Tribe, Reena Jana, 'Shredder 1.0', in Uta Grosenick, ed., *New Media Art* (London: Tashen, 2007), pg.70

¹⁵ *About the Shredder*, <http://www.potatoland.org/> (Aug. 15, 2008)

developed around 2000. His later practice focuses on the visualization of the way that algorithms can modify existing three dimensional models of various structures presenting the procedure via real time animations and still frames. This orientation led his practice in simplistic visual negotiations with the idea of algorithmic performances that are far away from their acting on digital structure possibilities.

The political claim.

Totalitarian databases and massive algorithms incorporate all the possible experience that is connected to art practice and theory. They acquire a consensual character that is disconnected from curators' personal and physical involvement. This assumption raises the question about the political aspect of these performances.

The political exploration of the described mechanism comes after its development. During its presentation as a theoretical schema these aspects were not explored. Moreover, there was no specific political claim that contributed to its articulation.

The identity of the algorithmic structure that has been suggested is adjustable from a collective task to a sole administrator's task. In the first case a whole compilation of collectives or independent data feeders would deal with the creation of the database and the generative development of the algorithm extending its possibilities towards a communitarian tool. In the second case a master user/curator could be (self) appointed to use the mechanism in an authoritarian mode. Moreover, the algorithm would propose itself as an automated procedure whose function would push over the curator's involvement. This would be upon the claim of the algorithm's self

sufficiency that has recorded and incorporated a consensual curatorial character due to its massive possibilities.

As suggested, the algorithm carries an extended experience that concludes contemporary activity. Its constitution includes no predefined political links to any particular formulation of politics. Nevertheless, it is possible to include them all, or even to perform them, due to its flexibility, through its suggestions.

Would there be a methodology to explore the political aspects of the algorithm in a way that would be detached from ideological tendencies and even more, detached from current political practices that would narrow its potentialities down to politico-terminological references?

Badiou's consideration of 'metapolitics'¹⁶ seems to suggest a methodology to deal with politics through its philosophical perspectives, referring to existing political schemata but, at the same moment, detaching it from them. It is a methodology that seems to seek for the politics of the politics towards a more general idea. This frame of thinking -from specific to general conceptual performances- that is central to Badiou is useful here. This is due to the first assumption that linked us to 'mediology': exploring interacting partial systems towards the composition of new catholic procedures.

Exploring the idea of 'Metapolitics' Badiou starts from commenting on the common use of 'democracy' and ends up to suggesting characteristics of democracy through which politics reaches its political prescription. He suggests a definition of democracy as a situation that is able to be among philosophical interests in a

¹⁶ Alain Badiou, *Metapolitics* (London: Verso, 2005)

'metapolitical' mode that interrogates politics though philosophical concerns.

The question here does not refer to the quality of the algorithm's democracy as a philosophical concept. Moreover, the question here is not about its democratic perspectives at all. The prior interrogation would be about the exploration of the political nature of the algorithmic function in a delocalized and no represented mode.

The possible consensual but also undefined algorithmic character that was mentioned earlier is the primal link to the investigation of the political perspective of the algorithm through Badiou's negotiations with the notion of 'democracy'.¹⁷

The idea of 'democracy' today is the principal organizer of consensus, it concerns an 'authoritarian opinion' and it suggests - in terms of philosophy- 'suspicious' points to consider. These aspects imply that this formulation of 'democracy' is not of any philosophical interest. The algorithmic structure seems to have some external similarities with these points of 'democracy': the 'consensual character' and the 'authoritarian opinion'.¹⁸

Starting from this point of comparing 'democracy' to the attitude of the algorithm we would try to project the three Leninist problems of democracy and the three relevant hypotheses of Badiou to the algorithm: absence or presence of generic communism, ultimate aims of its politics, attachment or detachment from a form of the State.¹⁹

¹⁷ Alain Badiou, 'A speculative disquisition on the concept of democracy', in Jason Barker, trans., *Metapolitics* (London: Verso, 2005)

¹⁸ Idem, p. 78-79

¹⁹ Idem, p. 80-81

This would mean a continuum of abstractions that would attempt to adjust the idea of 'democracy' (or democracy) to the algorithm attempting to result to the notion of political prescription.

