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# Human-Algorithmic Curation: Curating *with* or *against* the Algorithm?

**Keywords**

human and algorithmic curation  
curatorial biases  
visibility gatekeeping  
critical reflexivity

Although the cultural and social purpose of algorithms is the object of much public debate and contestation, their function is often compared with that of a renowned figure in the intellectual milieu: the curator. In this article I want to look at the relationship between these two agents – why they are compared and how they influence each other – in order to address the following question: is the curator working with or against the algorithm? Through the analysis of three hybrid artistic and curatorial experiments (including my own curatorial work) I want to problematise the false dichotomy of working either with or against the algorithm. I suggest instead that a critically reflexive approach to both the procedures of technology and art curating, to their biases and gatekeeping mechanisms, is necessary to address the crisis of cultural value brought about by the algorithmic world and for forging strategic alliances between humans and machines that can channel new forms of creativity and cooperation.

# 1 INTRODUCTION

1. The notion of algorithm is ever expanding, as new algorithms are constantly being developed and implemented. Kitchin (2017) preliminary defines algorithms as “sets of defined steps structured to process instructions/ data to produce an output.” He then highlights the ways in which they operate by virtue of their contingent and performative nature and their embeddedness within wider socio-technical assemblages.

In recent years, algorithms have become objects of scholarly attention, as a new wave of literature coming from the fields of critical algorithmic studies (Rutz 2016; Kitchin 2017; Bucher 2018) and experimental humanities (Finn 2017) is forging a cultural reading of them. This cultural reading is based upon the development of an *empirical* and *critical* (Kitchin 2017) understanding of algorithms,<sup>1</sup> which considers both the specific instructions they perform and how the latter are inscribed within a broader socio-economic system. This new current of literature argues against the dominant view previously held by computer scientists and technologists, according to which algorithms are “strictly rational concerns, marrying the certainties of mathematics with the objectivity of technology” (Seaver in Kitchin 2017) and attempts to create new interpretative roadmaps for understanding the increasing importance of algorithms in shaping social, cultural and economic life. Responding to this current wave of literature, in this article I situate algorithms in the gap between computational and material realities, information and meaning (Finn 2017), by acknowledging their socio-technical specificity and the power they exert on users everyday life and experience. According to this position algorithms can be described as “entangled, multiple, and eventful” entities which “are fundamentally productive of new ways of ordering the world” (Bucher 2018, p.20).

In parallel to these theoretical discussions, artists and cultural practitioners have begun to increasingly employ bots and software to expose, disrupt and challenge the hidden algorithmic infrastructures of online platforms and social media sites. While some artistic projects have explored the link between bots’ performance, audience reception and market value, such as for instance Constant Dullaart, *High Retention, Slow Delivery Bots* (2014) and Erica Scourti, *Empathy Deck* (2016), other artists have taken an activist route into these issues. This is for example the case of the work by UBERMORGEN *Vote-Auction* (2000-2006), an online auction platform created during the 2000 US presidential election that claimed to allow Americans to sell their vote.

In the context of both these theoretical investigations and practical experiments, the role of the algorithm is often paralleled to that of the online curator. This is because algorithms are accountable for the organisation and arrangement of visual content on the Web through activities such as searching, collating, grouping, sorting, analysing, visualising. Within online platforms, they sort out content according to criteria of relevance for users as well as manage the interactions between them. While this view rightfully attributes curatorial capacity to algorithms, the danger is that it reduces the activity of curating to a purely computable task, discarding the fact that the latter also involves cognitive faculties, such as contextualising, interpreting, reflecting, sensing out, imagining, criticising and inserting humour. On the opposite side of this debate is the position held by those human curators who want to assert their superiority over machinic agents at all costs, maintaining that they do serve the public “in a way that big data and learning algorithms cannot” (Byrne 2015).

So the issue at stake is what kind of relationship the curator can create with the algorithm: In what ways can such relationship be described? As a relationship of antagonism, resistance or alliance? In other words, is the curator working *with* or *against* the algorithm?



