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Luciano Floridi and contemporary art practice

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Luciano Floridi and contemporary art practice

This article examines how the thinking of Luciano Floridi, especially his emphasis on information, could affect the way we approach art practice. It aims to situate art practice in relation to contemporary informational theories and suggests that the way we view contemporary art practice needs to move beyond existing theories. Key components to Floridi's philosophy are introduced with relevance to art practice, followed by an analysis of these concepts with examples from the history of art. It is hoped that, by clarifying some of the more complex terms and concepts, readers will form a better understanding of the connections and potential synergy between art practice and the sciences of information, through the philosophy of Floridi.

Keywords: Luciano Floridi; philosophy of information; art practice; infosphere; semantic capital

Word count: 8000

INTRODUCTION

One of the most fascinating arguments coming to light in the early part of this century is the view that we humans negotiate a universal informational environment with other informational entities, many of which are increasingly artificial creations.

The issues raised by Luciano Floridi are perhaps one of the timeliest philosophical efforts in our progressively digital era. His writings surrounding the idea of an infosphere and our informational ethics have relevance for many different practices, including the visual arts¹. As we become more reliant on connected digital devices throughout our daily lives, Floridi has highlighted how this reliance has led us to 'reinterpret who we are and how we should interact with each other' (Floridi 2014: 166).

Floridi's project has been enriched by methods and concepts from computer science (see Floridi 2011a: 16). Nevertheless, he believes that it is 'preferable to

speak of an *informational* era rather than a *computational* era, because it is the increasingly pervasive and ever more important life-cycle of information... that deeply affect both individual and societal well-being' (Floridi 2015: 21).

Within the field of art, the influence of Max Bense's information aesthetics on computer-related art practices from the 1950's is well documented (see Nake 2012: 65-67). Likewise, Jim Berryman (2018) has brought to light the theories of information and the pioneering works of Seth Siegelaub within the conceptual art movement of the 1960s.

A particular significant connection between art and the dawning of the information society, however, is in the collaborations that led to the establishment by Robert Rauschenberg, Robert Whitman and the engineers of Bell Laboratories, of an organisation known as Experiment in Art and Technology (E.A.T.) (see Kuo 2018: 108)². Some members of E.A.T. later participated in curator Kynaston McShine's survey of conceptual art, the exhibition *Information* at the MoMA (2 July – 20 September 1970)³.

This article attempts to evaluate how the thinking of Floridi, especially his emphasis on information, could affect the way we approach art practice. It aims to situate art practice in relation to contemporary informational theories and suggests that the way we view contemporary art practice needs to move beyond existing theories. Key components to Floridi's philosophy are introduced with relevance to art practice, followed by an analysis of these concepts with examples from the history of art. It is hoped that, by clarifying some of the more complex terms and concepts, readers will form a better understanding of the connections and potential synergy between art practice and the sciences of information, through the philosophy of Floridi.

Throughout this article, we follow the Floridian notion of information as a reality we share with other informational entities. The term art will not be limited to any particular style, practice or shared qualities other than the fact that something, whether it is physical, conceptual, informational or otherwise, has been defined as art.

NEOLOGISMS IN THE WORKS OF FLORIDI

It is perhaps a sign of things to come that Floridi's doctoral thesis (1990) opens with fragments from text-based displays by the artist Jenny Holzer. The inscriptions were part of an exhibition organised by the Stedelijk Museum, Amsterdam in 1990 (see Floridi 1990). That same year, Holzer became the first woman to be the sole representative in the US pavilion at the Venice Biennale which was awarded the coveted Leone d'Oro for Best Pavilion (see Caruth 2008)⁴.

Floridi was a keynote speaker at the 56th annual conference of the British Society of Aesthetics (16-18 September 2016). To illustrate his ideas, the results of a project called *The Next Rembrandt*, a collaboration between Microsoft and the Rembrandt House Museum of Amsterdam, was used. The project was also a subject used in a discussion with John Searle later that year and was discussed in the paper *Artificial Intelligence, Deepfakes and a Future of Ectypes* (2018a), which is one of Floridi's first publications to focus specifically on issues surrounding art from an informational perspective.

In the aforementioned paper, the question of forgeries, replicas and artists' editions is raised, something which Floridi was acquainted with, albeit indirectly (see Harr 2006). It opens with a discussion on the concept of authenticity in art and mentions the research paper by Elgammal, Kang and Den Leeuw (2017) proposing a

computational approach for the analysis of strokes in line drawings (Floridi 2018a: 318).

Floridi introduced the term *ectype*, one of his many neologism throughout his writings. Not all these terms are of significance to us here and we shall only discuss some of the more relevant Floridian terminologies, including the *infosphere*, *inforgs*, the *level of abstraction*, *telepistemics* and *semantic capital*:

Infosphere

The term *infosphere* came into being around the 1970s (Floridi 2014: 40-41). For Floridi, the infosphere should not be viewed as a ‘virtual environment supported by a genuine “material” world’ (Floridi 2010b: 9-10). Once we interpret the world informationally, the concept could be taken to be synonymous with reality (Floridi 2014: 40-41). The purpose of this neologism is to shift our perspective of the world from a materialist outlook of physical objects and processes that are immutable or subject to perception, to an informational one that is typified, cloneable and more importantly, interactable (Floridi 2010b: 9-10).

Moreover, this shifts our knowledge of the world to a knowledge of its informational structure. *Informational ontology* is not the same as *digital ontology*: the ultimate nature of reality is not digital and we do not live in a universe that is a giant computational system (Floridi 2011a: 316). Unlike the term *cyberspace*, the infosphere is all encompassing: it includes our offline and analogue spaces of information as well as its many sub-regions like cyberspace (Floridi 2010b: 6; 2013: 6; 2014: 40-41).

[T]he information society is better seen as a neo-manufacturing society in which raw materials and energy have been superseded by data and

information, the new digital gold and the real source of added value. Not just communication and transactions then, but the creation, design, and management of information are the keys to the proper understanding of our hyperhistorical predicament.

(Floridi 2013: 17)

The idea that we live in an information society is not new, but the nature of, and rationale for, such a society may be understood in various ways (Feather 2013, Webster 2014). Among the most significant are Porat's 'information economy', in which most of the economic activity and wealth of a society is based on intangible, information-based goods, Bell's 'post-industrial society', with most people are employed as 'information workers', rather than in agriculture or manufacturing, and Castell's 'networked society', whereby digital networks change our perception of time and distance, and affect all of our social interactions (Graham and Dutton 2019). This latter understanding is particularly relevant to our later discussion of collaboration and co-creation with the technologies and agents which analyse and interpret information⁵.

Floridi views a communication-based interpretation of the information society as being outdated, since the very fabric of our reality is altering (Floridi 2013: 17). Not only has our recent technology re-engineered the world around us, but it has fundamentally transformed our infosphere and our very way of being, in a way which encompasses but goes beyond the idea of the networked society (see Floridi 2010b: 6; 2013: 6). Indeed, Floridi dismisses the idea of a single form of information society, in favour of different forms of information society of varying degrees of maturity (Floridi 2016b).