This task would be tricky in terms of consistency between the two different systems even in a transsystematic mediological context that tries to exchange the dynamics of foreign systems.²⁰ Moreover, it would try to follow Badiou's conceptual construction that is based on specific axiomatic conventions. The foundation of the equation would be different. Besides, the aim is not to prove that a specific characteristic of the algorithm's structure corresponds to the philosophical condition that Badiou describes though democracy. Even in these terms this would make no sense since we would seek through a singularity, a singular body of knowledge that is contradicting to this "system".²¹ The idea is to highlight the demand for metapolitical dynamics of the possibilities of the algorithm and explore such conditions in its performance, not in the way it has been (conceptually) designed.²²

Moreover, the close attachment to the schema of Badiou would mean that the exploration of art (the curatorial practice) thought the algorithm in the terms of exploring its norm, would lead to educational assumptions. Only then would philosophical interests regarding curating be activated.²³ The involvement of didactic schemata would get us back to the negotiation with the feeding and scheduling of the algorithm whose perfection has been already, axiomatically, established. Also, the possible didacticism of art

²⁰ Idem 4

²¹ Lauren Sedofsky, 'Being by numbers - interview with artists and philosopher Alain Badiou – Interview', *Art Forum* XLIII, No. 2 (Oct. 1994)

²² Idem 19, p.92

²³ Alain Badiou, 'Art and Philosophy', in Alberto Toscano, trans., *Handbook of inaesthetics* (Stanford: Stanford University Press), p.3

should already have been incorporated in the databases even in the status of singular regime of each single entry of the database.²⁴

In these terms the question would transform towards the conditions under which the use of the algorithm would be able to acquire metapolitical aspects and not towards if the algorithm itself suggests such aspects. In terms of 'use' what is implied is the results and the performance of the algorithm and not the way that someone experiences its performance or its suggestions.

This brings us to set theory where ontology is structurally linked to mathematics. Even if this procedure still refers to axioms in this case it stands as a general methodology that Badiou suggests and there are no literal axioms to start with (such as specific formulations of democracy, statist formulations etc).²⁵ In this case, the negotiation with the essence of the politics of the algorithm is through truth procedures that look for elements of multiplicity and heterogeneity to be put together in a philosophical mechanism.²⁶

In this context we are looking for the event that, though rupturing the set of the suggested system, will lead towards the truth.²⁷ In this case that would finally lead to the completion of the current task: suggesting a condition where the politics of the politics is performed.

The task that would indicate the specific operation of the algorithm towards our aim becomes the one of finding the possible equation of the algorithm that would recall an element of the available sets that would have the desirable result. This condition seems to be the suggestion of the nule set \emptyset .

²⁴ Idem, p.9

²⁵ Idem 23

²⁶ Idem 23

²⁷ Idem 23

[...] for the void to become localizable at the level of presentation, and thus for a certain type of intrasituational assumption of being qua being to occur, a dysfunction of the count is required, which results from an excess-of-one. The event will be this ultra one of a hazard, on the basis of which the void of a situation is retroactively discernible [...] ²⁸

The empty set can be qualified as unique and cannot be represented as space or extension, it must be thought as a point and then it suggests the genuine ontological solution.²⁹

The statement of the void is existential, it directly inscribes an existence.³⁰ The link of the event to the void is through something whose very being is to disappear. It is a condition in which the desired truth refers to a whole situation, not a singular one. It becomes a generic subset appearing as a gap in the system.³¹ The form of presentation is multiple of multiples and the unrepresentable can appear as 'multiple' of nothing.³²

This condition in terms of the curatorial algorithm would recall a performance of its mechanism that there wouldn't be a named algorithmic suggestion. This wouldn't mean that there is no possibility, no predicted function of the algorithm, to come up with a curatorial suggestion. This would mean that the algorithm would suggest something that would be excluded from any other possible suggestion, that it would even exclude itself. That would be the void set.

²⁸ Idem, p.56

²⁹ Alain Badiou, *Being and Event* (London: Continuum, 2005), p.77

³⁰ Idem, p.60

³¹ Idem 23

³² Idem 30, p.67

In terms of the politics of the algorithm and moreover the question about the curatorial suggestion of the algorithm still remains. In Badiou's words, the answer might be that 'fidelity' to the system, to the truth procedure, would lead to the desirable results: 'continue in your fidelity'.³³

In terms of practical negotiation with the curatorial task the question might be revised as following: there might be no interest in exploring among the suggestions themselves but to look at the possible curatorial questions that would lead to a curatorial suggestion that would acquire the above character.

Conclusion.

The projection of the mechanisms of an algorithmic structure upon curating seems to generate an idea that could expand its perspectives as a technique and as a cultural practice. There appears to be a way to adopt experiences from the contemporary digital context in an attempt to criticize and renegotiate with the task of the curator.

What could be discussed as an assumption from the above analysis is the need for constant renovation not only of the methodologies of dealing and acting on art practice and theory but also a constant alertness regarding the aim of these practises. The tasks and productions of cultural experience seem to remain attached to political demands that overpass materialized political schemata and address themselves towards catholic assumptions regarding their interpretations but also their motivation to perform themselves.

³³ Idem 23

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