**Fig. 1.** Illustration from Steven Rosenbaum's article "Curate or Be Curated: The Coming Age of the Curation Economy", in [www.huffpost.com](http://www.huffpost.com).

In this article, I want to argue that both curators and algorithms are key "organizational nodes in cultural systems" (Nagler and del Pesco 2011) and acknowledge their growing interdependence in everyday socio-technical systems. As such I suggest the necessity to further explore the terrain of human and algorithmic curation, recognising in the latter the potential to overcome the "gap between computation and culture" (Finn 2017, p.55) by means of creativity and new forms of cooperation.

In what follows, I will analyse three examples of hybrid artists and curatorial projects, which have experimented with a mode of human and algorithmic curation: 1. *Cosmos Carl* (2014–), a platform "parasite" which fosters the creation of artistic interventions into social media sites and existing commercial platforms and hosts their links online (<http://www.cosmoscarl.com>); 2. The curatorial approach put forward by the Museum of Digital Art (MuDA) in Zurich, which involves the participation of the algorithm "HAL 101" in the process of curating (<https://muda.co>); 3. My own strategic alliance with the eBay algorithm "Cassini" within the context of the project *#exstrange* (<http://exstrange.com>). Through the analysis of such experiments I want to problematise the false dichotomy of working either with or against the algorithm, suggesting instead that a critically reflexive approach to technology is necessary to address the crisis of cultural value brought about by the algorithmic world and for envisioning new types of strategic alliances between humans and machines.

## 2 WORKING AGAINST THE ALGORITHM: *COSMOS CARL*, A PLATFORM PARASITE

Working with technology against its own grain has been a preoccupation of cultural practitioners and net artists since the early 1990s, when the

space of the Web was still an uncharted territory characterised by “the endless joy of serendipity and strong feeling of responsibility” (Lialina in Andrew and Papadimitriou 2018). With the development of the commercial Web in the early 2000s, artists and curators began to shift their attention towards online platforms as sites for sociological and anthropological investigation on the one hand, and for emancipatory and political practices, on the other.

An interesting example of an hybrid artistic and curatorial experiment working with technology against its own grain is offered by *Cosmos Carl* (2014–), an initiative launched in 2014 by artists Frederique Pisuise and Saemundur Thor Helgason. *Cosmos Carl* (2014–) consists in an online repository which hosts links to embedded projects occurring in external platforms such as Google Drive, Torrent, Pinterest, YouTube, Etsy, Instagram and eBay among others. By clicking on the links featured on *Cosmos Carl* website, visitors are re-directed to artists projects that are active or eventually “no longer available” on the Internet elsewhere. The interventionist character of the project is reflected in its underlining politics, which follows the legacy of 1960s cultural jamming practices and of early net art, respectively concerned with “the targeted application of the very method one intends to critique” (Elbaor 2018) and the resistance towards privately owned art. As Pisuise and Thor Helgason observe:

“Cosmos Carl artworks are not necessarily political, but by utilizing platforms for the display of art, the contributions disrupt the platforms’ usual traffic. In that way, the works potentially protest global platforms like Google and Facebook, even though they simultaneously accept their terms and conditions. (Pisuise and Saemundur Thor Helgason 2017)

As the above statement reveals, the projects that *Cosmos Carl* (2014–) promotes play out a key tension: that between online users’ automatic habit of accepting platforms’ terms of service and the reflexive choice (often carried out by artists and creative practitioners) of breaching them to make their procedures more visible.