Inforgs

What Floridi has in mind is a view of humans as informational organisms (or *Inforgs*), ‘mutually connected and embedded in an informational environment (the infosphere), which we share with other informational agents, both natural and artificial’ (Floridi 2014: 94). This is the world where we share an informational environment with Alexa, Cortana, Siri or Xiaowei, as much as we do with a cat, dog or the odd dust mite. And as technology moves further, merging with what was once an analogue-offline world of things, we are no longer ever offline, but living an ‘*onlife experience*’ (Floridi 2014: 43).

Since the end of the last century, artists like Rafael Lozano-Hemmer and his team have utilized motion sensors, facial recognition and biometric data to bring their projects to life (see Droitcour 2020). Beyond the use of connected devices and wearable technology, augmented reality has further superimposed the onlife experience on to things of analogue origin. The MoMAR Gallery project for example, hijacks the Jackson Pollack room of New York’s Museum of Modern Art with an unauthorized augmented display through the use of an open source smartphone application (Damjanski, Lobser and Baltzer n.d.)⁶.

What makes us different from artificial agents is the way we process data. ‘Humans are the only semantic engines available’ (Floridi 2014: 161), transforming data into meaningful information by consciously ‘design[ing] and understanding[ing] semantic artefacts, and thus developing a growing knowledge of reality’ (Floridi 2019: xi-xii), which we unconsciously create (Floridi 2019: 99). We never perceive data without any form of interpretation but always in semantic context (Floridi 2014: 161). Artificial agents on the other hand, from the basic desktop to the most sophisticated smart technology are ‘*syntactic engines*, which cannot process meaning’

(Floridi 2014: 161). As John Searle had argued, ‘the syntax does not cause the semantics at any point’ (Fritt Ord 2016).

Level of abstraction

How we come to view ourselves as agents sharing an infosphere is through a method of abstraction⁷. The basic premise of the concept is rather simple, and it is a significant way of studying a system by abstracting all other variables. We can therefore build different models for the same system depending on the level of abstraction (LoA) we choose to describe it because ‘the choice of the type corresponds to a decision about how the phenomenon is to be regarded’ (Floridi 2008b: 91).

Following Floridi’s example of how a car battery could be analysed (see 2011a: 77), a painting could be viewed as in Figure 1 [*Figure 1 near here*].

‘Specifying the LoA means clarifying, from the outset, the range of questions that (a) can be meaningfully asked and (b) are answerable in principle’ (Floridi 2011a: 347-348). It could therefore be viewed as being dependent on a frame of reference, but such a subjective position need not be relativistic, where the values are simply qualified by a point of view. As long as we make explicit the LoA, the values are not arbitrary, only relational (see Floridi 2016a: p.52-53).

In relationalism, or *liminalism*, as Floridi prefers (Floridi 2019: 40), it is our frame of reference that changes and not the observable (Floridi 2013: 33). Viewing art informationally, therefore, requires a change in our world view. ‘Such a change is made possible by the *method of (levels of) abstraction*’ (Floridi 2013: 29).

Relativism could be avoided by embracing the view that we can only know *our* representations of the world (Floridi 2013: 3). An example of relativism would be

Luhmann's constructivist approach in *Art as a Social System* (2000). The alternative is to take charge of our conceptual constructions, but to avoid relativism, we must accept that constructivism, like that of Luhmann's social systems, is ill-conceived (see Floridi 2013: 3). Instead, Floridi believes in a *constructionist*, or *poietic* approach that provides more than just a description of the world but actually contributes to the construction of it (Floridi 2019: 194)⁸.

An example of Floridi's application of LoA is the case study he made on the concept of presence (2013: 36-51).

Presence

The notion of presence is of great importance to art theory, as it is indeed, with philosophy, where 'some classic issues... could be easily re-conceptualized as problems concerning (tele)presence' (Floridi 2013: 36)⁹.

What is unique to Floridi's analysis is the idea that presence is based on *successful observation*. So, where a local space of observation and a remote space of observation is different, that *thing* 'observable at a given LoA in a local space of observation... is also telepresent in a remote space of observation if and only if [the *thing*] is also observable in [a remote space of observation] at a given LoA' (Floridi 2013: 43).

Floridi goes on to clarify our understanding of *telepistemics*, which could be 'understood as a way of making the observed locally present' (Floridi 2013: 50). In relation to presence defined as successful observation, making something epistemically available locally is completely different from 'being present in [a] remote space as an entity' (47). To put it simply, looking through a pair of binoculars does not make you present in the space you are seeing, but neither would pulling

down a wall between the room you are present in and the next. In the latter, according to Floridi, you will not become ‘telepresent in the next room; you are merely present in a larger room’ (47). This is important as, contrary to what the term *surfing the web* appears to imply, we are in reality ‘downloading those spaces into one’s own’ (47).

To illustrate this, let us consider Dan Graham’s *Time Delay Room 1* (see Buchloh 1979: 11-12):

Two rooms of equal size are connected by an opening at one side, under surveillance by two video cameras positioned at the connecting point between the two rooms [Two monitors are also featured in each room].

(Stemrich 2002: 68)

Let’s suppose that a participant in the first room (audience A) makes a loud noise, audible to someone in the second room (audience B) in real time. In terms of this sonic aspect, they are both simply present in a large connecting local space of observation.

On monitor 1 a spectator from audience A can see [themselves] only after an 8 second delay. While [they view] audience B (in the other room) on monitor 2, this audience sees [them] live on the monitor whose image can also be seen by audience A.

(Buchloh 1979: 11)

Visually, audience B, viewed live on monitor 2, is telepresent to audience A and vice versa. They could interact visually with each other, like in a simplified form of videoconferencing.

If we put the two together, audience A could experience and interact with audience B in the remote space as an entity in the local space through the camera/monitor setup. Alternatively, audience A could interact with audience B

through shouting and therefore make the remote space epistemically available locally, i.e. audience B is present in audience A's local space (see Floridi 2005: 17).

In monitor 1 however, what the audience is seeing is not the telepresence of their past self. The space is remote, in so far that the past is no longer present, but the audience is in no way interacting with their past visual self. They could, of course, play out a routine that would give an illusion of interaction and this was cleverly performed in a situation devised by Kim Noble and Stuart Silver during their live public residency at Beaconsfield (31 October – 24 November 2002).

Even if audience A is totally engrossed in their past self as seen in monitor 1, this experience is merely psychological (Floridi 2005: 12). They are left out of the remote space of the past. To put it another way, they are observing the past (remotely) through the monitor. Floridi explains, however, that telepistemics is also an example of *backward presence*, where the observed has been abducted and is now locally present to the observer (20). This is especially true for participants unaware of the camera setup, watching the entity in monitor 1 appearing after the 8 second delay and realising that they are seeing a recording of themselves.

Interaction and presence, thus, further creates informational spaces. This distinction broadens our awareness of the boundaries between the local and the remote in relation to what is successfully observed.