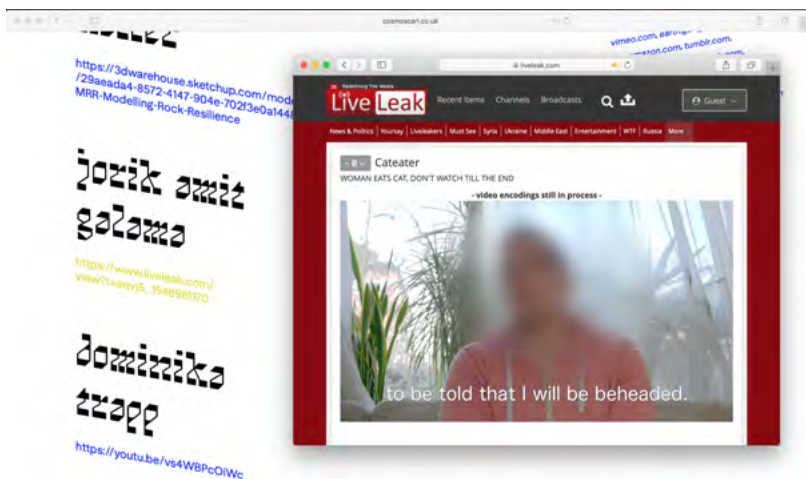


Fig. 2. Cosmos Carl\_Cateater\_2019\_Jorik Amit Galama

Moreover, because of the embedded nature of all the artistic and curatorial interventions it activates and hosts, the project operates in a grey area of practice between “not-just-art” (Fuller 1997) and “not-just-art-curation” (Tyzlik-Carver 2016; 2017). Two additional dimensions of interest are specific to *Cosmos Carl* (2014–). The first is that it brings to the fore the agential dimension of the technology underpinning each platform or social media site, as this forges the kinds of creative interventions that are possible under conditions of online embeddedness. For instance, an intervention on Pinterest poses a diverse set of challenges and opportunities than one on Tumblr or Instagram in terms of interface, image display and audience experience. In this respect, *Cosmos Carl* foregrounds a complex understanding of the platform not simply as a “networked repository or connective archive”, but crucially as an “apparatus that observes the world and generates ordering statements” (McKenzie 2018).



**Fig. 3.**  
Cosmos Carl\_Nude with Socks\_2018\_  
Camilla Rhodes and Zoë Claire Miller

The second is its distributed and collective dimension, which is the ability to coordinate different interventions in several platforms. This aspect significantly increases the impact of the overall operation, which spreads like a “slow virus” (Pisuise and Thor Helgason 2017), providing a connecting tissue for all the various interventions activated. What *Cosmos Carl* suggests is that the effects of such modes of practice cannot be judged in isolation or within a short timeframe, but can be valued in the long term and in concert with other similar operations. In other words, that their force lies in the ability to be part of and form a network of relations, that is to establish connection and exchange amongst creative practitioners on the basis of shared and differential values, intents and agendas. In the case of *Cosmos Carl* the aim is to produce a creative rupture in the system of “Platform Capitalism” (Srniczek 2016) – the present-day environment of Internet business models based upon the ownership of algorithms, hardware and digital infrastructures that foster the extraction and control of data and are centred around “the intensive techno-creative labour of users” (McQuire 2013).

However, the projects carried out within the context of *Cosmos Carl* (2014–) exemplify the increasing interdependence that online artworks and interventions have on the technical architecture and material sub-

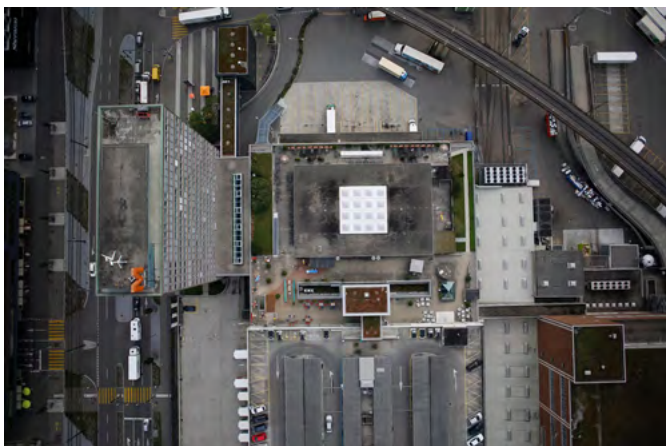
2. The networked image is an image defined by its own conditions of online circulation which operates simultaneously as a mode of representation and computation. I discuss at length its status and its entanglements with processes of online curation in my forthcoming doctoral dissertation “Curating The Networked Image: Circulation, Commodification, Computation” (2019).

strate of commercial platforms, pointing to problems of *visibility*, *formalisation* and *documentation* that characterise the majority of interventions which are embedded online. These issues are a direct consequence of the process-based, computational and immaterial nature of the networked culture and the resulting transformation of the work of art into a networked image,<sup>2</sup> which exists and circulates beyond the physicality of the art object, yet is subjected to the volatility of digital content. They also highlight how algorithms perform a form of “visibility gatekeeping” (Magalhães and Yu 2017) or “censorship” (Finn 2017, p.111), impacting which data – images, information and material goods – are available and to whom.

*Cosmos Carl*, by working against the algorithms and the apparatuses of specific commercial platforms, shows how the motives behind current modes of human and algorithmic curation can be of political and emancipatory nature, in the sense of being related to the urge of denouncing and critiquing the system of “Platform Capitalism” (Srnicek 2016). The following example, the one of the MuDA, adopts the strategy of working with the algorithm within the context of institutional practice and therefore pertains to a different kind of politics – one that concerns more closely the dynamics of the art world and its field of work.

### 3 WORKING WITH THE ALGORITHM: “HAL 101”, THE WEB CRAWLER OF THE MUSEUM OF DIGITAL ART IN ZURICH

No other place than the contemporary museum can be more apt for observing the dynamics of art at work. The recently funded Museum of Digital Art (MuDA) in Zurich represents a case in point of a small and flexible institution that is currently experimenting with a mode of human and algorithmic curation.

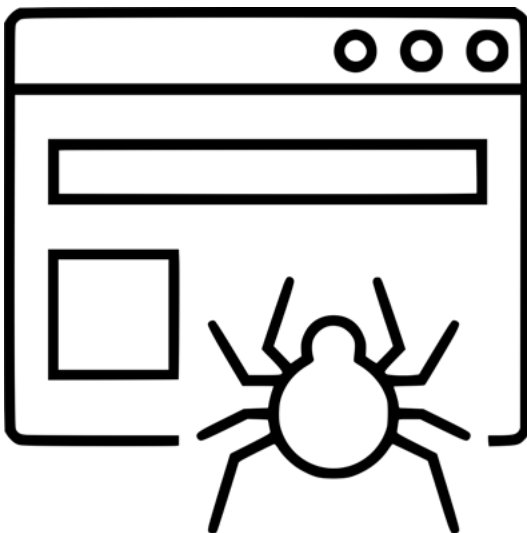


**Fig. 4.** MuDA is the acronym for Museum of Digital Arts. It is also a Japanese word meaning futility, uselessness, idleness, superfluity, waste, wastefulness. © Digital Arts Association

The team of the museum has decided to open the curatorial process to the participation of “HAL 101”, a web crawler that searches the Web in order to index and select potential artists to exhibit.

In this way, the museum not only works with the algorithm, but also takes the whole notion a step further by means of actually programming “HAL 101”. The fact that the MuDA is a non-profit cultural organisation whose mission is “untangling the digital fabric connecting data, algorithms and society” (MuDA website) frees this mode of human and algorithmic curation from the logic of profit, offering the opportunity to test the pursuit of a cultural agenda. However, the parameters that are used to encode the algorithm and the specific kinds of actions it executes under this allegedly transparent agenda remain rather opaque.

As can be learned from the museum’s website, “HAL 101” has been instructed to look for artists whose data traces correspond with those initially chosen by the curatorial team for the museum’s inaugural set of exhibitions (MuDA website). Therefore the working of the algorithm mirrors and executes decisions previously made by the curatorial team. The parameters upon which the algorithm has been programmed are not publicly disclosed and the information available is limited to the claim that the search that “HAL 101” performs insures that “nationality, age, gender or financial factors don’t override the decision making process” (MuDA website). In the framing of “HAL 101” as a curatorial agent, the MuDA’s team emphasises how the scope and reach of the algorithm prevents, or perhaps mitigates, the perpetration of art world biases, such as the selection of artists on the basis of their participation to a particular Biennale or their exhibition in an established gallery, offering instead visibility to artists who are not in the public eye. The fact that the algorithm creates a scoring system that is not personal and does not differentiate nor judge its information source is claimed as evidence of its democratic approach. Nonetheless, what this position disregards is that technology is never neutral or democratic (Chun 2009; Hendricks 2017; Bucher 2018) and that considerations of context and provenance of any information form part of a process of critical evaluation and analysis. In other words, it raises the problem that algorithmic associations, especially when devoid of context, generate their own set of incongruences and biases.