The creative use of drones, closed-circuit television cameras and facial recognition software has broadened interrogations into notions of presence in contemporary art and performance, giving rise to a form of 'surveillance art' (see Morrison 2016). In Dries Depoorter's *Trojan Offices* (2020) for example, viewers are offered a glimpse into the countless office webcam images that are streamed across the internet. Such emergent practices are the focus of exhibitions like *Watched!*

Surveillance, Art & Photography at the C/O Berlin Foundation (18 February – 23 April 2017).

Semantics

Floridi's insistence that information must be truthful could be deemed challenging and further scrutiny of this will be provided later. Here, we will merely try to clarify the terminologies.

Semantic content is not necessarily semantic information, hence semantic content does not have to be truthful (Floridi 2018b: 485). 'When data are well formed and meaningful, the result is... known as *semantic content*' (Floridi 2010a: 34)¹⁰.

What matters is... whether that content provides a person holding it with the means to give meaning to something and embed that meaningful something into a more general narrative that makes sense to that person.

(Floridi 2018b: 485-486)

Furthermore, for semantic information to become knowledge, it must also be *relevant*. So, in order to interact successfully among ourselves and within our environment, we need a constant flow of *relevant* semantic information for us to process (Floridi 2011a: 244).

Floridi has recently given us a further neologism – *semantic capital*. The term arrives from Pierre Bourdieu's categorisation of *economic, social and cultural capital* (Floridi 2018b: 481): all of which belong to the 'domain of production, distribution and consumption of valuable goods, services or social positions' (3).

There is a wealth of resources – including... [the] arts... - that we produce, curate, consume, transmit, and inherit as humans. We use this wealth – which I shall define more precisely as *semantic capital*.

(Floridi 2018b: 481)

The inclusion of the arts is very interesting as most commentators on information and knowledge resources or assets adhere to values that are either quantifiable or commercial in nature.

Floridi expressed, at the Digital Life Symposium (10 November 2018, Exeter College, University of Oxford), that semantic capital is what gives meaning to and makes sense of our existence, of the reality that surrounds us. It is not the only thing that defines who we are and how we see ourselves, ‘but it is certainly what defines *only us*’ (Floridi 2018b: 485). By this, he means that animals and artificial agents cannot have semantic capital (Floridi 2018b: 485)¹¹.

Semantic capital is better studied from a multidisciplinary perspective, combining cultural studies, hermeneutics, history (of art ...), just to mention some obvious disciplines.

(Floridi 2018b: 488)

But what we make sense of, could be reinterpreted differently at a later date. Nothing in the narrative changes, rather, it is our point of view casting a new light on the very thing that has remained the same. Floridi adapts an Aristotelian term, *Anagnorisis*, to mean a form of re-adaptation we make to ensure that the meaningfulness of the narrative we have in our life is consistent (Floridi 2018b: 489-490).

The growth of semantic capital occurs through its interaction. At its best, it is both productive (therefore, creating further usage) and appreciated (as in, giving us value). In a summary article of the recent Future Art Ecosystems report, Vickers and Ivanova (2020) highlighted three non-exclusive models that could influence the course of art and technology over the next decade. The article posed the question of

how the historical value of public-engaging art could be preserved and strengthened at a time when all layers of our art systems face the need for revision to stay relevant.

The increasing use of smart digital technologies to manage and edit our semantic capital could generate new forms of semantic capital for us (Floridi 2018b: 496). Examples from Vickers and Ivanova (2020) included Apple's *[AR]T Walks*, Hauser & Wirth's *ArtLab* and teamLab's *Borderless* museums. Further engagement and investments in new technology for the arts affects our realisation of our reality, as it is meaning and our use of meanings which makes us different from other informational entities.

Ectypes

The term *ectype*, as used by Floridi, refers to 'a copy that has a special relation with its [archetypal] source' (Floridi 2018a: 319). They could be authentic unoriginal artefacts - where something is made from its source but not in the same method, or inauthentic original artefacts – where content received is considered as matching, but not arriving from its source (see 319-320). This is especially relevant with digital processing, where a copy is a clone, with all the properties of the original depending on the technology and storage capacity available.

When something digital is broken down into elements, its reconstruction could bring about something novel. Here, Floridi (2018a) used *The Next Rembrandt* project as an example. It has all the elements of a Rembrandt depiction of a person, but the image is constructed through the *visualisation of data* collected from a selection of Rembrandt paintings.

Another example used by Floridi (2018a) is the vocalisation of John F. Kennedy's last speech through a process of analysing recordings of his speeches and reconstructing extracts to the script prepared before he died.

There are obvious legal issues to address here and the *Chuck Close Filter* (2001-2010) by artist Scott Blake is a case in point (see Dayal 2012). Though he had no intention of passing off any digital portraits created by users of the website as an image by Chuck Close, portraits by Close were scanned to create the filter. So, while the issues raised in Steyerl's (2012) defense of the poor image stem from resolution, availability and ultimately economic factors, there is potential for issues to arise in the opposite extreme, where the copy becomes digitally cleaner than the original.

We will return to the notion of the ectype in the next section and analyse the relevance of some of these concepts to art practice. Due to the length of this article, we will focus primarily on the notions of interactivity, veridicality and the significance of the ectype.

AN ANALYSIS OF INTERACTIVITY

The trouble with 'interactivity' isn't that it's meaningless. The real trouble is that it means too much – it means so many different things in so many different situations that it's hard to come up with a one-size-fits-all definition.

(Lopes 2010: 36)

In the latter part of the last century, participatory models from a host of artists working within the system of fine art have led to an excitement demonstrated by writers and theorists expounding the rise of interactivity. Beyond the confines of gallery-based performances, by the beginning of the second decade of the current century, participatory projects expanded in a variety of directions to include ruptural

activism (see Perucci 2017), delegated performances like the works of Santiago Sierra (Bishop 2012: 222-223), as well as pedagogical projects like Thomas Hirschhorn's *Bijlmer-Spinoza Festival* (Bishop 2012: 260-265), to name but a few.

Of the arguments relating to interactivity and participation, we would like to highlight three particular approaches: an emphasis on social relations, on communication, followed by a computational perspective¹².

In terms of a social relations point of view, of particular significance here, though rarely discussed, is Alfred Gell's anthropological theory of art which, like Floridi, also utilises the Peircean logical inference of abductive reasoning (see Schneider 2016: 201). To Gell, the elements considered as 'art becomes socially effective once their agency is... "abducted" by those who view and use them' (201). The focus is on the social relations articulated through the indexes within art¹³.

In a similar vein, though far more influential in the field of art, is the constructionist thinking of Bruno Latour, especially that of his *Actor-Network Theory* (see Bianchini and Fourmentraux 2016: 771). The difference here is that through the act of experiencing art, all participants, as 'co-actors', co-produce the art along with the artist (Bianchini and Fourmentraux 2016: 776). Participants, all of equal standing, include human elements, non-human living things and inanimate objects (see Dusek 2006: 207).

From a communications perspective, we have the *Interaction of Actors Theory* established by celebrated cyberneticist Gordon Pask (see de Zeeuw 2001: 978; Pask and de Zeeuw 1992: 11). Pask was highly influential on British artists and created several working interactive models (see Rosen 2016: 25-38).