**Fig. 5.**  
Web Crawler Free Icon.  
Available from Online Web Fonts.

Indeed, in its attempt to overcome the curatorial biases associated to the activities of search, selection and evaluation, “HAL 101” inevitably amplifies the ones that are built-in on the Internet as well as creates new ones: its logic of objectivity and transparency is undermined by the fact that its choices are based on information which is already visible online. More explicitly, to information such as artists’ names, titles and specifications of artworks which representation has already been given since they have been indexed by search engines. As such its attempt to critically reflect on the mechanisms of inclusion and exclusion the very process of curating articulates is not substantiated by an equally necessary awareness of the biases the algorithm itself generates and reproduces.

In its working as a curator, the algorithm is primarily used as a tool to simplify operations of searching and selecting, to reduce complexity in the decision making process and de-responsibilise the human curators from the difficult task of operating “cautious differentiation” (Goriunova 2012) from within the aesthetic complexity of the networked culture. By this, I mean to develop an attentiveness of the nuances between cultural appropriation and plagiarism, users creativity and savvy marketing strategies, web parody and defamation – all differentiations that rely upon the use of human cognitive faculties such as critical reflexivity<sup>3</sup> and knowledge. What the shortcoming of the model of the MuDA is pointing at, is the need for the curatorial function online to encompass not only a sophisticated knowledge of algorithms but also its very own critique, understood not as a dismissal of their potential, but as an opportunity to explore more thoroughly their wider socio-cultural impact. As Bucher lucidly puts it:

3. “Critical reflexivity” is here understood as a quality belonging to humans only. My use of the term draws upon Alvesson and Köldberg’s framing of reflexivity as “ways of seeing which act back on and reflect existing ways of seeing” (Clegg & Hardy, 1996, p.4 cited in Alvesson & Köldberg, 2009, p.271), whereby the act of seeing is “inseparable from the perspective, it is perspectival” (Alvesson & Köldberg 2009, p.6). It is coupled with Scott Lash’s understanding of critical reflexivity as a mode of reflexivity whose reference shifts ‘from everyday experience to “system”, of commodities, bureaucracy, or reification of life forms’ (Lash 1994, p.140).

“Algorithms matter in a variety of ways: in their capacity to govern participation on platforms, distribute information flow, embed values in design, reflect existing societal biases and help reinforce them by means of automation and feedback loops, and in their power to make people feel and act in specific ways. (Bucher 2018, p.120)

Consequently, she further observes, “knowing algorithms might involve other kinds of registers than code” (Bucher 2018, p.113), such as the register of critical analysis, speculative inquiry and poetic imagination.

#### 4 FORGING A STRATEGIC ALLIANCE: “CURATORIAL CONSULTANCY SERVICE WITH CASSINI” ON #EXSTRANGE

My strategic alliance with the eBay algorithm Cassini attempted to play with these other registers – critical, conceptual, poetic – and as such sits at the crossover of these different examples. It was developed within the context of the project *#exstrange*, an initiative mobilised by curators Mari-aura Ghidini and Rebekah Modrak that used the online marketplace of eBay as “a site of artistic production and cultural exchange and as an artistic intervention into capitalism” (Ghidini and Modrak 2017).<sup>4</sup> The premise

4. For an in-depth description and analysis of my contribution to the project’s *#exstrange*, see my essay for its catalogue (2017) and my forthcoming doctoral dissertation (2019).



5. Here “stranger” recalls the sociologist and philosopher Georg Simmel’s use of this term, understood as a figure characterised by nearness and remoteness, who enters into a community able to perceive entrenched dynamics with new eyes (Ghidini and Modrak 2017).