In a Paskian model, interaction is defined by higher order goals. Hence, participation becomes a conversation between participants as opposed to a simple

reaction (see Pangaro, n.d.: a). Following this, Pangaro pointed out that the key to a Paskian model is novelty, since a conversation must involve the unexpected, ‘resulting in an emergence of new possibilities’ (Pangaro, n.d.: b).

A conversation is interactive, according to Dominic McIver Lopes, but computer art ‘isn’t interactive in that way’, and ‘[n]either is it much like social interaction, though [some computer art] involves social interaction among many users’ (Lopes 2010: 36).

To Lopes, ‘a work of [computer] art is interactive to the degree that the actions of its users help generate its display (in prescribed ways)’ (see Lopes 2010: 37)¹⁴. Although attempts have been made to apply his thinking to non-digital art (see Thomas-Jones 2016), this would be a mistake, as his definition is tailored specifically to computer art (Lopes 2010: 36).

Within the writings of Floridi, a more helpful definition comes from a chapter in *Information Technology and Moral Philosophy* (Van den Hoven and Weckert (ed) 2008):

A transitional system is *interactive* when the system and its environment (can) act upon each other. Typical examples include input or output of a value, or simultaneous engagement of an action by both agent and patient – for example gravitational force between bodies.

(Floridi 2008a: 53)

A similar definition is given in *The Ethics of Information* (Floridi 2013: 140), although the example used is that of a robot in a car plant. These rather vague explanations of reciprocal action suggest the idea that a level of abstraction plays an important role in how we see our interactions (see Floridi 2013: 30). Interactivity is therefore liminal and dependent on a specific frame of reference¹⁵.

A sense of presence would invariably be presupposed by this notion of interactivity, and the shift in Floridi's model of presence to 'an external and objective evaluation' necessitates a clear definition of the LoA adopted (see Floridi 2013: 44). To demonstrate this, we can utilise an art project by Santiago Sierra. In 1988, Sierra hired a truck driver to block off one of Mexico City's busy roads for five minutes (see Sierra 2012).

To those travelling along the same route, there would have been no reason to believe they were playing a part in a piece of art unless they had prior knowledge of the event (for the sake of simplicity, we will ignore the likelihood that someone would have a random *eureka* moment and somehow distinguish their inconvenience as an element in a piece of art.).

This scenario is a piece of art because, from a level of abstraction defined by Sierra, it is now something for us to observe. Moreover, the observer from the art world *sees* the scenario, at a given level of abstraction, as a participatory piece of art, although they are in no way involved in the remote event.

From a Floridian perspective of telepistemics, the frustrated drivers, who were unknowingly present at the event, have moved to the art observer's local space as visual information, even though such a space is still remote to the driver in their car.

Imagine that you were one of the drivers behind the truck, pressing on the steering wheel: in the ensuing cacophony of car horns, which form the aural element of the event, you have now been *abducted* into the informational space of the art world. This can be seen as a case of an '*imposed backward presence*' (Floridi 2013: 51). This informational space is thus created by the interaction, but your material space remains the same. You have not been transported into the space of the observer

as a material entity: instead, it is a duplicate of an element of your informational self that you have lost (see 50).

Simon Weckert's *Google Maps Hacks* (2020) provides a contemporary twist to a similar situation. Here, a virtual traffic jam is created in Google Maps using 99 smartphones transported in a handcart. Drivers travelling through the city streets are potentially denied a certain physical space as they are rerouted by their own navigation systems. The quiet informational space of the art world is thus created via the absence of drivers through the use of technology.

AN ANALYSIS OF VERIDICALITY

Joseph Kosuth was one of the many participants in McShine's aforementioned survey of conceptual art in 1970. His display comprised a number of pieces, including *One and Three Chairs* from 1965 (see McShine 1970: 69).

At times, Kosuth has suggested that philosophy could be succeeded by conceptual art (see Goldie and Schellerkens 2007: x), but his understanding of philosophy leans closer to a solely analytic stance rather than Floridi's approach of design and modelling (Wilde 2007: 120). Following Bertrand Russell, Floridi argues that the task of philosophy is not only that of analysis of questions, but 'should also be followed by, the synthesis of answers' (Floridi 2019: 4).

Let us consider an assemblage titled *Clock (One and Five) English and Latin version* (Alley 1981: 399). It is a typical assemblage from one of Kosuth's early Proto-Investigation projects influenced by the theories of linguistic relativity (see Alley 1981: 399)¹⁶.

Typical of the conceptual art from the period, it comes with a list of instructions in the form of a certificate, where '[o]wnership was dependent on

possession of the “instructions” (Alley 1981: 399). The assemblage is constructed by gallery assistants, following the instructions provided whenever it is displayed (see Wilde 2007: 129).

Images can have semantic content (see Fallis 2016: 335). The photograph of the clock and the actual clock may appear the same, but no-one would suggest using the photograph to tell the time, even if it is likely to be correct twice a day. In such a scenario, Floridi reasons that ‘one is still informed [of the time],’ that is to say, they now hold the information, ‘although one can no longer be said to know the time’ (2011a: 269-270). The image could be said to affect our knowledge, but not constitute semantic information as such (see Floridi 2011a: 269). Such ‘accidental truths do not count as disinformation,’ as ‘Floridi requires that disinformation be inaccurate’ (Fallis 2016: 339).

As for the actual clock itself, it is merely calculating from the point it was activated. We noted earlier that for Floridi, it is only information if it is accurate semantic content. Assuming that it was not the intention of the manufacturer to mislead, it cannot be considered as disinformation either. In his definition of factual semantic information (Floridi 2010a: 50), Floridi would appear to suggest that ‘it makes more sense to say that visual information is simply more or less accurate’ (see Fallis 2016: 335). Such simplified information is not entirely inaccurate, however. Instead, it should be seen as having a high level of abstraction (see Fallis 2016: 344). As Fallis had pointed out, Floridi suggested that rather than true data, we speak of data being veridical ‘and, like accuracy, veridicality comes in degrees’ (Fallis 2016: 344).

The blow-ups of dictionary entries offer a range of possible *types* from our folk ontology of ‘time’, ‘machination’ and ‘object’. Similarly, within the other

assemblages in the series, we have 'Wall', 'Tables', 'Chairs', 'Plants', 'Hammers', even 'Mirrors' and 'Windows' to name but a few (see Kosuth, et al. 1973).

Let us suppose that an assistant happens to have the dictionary entries muddled up. To Kosuth, the display is no longer art, as it contravenes the certificate that is said to qualify it as art. In terms of information, if we associate the juxtaposition as a reflection that they belong in the same category, then we could say that this is misinformation, or holding no information at all. But this is where the level of abstraction is of importance, as it could hold valuable information to others - in this case, it could be the assistant's comprehension. This is why the 'level of abstraction at which one is evaluating epistemic relevance needs to be kept clear and fixed in the course of the analysis' (Floridi 2011a: 260)¹⁷.

Yet, as observed by Carolyn Wilde in *Philosophy and Conceptual Art* (2007: 132), what is at stake here is not the words - in this case - 'time', 'machination' or 'object', but 'the [very] meaning of the concept of art itself.'