6. Cassini was the first to take successful measurements of the solar system latitude and to discover what became known as the Cassini Division in the rings of Saturn. The Cassini Mission to Saturn, which started in the early 1980s and terminated on September 15th 2017, was one of NASA’s most renewed missions in recent times.

of the project was to treat the idea of the auction as an artwork: hence the category chosen, the images uploaded, the prize and the description. Everything was to be considered part of the artwork and each auction would run for seven days. All auctions and interactions with buyers were documented on the project’s website (<http://exstrange.com>) and in a catalogue published in the summer 2017. Through this conceptual framework, the curators were aiming to place art in a context where it could solicit an “exchange with a stranger”,<sup>5</sup> from where the title *#exstrange* developed.

When reflecting upon the actual visibility of the project *#exstrange* and its penetration within the platform, it became clear that the latter was executing a key operation of mediation between the project and its publics by means of its search engine and “best match system”. Further to exploring eBay analytics I soon discovered that the eBay search algorithm was enhanced in 2013 to improve the platform’s overall performance, selling standards and customer satisfaction. Interestingly, eBay renamed its algorithm after a NASA space probe dedicated to a famous Italian-born astronomer of the Seventeenth Century, Giovanni Domenico Cassini.<sup>6</sup>



**Fig. 6.**

Photograph of Giovanni Domenico Cassini. Collection of Yesterdays Photos, 2017. In eBay.com “Art > Art from Dealers & Resellers > Photographs.” Screenshot of eBay.com website.

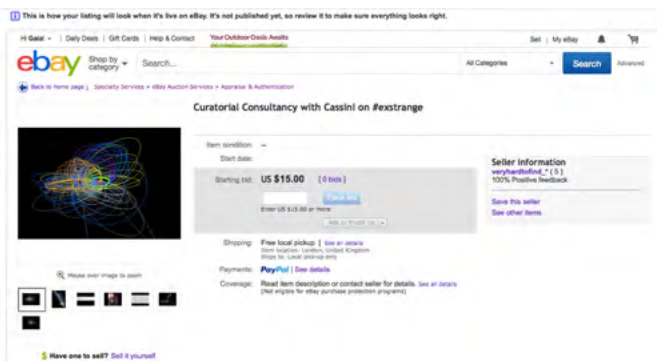
Cassini replaced eBay’s previous search engine, Voyager, revealing the consistent fascination of eBay developers with the imaginary of the NASA. Its implementation, led by the then eBay’s vice president of experience and search Hugh Williams, was part of a rebranding strategy which began around 2008 and that marked a new era in the platform’s history: the move from a seller-oriented marketplace to a customer-centred one.

The parameters and visual language of my strategic alliance with Cassini were defined through the process of interacting with the platform’s

interface and database, from the choice of the listing’s category to its full descriptive text and the images uploaded. The little known eBay sub-category chosen for my auction “Specialty Services > eBay Auction Services > Appraisal & Authentication” assisted the purpose of highlighting that the sale consisted in an unusual service and that such service was closely related to the mechanisms of validation of the platform itself. The “item specifics” described a mode of human and algorithmic curation, which aimed at merging a quality usually associated to humans (reliability) with one generally attributed to machines (efficiency), through the common channel of creativity. The latter was framed and put forward as a property that cannot be located in either humans or machines alone, but “it is found in their interrelationships, in-between” (Goriunova 2007).

Although available to all eBay users, the service was specifically addressed to artists or curators interested in exploring the currency of their name and their listing in the liminal space between the commercial platform – the so-called “eBay universe of happy transactions” (Hsiao 2017) – and the art world. The curatorial consultancy service placed particular emphasis on two key success markers – visibility and criticality – which weigh the relevance of an artist or a work of art in both the art market and the institutional establishment. These success markers are usually hard to quantify and control since they depend upon highly subjective and volatile criteria, such as fame, chance, taste and market fluctuations.