Let us imagine that a couple of art tourists are visiting a new city. They have a fair knowledge of contemporary art but are not art professionals in any form. They wander around and through an error of judgement, mistake a perfectly regular phenomenon as art. They later tell their friends, who are equally unaware, about their experience and they in turn tell their other friends and so on.

This mythic work constructed in the minds of our couple and later transmitted to others now operates within the system of art at a certain level of abstraction. It does so because the couple, as observers, were applying the social codes of the system. The only difference is a practitioner has the intention of making others categorize an element as art. The laymen, in this particular scenario, categorized an element in

error. From a Floridian perspective, this socially constructed view of art is therefore dependent on the level of abstraction.

Coming back to our inattentive assistant: supposing that, whilst working on a display of Kosuth's Proto-Investigations, they now mixed up the photographs, objects and dictionary entries. Even if they kept to one of each, there could be numerous possibilities. As we discussed earlier, the display would no longer be considered genuine, but they are using the very same elements that make up the genuine displays. Could this be considered as a new work of art if the assistant's action was intentional?

AN ANALYSIS OF A POSSIBLE ECTYPE

Art, in whichever shape or form, contributes to the accrual of our *semantic capital*. As informational organisms, we create, curate, consume and further communicate art for others to do the same (see Floridi 2018b: 481).

By the end of the last century and the beginning of this century, the value of “remix” as a form of creativity’ has meant that what constitutes the new has become increasingly flexible (Sandry 2017: 308). But there is something far more interesting emerging from our infosphere today. We are not talking of appropriation, where the semantic capital of others is taken as a new creative piece. Neither are we talking of postproduction (see Bourriaud 2002) with its sampling and mixes that attribute to the semantic capital of others through (re)presentation. To discuss what we have in mind, let us first explore a project initiated by the late Gordon Matta-Clark.

Fake Estates came to life in late 1973 when Matta-Clark and his assistant started purchasing small inaccessible slivers of land from New York auctions:

They were... left-over properties from an architect's drawing. ... Buying them was my own take on the strangeness of existing property

demarcation lines. Property is so all-pervasive. Everyone's notion of ownership is determined by the use factor.

(Matta-Clark in Fend 1997: 55)

All the deeds, maps and photographs were kept in a box. This was later passed on to Norman Fisher, who died a year before Matta-Clark. Taxes went unpaid and eventually, the box was returned to his widow, Jane Crawford:

[T]he box contained many tiny, loose, close-up photos of grass and dirt and cement, and innumerable legal documents, I was completely dumbfounded.

(Crawford in Kastner 2005: 52)

The first proper recognition of the project came during the 1985 retrospective at the Museum of Contemporary Art in Chicago, where the catalogue listed it as '*Fake Estate*, illustrated by a single map' (Kastner 2005: 54). It was only in 1992, with the retrospective at the IVAM Centro Julio Gonzalez which toured at the Serpentine Gallery in London, that the material was recognised as *art*, with some documents included in the display and catalogue (see Kastner 2005: 54).

According to Pamela Lee, '[Crawford] said that she herself had reconstructed the images, and then mounted them on whatever support to present as the object. She was completely matter-of-fact about her hand in making this into "a work"' (Kastner 2005: 57).

Our concern here is not whether this collection, assembled posthumously from Matta-Clark's original documentation, is art. Here, we are not dealing with the historical or materialistic notions of reality but that of information. We are more interested in whether this collection, which was later exhibited together for the first time in 2005, could be considered as a non-digital ectype.

Fake Estates is obviously not a copy: it was assembled from the information gathered from its original documentation. But Kennedy's last speech was also constructed from recordings of Kennedy's voice to the script of the speech he would have given. Thorough investigation was made to ensure that the right documents from the Matta-Clark archives were presented together, just as researchers working at the Rembrandt House Museum scanned through multiple paintings to construct their *Next Rembrandt*. If it is to be considered an ectype, what sort of ectype could it be¹⁸?

An interesting observation on originality and what it means to be authentic was presented by Byung-Chul Han (2017). Han explained that in seventeenth-century Europe, art from Antiquity was not necessarily 'restored in a way that was faithful to the original. Instead there was massive intervention in these works, changing their appearance' (66). The 'epistemological value' of what was deemed to be original had later rejected the interventions and alterations (66-67).

Han noted that in the Far East, there is the 'special practice of persisting creation' (Han 2017: 30). Using the Terracotta Warriors workshop as an example, he demonstrated that what was being produced was not seen as forgeries, but a resumption of production (30). This is possible because of several factors: The first is within the different concepts of a copy.

In Chinese, a copy could be translated as an *imitation* and Han notes that 'the difference from the original is obvious' (Han 2017: 60). Another version of a copy could be translated as a *duplicate* and according to Han, they are 'exact reproductions of the original [and are held in] equal value to the original' (60). This notion of duplicate versus imitation parallels with the concerns of a copy in the digital element of the infosphere, which is where Floridi's examples of ectypes were created. Another concern is that of modulation (see Floridi 2014: 31).

The aim of modulation is not uniqueness, but a form of constructionism that allows variations and further modulations (see Han 2017: 68). *Fake Estates* is certainly made up of components: maps, deeds, the accumulation of tax notices, photographs, stories and many personal accounts. This modulation is a very different type of creativity and this notion is important: if *Fake Estates* is an example of an ectype, then what type of creativity is it, indeed, what type of creativity is an ectype?

In a similar vein to the theories of Pask, Margaret Boden has explained that ‘a creative idea is one that is new, surprising, and valuable’ (Boden 2007: 216; Boden 2010: 29)¹⁹. To Boden, there are two different senses of the new:

P-creativity involves coming up with a surprising, valuable idea that’s *new to the person who comes up with it*. It doesn’t matter how many people have had that idea before. But if a new idea is H-creative, that means that (so far as we know) no one else has had it before: it has arisen for the first time in human history.

(Boden 2010: 30)

Boden was talking about human psychology, ‘where the “P” stands both for “person” and for “psychological”’ and H, that of human history (Boden 2007: 217). If we apply this to the Floridian hyperhistory, P-creativity could become A-creativity, where A stands for agent, artificial or natural, and H-creativity could become I-creativity, as we see in Figure 2 [*Figure 2 near here*].

We could argue that psychological-creativity could not be simply relabelled as agent-creativity. We can also say that in the case of the *Next Rembrandt*, it was the programmers who chose Rembrandt as an envelope for the program. But the question of ectypes is not whether machines can make art. This is something which Floridi might call, ‘old questions’ (see Fritt Ord 2016). What Floridi was proposing, by

introducing the neologism of ectype, was a definition of the type of art machines are making. The two examples Floridi gave both utilise enormous data sets to achieve a high degree of verisimilitude. What Floridi has reminded us is that computers operate through syntax with ease on operations that would require skill and intelligence from humans, and this is of great importance²⁰.

To paraphrase a question concerning intelligence by Simon Head, ‘if [machines] do not have [to make art] close [to] ours, what kind of [art] do they have, and should we think of inventing concepts of [art] which accommodate what they do?’ (Fritt Ord 2016).

What really matters is whether, through the interest of rule-based art in the late twentieth century (see Rose 2005), we are making an envelope for computers to make art.

In the case of the *Next Rembrandt*, it could be yes. With *Kennedy’s Last Speech*, the emphasis is more of a collaboration between the artificial and the natural. Floridi has often stressed that working towards a cooperation between artificial and natural agents is the preferred future²¹.

Consider the project *The Wayblack Machine* (2014 - ongoing) by the YAMS Collective. Using an algorithm to extract images and materials from the web, which are then electronically processed, the artists present an ever evolving collage of social media posts, hashtag trends as well as press and amateur footage surrounding the issues of black embodiment (see Respini 2018: 21; de Blois 2018: 108). Here, we have an example of artists as curators of data and information. The project is assembled from the data and information gathered. It is modular, made up of components and although it is primarily presented as a video set-up, could easily be reconfigured to other methods of presentation. More importantly, the crowdsourced

material stays almost the same and yet, together, the images, the news reports, the statistics and slogans capture the racial tension, inequalities and institutionalized brutality that is very much part of the societies we live in (see Vasvani 2014). This is, therefore, not just an accumulation, but an enrichment that shapes our semantic being (see Floridi 2018b: 484).

Alternatively, for an example that draws on the connections between the materiality and immateriality of information, we could consider *Biologizing the Machine (terra incognita)* (2019) by Anicka Yi. An algorithm is used to learn and amend the environment through the smell of a bacteria that was introduced to soil samples local to the exhibition venue (see Bagri Foundation n.d.). The changing colours and smells of the exhibit is dependent on the data gathered and processed. It is made up of various components, including soil samples and other organic matter that is changeable. The unpredictability of the system, which our presence becomes a part of, ultimately furthers the experience and interactions which we share, where value is added via our semantic capital, assisting in our ability to navigate this shared infosphere.

CONCLUSION: A SYNTHESIS OF A FLORIDIAN APPROACH TO ART PRACTICE

A meaningful conclusion will only be reached if we attempt to synthesize the elements discussed within this article to form a coherent Floridian approach to art practice.

In essence, Floridi is encouraging the view that Art exists as part of what helps us interpret our existence within a universal informational environment that is negotiated by informational entities that include, amongst other things, conscious informational organisms and possibly artificial informational agents.

By shifting our perspective of art away from a materialist stance and towards an informational one, we acknowledge that art is not just a matter of communication and consumption as it is commonly practiced today, but we could be actively creating, designing and managing art as data and information.

This is something we have seen in *The Wayblack Machine* by the YAMS Collective, countered with a materialist connection in the *Biologizing the Machine (terra incognita)* led by Anicka Yi, experienced in countless projects led by Rafael Lozano-Hemmer, within artworks like *Forest of Resonating Lamps – One Stroke* (2016) by the international art collective teamLab and in projects led by many others actively practicing art today [*Figure 3 near here*].

Within such a Floridian infosphere, as we become more connected informationally with our surroundings, each entity plays an equal part in our existence. We humans are no longer seen as the centre of our environment, but as Floridi has repeatedly explained, what makes us different, for now and possibly in the foreseeable future, is the way we perceive and process data. Our ability to process meaning is what makes us unique compared with syntactic engines, but it is also our hindrance. The paintings by Chuck Close, for example, take an immense amount of skill and patience to achieve, compared with the results of the application filter developed in a project led by Scott Blake. Tasks which we find difficult could be easily processed by an entity that has no awareness of meaning, but when meaning is of significance, the human mind, depending on the individual, is where we are able to lead.

From the Floridian adoption of *formal methods*, we see that by abstracting all other variables, we clarify what it is we can meaningfully enquire. In doing so,

we can leave behind some of the more self-indulgent and speculative aspects of art theory and criticism and concentrate on concepts that support art practice.

As a comparison, the constructivist systems thinking of Niklas Luhmann (2000), through a clarification of observing systems from Spencer-Brown's (1969) calculus of indications, combined with Maturana and Varela's idea of autopoiesis (see Bishop and Al-Rifaie 2016), has given us an interesting reflection of the social structure within the art world. This is especially true with Luhmann's analysis of 'internal differentiation', where the art world is a sub-system of society and thus remains autonomous (Vanderstraeten 2001: 305).

Reaction to Luhmann's theory by artists has had a long history in Europe, especially within the German speaking world (see Lingner 1993, 1994). The complexity of his ideas however, has been a challenge and the suggestion that artists do not directly control the operations of the system could be mistaken as a disregard of art practitioners.

Although equally complex, within the works of Floridi, the suggestions of what a maker's knowledge could be has exposed the 'fundamental epistemological lesson we can learn from [the interactive, constructive, and creative] disciplines' (Floridi 2019: 27). Through a Floridian constructionist approach of *poiesis*, as opposed to *mimesis*, art, through the use of information could model and construct the world rather than reflecting and analysing the world through models (see Floridi 2019: 186).

The Floridian idea of building on our semantic capital adds further weight to the importance of producing, curating and managing art as information. As something which could give meaning to our existence, the importance stems from the fact that it is semantics which makes us different from other informational entities, as we have

experienced through *The Wayblack Machine* in view of the racially motivated violence we still see today.

Because syntactic engines do things differently from humans, it would be unrealistic to assume that the type of art produced in the future will be something that we recognise in our human-oriented definitions.

It is through the understanding of our shared informational environment that we can begin to move art practice forward in our informational era. This is essentially how Floridi's philosophy could influence future art practice, as it is our digital environment that will be shaping our very way of being. Through working alongside the latest technology, we become co-creators of art and in doing so we can construct and model further concepts of art. Understanding Floridi's philosophy of information help us to recognize our act of applying meaning to the world and how we contribute to the responsible construction of the world as an infosphere. Together, we could further enrich our increasingly digital semantic capital.

ENDNOTES

1. To date, Floridi has published three books of an anticipated five-volume work on 'The Foundations of the Philosophy of Information' (see <https://twitter.com/Floridi/status/1074955123107995648>). The first volume, *The Philosophy of Information* (2011a) lays down the 'conceptual foundations of the series' (2011a: xii). The second, *The Ethics of Information* (2013) discusses 'what duties, rights, and responsibilities are associated with the poietic practices that characterize our existence' (Floridi 2019: xii). *The Logic of Information* (2019) offers a bridge between epistemological analysis of the first volume and the normative analysis of the second by focusing on the 'conceptual logic of semantic information as a *model*' (2019: xii).
2. E.A.T. assisted in the matching of artists with engineers (Kuo 2018: 163), presaged a 'faceted navigation' system of data processing much like the internet of today (171) and by 1970, attempted the 'EATEX' database which echoed Vannevar Bush's vision of manipulable information (177). Indeed, some of the most iconic art projects stemming

from the 1960s, from the new materials of Eva Hesse (192), to the use of light by James Turrell (272) would not have been possible without the establishment of E.A.T. (193).