By invoking the calculating capacity of the Cassini algorithm in the process of evaluating them, through the strategic alliance I performed a double mandate: on the one hand, I aimed at exposing the arbitrary mechanisms of the art world and its market – mechanisms of judgement, validation, inclusion and exclusion – and traded them as assets in a commercial exchange; on the other hand, I wished to confront “a certain tyranny to the curator’s role” (Brand 2011), by testing a more open and transparent approach through the involvement of a non-human agent. Overall, I attempted to perform an institutional critique of the system of art curating by recognising the influential role the curator plays in shaping not only “the public tastes but the very value system of art” (Tyżlik-Carver 2016, p.51). The affordable price of the consultancy service – only \$15 – reiterated the urgency to challenge mechanisms of curatorial gatekeeping and to redistribute agency more evenly across all agents – artists, curators, algorithms and online users – involved in the process of curating.



**Fig. 7.** Gaia Tedone, *Curatorial Consultancy Service with Cassini on #exstrange*, 2017. In eBay.com “Specialty Services > eBay Auction Services > Appraisal & Authentication.” Screenshot of eBay.com website.

A number of actual benefits were offered as part of the consultancy, including: unlimited Skype and telephone assistance towards the creation of a listing that the algorithm Cassini would rank well; the co-creation with Cassini of an eBay collection tailored on the buyer's listing and personal tastes; the fabrication of an electronic report summarising the key findings emerging from this experimental mode of human and algorithmic curation; a special announcement during a public event in a prestigious London Gallery which aimed at extending the buyer's visibility from the platform to the art world.

The visuals accompanying the listing drew together the language of astronomy, search optimisation and online curation. They included satellite generated images produced by the Cassini space probe, a lithograph of the astronomer Giovanni Domenico Cassini and two screenshots taken from the platform featuring the error messages that appear when a given listing cannot be seen or accessed in a specific location or at a given time: "this listing has been removed, or this item is not available" and "this item isn't available in your location". The function of the latter was to hint at the possibility that a mode of human-algorithmic curation could help circumnavigating visibility problems on the platform and fashioning new modes of visibility.

The listing went live on March 23rd at 10 UK time. It was artist Alessandro Sambini, registered on eBay as user "Afaja", who purchased it. As part of the consultancy, I conferred with Sambini and guided him through the production of a brand-new listing entitled "*Portable Wildlife Image Instance*". Sambini's auction ranked at the top of the eBay search. This was due to its original title, witty description and high quality photographs – three features that the previous study of Cassini had revealed as key. After fierce competition and thirty-two different bids, user "Temporama" bought "*Portable Wildlife Image Instance*"<sup>7</sup> at the price of \$44.00, for an increased market value of 40.5%.

The kind of operation the strategic alliance with Cassini produced can be first and foremost described as *conceptual*, in the sense of working with different planes of imagination, and *critical*, in the sense of soliciting a reflection about the algorithm's concealed role within the platform. The polysemy of the word Cassini on the Web was instrumental for these purposes, since it enabled to put in relation different concepts (Cassini the Astronomer, Cassini the space probe and Cassini the Algorithm), fields (science, culture, technology) practices (art curating, business, hacking) and regimes of visibility (the human language of signs and symbols and the computational code of numbers and data). To provide a foundation to the strategic alliance with the algorithm, a new aesthetic and semantic coherence was created out of the remix of these different planes of information and imaginaries. Such remix was enabled by the simple operations of cut-and-paste, which are available to online users and that allow the de-contextualisation and re-contextualisation of content (Paul 2006; Groys 2016). In this case, human and algorithmic curation operated as a method to forge a conceptual and cultural reading of the algorithm and

7. Sambini's listing played with the tropes of contemporary landscape photography and Dada ready-made and sold half of a shopping bag of the multinational retailer Tesco depicting the image of a generic countryside view.

to re-envision technical practice as a crucial aspect of culture from which poetic performance can originate.

However, through the course of the experiment, the premises of my strategic alliance with Cassini, which were based upon the complementarity of aims and actions between the algorithm and myself, were complicated. This is because I discovered that the curatorial capacity of the algorithm was inextricably linked to the wider dynamics of control over users' data and behaviours that eBay implements because it is a commercial platform. In other words, the Cassini algorithm was acting as a visibility gatekeeper, determining what users see, know and consume on the platform. Additionally, it also created an "art filter bubble" – an algorithmically-delineated community of artists and art professionals whose online preferences and searches qualify them as already part of a particular system. Consequently, the circulation of my project and its sale remained confined within the perimeter defined by the project *#exstrange*, even if its premise was to open up such confines by challenging the conventional paradigm of art curating through a mode of human and algorithmic curation.