3. At the beginning of this century, Stephen Wilson (2002) provided an extensive presentation of art research inspired by the latest scientific and informational thinking. Similarly, an anthology of text on the theme of information was later compiled by Sarah Cook (2016), offering a glimpse into the way artists have explored the questions of connection, memory and the access to knowledge from past to present.
4. The inclusion of Holzer's work is significant as Floridi has mentioned mostly historical artistic efforts in passing. Despite what was to become the start of a global economic decline, Holzer's work, like many New York based artists of the time, mirrored the 'slickness and surface' of the 80's era (Harrison 2003: 82). Whatever the reasons, the stream of information flickering across the electronic displays and reflected on the marble surfaces must have made quite an impression. Towards the end of the 90's, Floridi was to focus on what was to become a Philosophy of Information (Floridi 2011a: p.xii).
5. We thank an anonymous referee for drawing attention to this link.
6. A similar project by a group known as *Hack the Artworld* uploaded their own augmented displays as a critique of the Google-sponsored *DevArt* exhibition at the Barbican Centre of London (Collins 2014).
7. *Level of abstraction* (LoA) originates 'from modelling techniques developed in an area of Computer Science, known as *Formal Methods*' (Floridi 2008b: 91; 2013: 30-31). Floridi's use of the concept was developed with a former colleague, Jeff Sanders (Floridi 2013: xvii) and an introduction to the concept can be found in the works of systems scientist Edsger Dijkstra, and of David Parnas, a pioneer in software engineering (Floridi 2013: 29).
8. The term *constructionism*, or maker's knowledge (see Floridi 2011b), came from the computer scientist Seymour Papert and his work on the psychologist Jean Piaget's *constructivism* (Floridi 2013: 176). The clearest example of constructionism in art would be an artist's workshop or makerspace. Interestingly, although by no means a perfect example, Snapchat recently created a Spin Art filter in collaboration with Damien Hirst (see Wilson 2020). For a small donation, users of the mobile application can create and display their own virtual spin painting through the augmented reality tool.

9. Floridi acknowledges Marvin Minsky as having pioneered the study of presence. It is commonly understood as ‘a *type of experience* of “being there”’, especially in relation to some form of mediation (2013: 34).
10. When semantic content is false, we could simply call it misinformation. When the semantic content is an intentional lie, this becomes disinformation (Floridi 2010a: 50). As semantic content, semantic information, that is, a truthful semantic content, could be *instructional* or *factual* (34). Semantic content could be factual without being entirely true, like that of a false story concerning a situation. We could potentially deduce information (that is, elements of truth) out of the story, but the content itself remains false. The story is only considered factual semantic information if it is entirely true (49-50).
11. Animals have narratives ‘within which meaning is embedded’ (Floridi 2018b: 485), but as far as we know, they don’t make sense of their existence. Artificial agents can ‘only handle syntax, not even meaning’, so they cannot define who they are on their own terms (Floridi 2018b: 485). The only way an artefact can enrich an experience with an interpretation is if we humans use it to make sense of our existence. So, something like a collection of art could be said to give us a sense of meaning or help us make sense of the world.
12. Claire Bishop (2012: 1) differentiates participatory art from interactivity, where the former ‘connotes the involvement of many’ and the latter, a one-to-one relationship.
13. Schneider (2016: 202) has noted that Gell's social relations has particular significance when viewed with the writings of curator Nicolas Bourriaud, which discuss social relations as the materials artists work with. Interestingly, Bourriaud has asserted that participation was never the central aspect of his relational aesthetic theory (see Dryansky 2016: 785).
14. Dominic Preston, writing in *Philosophy and Technology* (a journal edited by Floridi) is concerned with Lopes’ ‘ambiguity between... cases where a display varies over time, and cases where a display varies because there are multiple, varied instances of it’ in relation to its properties (Preston 2013: 270). Preston suggested, for sake of clarity, that Lopes’ definition should speak of *display type* (271). It is also apparent, Preston continues, that although Lopes ‘goes to some lengths to lay out the properties possessed by displays, it is less clear what properties the [interactive] artworks themselves bear’ (272).
15. In a passage that quotes the writings of Janet Murray, Floridi later identifies the three pleasures of digital environments as that of *immersion*, *agency* and *transformation* (see

Floridi 2013: 172). He adds the further pleasure of *interactivity*, as the vision of what defines telepresence in the infosphere (173).

16. 'This work consists of a clock, a photograph of this clock on the same scale, and three blown-up photographs of entries from an English-Latin dictionary for the words 'time', 'machination' and 'object'. It is one of a series of works comprising a real object such as a clock, a chair or a hammer, together with its photograph and one or more entries for words relating to descriptions or definitions of it taken from dictionaries (usually dictionaries from English into another language)' (Alley 1981: 399).
17. At a given level of abstraction, the system observed is treated as a reference model: 'We never check semantic information against some fact, we check it against other semantic constructs' (Floridi 2011a: 203-204). So, for example, in the case of Joseph Beuys and the myth of being shot down as a pilot in the Luftwaffe, the narrative, which his art is constructed around, supports his work as a system.
18. If we call it an authentic unoriginal assemblage, then we are saying that it was in the style and content of a Matta-Clark - which it could be, since he was very flexible with his projects. Then again, we would also be saying that it was not original in terms of what he had in mind. This is more difficult to prove as stories conflict, but there were mentions of the process he envisaged the collection to follow (see Kastner 2005: 45). If we say it was an inauthentic original assemblage, then we are questioning the process but not the intent.
19. Boden studied at the Cambridge Language Research Unit where she encountered Pask and his computer-aided learning devices (see Floridi 2008b: 2).
20. This is not to say that we will not have human information organisms attempting to master skills that a machine could perform with ease. After all, the art of painting realistically did not die with the advent of photography. This emphasis on process could be interpreted as the importance of constructionism (see Floridi 2013: 173), where the difference is purely informational.
21. For a simple yet interesting exploration of the strengths and weaknesses of using a generative adversarial network in art, see Janelle Shane (2019).

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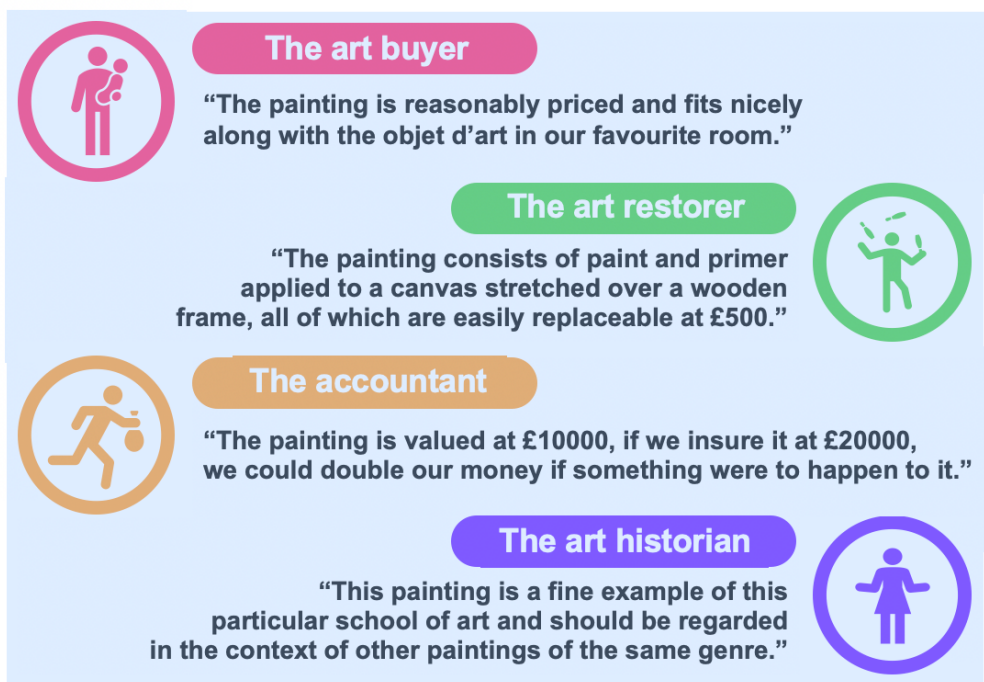


Figure 1. *An example of levels of abstraction.*

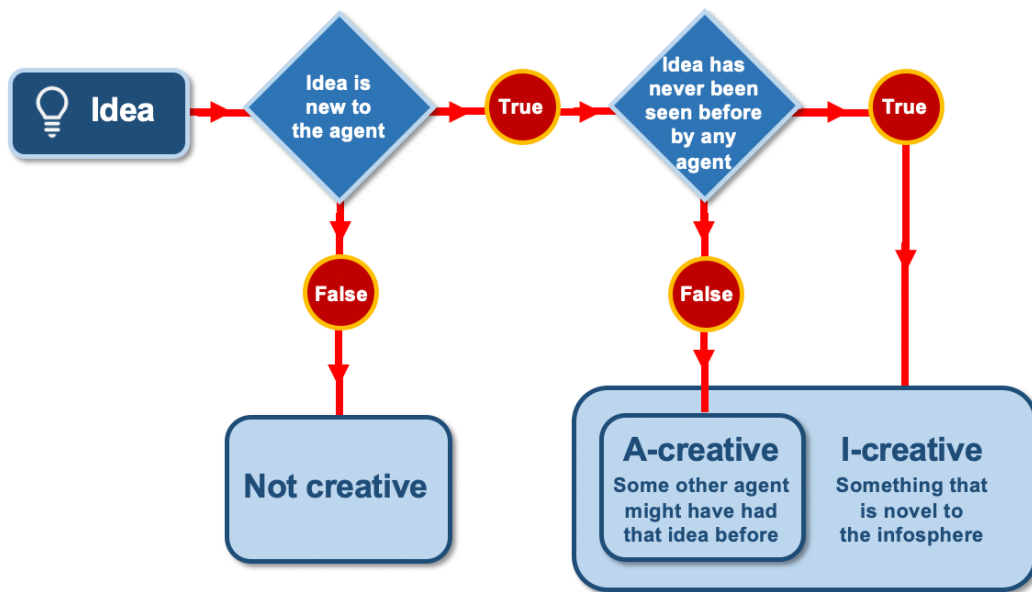


Figure 2. *Different senses of the 'new' in a hyperhistorical context.*

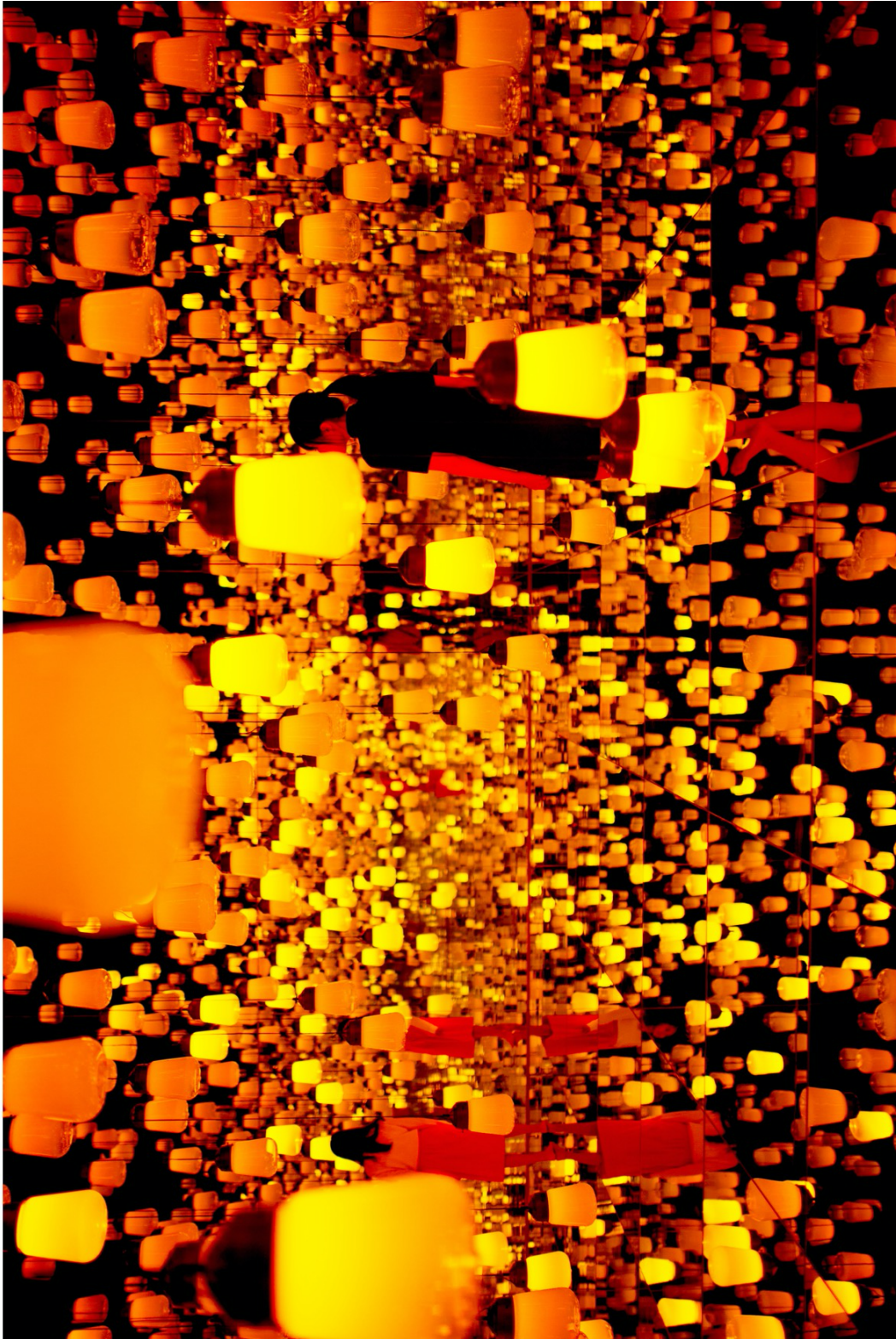


Figure 3. *teamLab*, *Forest of Resonating Lamps – One Stroke*, 2016; *Interactive installation, Murano glass, LED, Endless, Sound: Hideaki Takahashi*. © *teamLab*, *courtesy Pace Gallery*.