This outcome points to an important paradox which describes the state of artistic and curatorial interventions online: either they exist within pre-defined contours that link them back to specific systems of reference and fields – these being for instance the contemporary art and new media worlds or the academia – perpetuating old institutional separations that the logic of the Web attempts to disrupt – or they risk dissolving within the plethora of content produced online or disappearing entirely from the Web.<sup>8</sup>

This was, for instance, the case of an earlier experimentation with the eBay algorithm performed by artist Angie Waller, entitled *EBay Longing* (2003), which left little trace online. Waller's intervention, which was realised ten years before the Cassini algorithm was introduced, consisted of scraping the eBay database during the years of the so-called "war on terrorism" using the word "Afghanistan" as the search query. The aim of this quasi-anthropological study was to explore the shift in the sale of objects in countries such as Syria, Afghanistan and Iraq through the collection of a few hundred images. The images depicted objects spanning from memorabilia and souvenirs to American-made T-shirts bearing slogans in support of the war, alongside bumper stickers and miscellaneous items that the troops were sending back home. Waller's intention with this project was to critically reflect upon the relationship between users' activity and the performance of the algorithm as influenced by specific cultural trends and contingent political biases.

Unlike my experiment with Cassini, which operated with the algorithm to produce a moment of dissonance, ambiguity and critical reflection, Waller's project more overtly pursued a hacking strategy, consisting in the actual manipulation of the data generated on the platform. But in spite of this difference, both projects pointed to the problem of human and algorithmic curation and its entanglement with broader questions of power and control associated with the use and implementation of technology. This is a topic that Waller has continued to explore in her subsequent

8. To overcome this problem and clearly define project *#exstrange* as an experimental media project, Ghidini and Modrak created a dedicated website, autonomously managed and "all rights reserved". The latter served the key purpose of documenting and archiving the project, in other words to prevent its own disappearance from the platform and the Web.

9. For more information on Waller's project, see: <https://angiewaller.com/how-to-look-at-artist-networks-2015/>.

works, such as for instance *Data Mining with Amazon* (2003) and *How to Look at Artist Networks* (2015) – works concerned with the algorithms of Amazon Database and Google Knowledge Graph. The latter project, in particular, offers an interesting counter-point to the MuDA's example, since it illuminates how the Google algorithm “Knowledge Graph” potentially collapses art historical canons and produces incongruent associations devoid of context.<sup>9</sup>

## 5 CONCLUSIONS

The comparative analysis of these examples suggests that a nuanced approach should be developed in regard to the kind of relationship the online curator shall create with the algorithm and that the false dichotomy of being either *for* or *against* the algorithm must be surpassed. It also revealed that curators and algorithms similarly take up the role of cultural and visibility gatekeepers since they both operate through mechanisms of filtering and selection; such gatekeeping mechanisms, if not attentively recognised and monitored, could even be amplified through their co-operation. For this reason the development of strategic alliances between curators and algorithms must be based upon the critical awareness of both their complementary roles and potentially similar biases. More precisely, these strategic alliances would need to incorporate a critical reading of both the algorithm and the curatorial process involved, their potential biases and filtering mechanisms; the parameters of such alliances would need to be negotiated case by case; their outcomes would depend on the kinds of values that are encoded in the algorithmic system and which the alliances aim to produce and co-create. Under this light, experiments in the field of human and algorithmic curation can offer the opportunity to implement a mode of “processual criticism that is both reflexive and playful” (Finn 2017, p.13), whilst also bringing to the public attention urgent debates concerning the wider implications algorithms have on society and the increasing interdependence between humans and machines in everyday life. Their social and cultural remit could be to develop a fine-grained reading, interpretation and informed questioning of the socio-technical transformations brought about by the algorithmic world and to firmly position human agency at the core of such transformations.

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