NO SINGULAR NARRATIVE

In the age of personalization, how is the way we are navigating information online affecting our creativity and how can we create strategies of navigation that disrupt personalization?

INTRODUCTION

My research will examine the way we are navigating information online, and ask questions about the impact that has on creativity, exploring the concepts of curiosity, bisociation and the unexpected finding of knowledge. The structure of the paper is divided into four chapters that describe the way we navigate information online in relation to the definition of curiosity and bisociation, and proposes the creation of tools of navigation for the disruption of personalization.

In the first chapter I define the key concepts of curiosity and bisociation, on which I will base my designation of creativity. It expands on how environments that provide unexpected findings of information and that promote categorical openness are essential to experiencing creativity. The second chapter introduces the concept of navigation and examines the way we are navigatinginformation online through systems of personalization. It expands on relevance based navigation and its consequences to the way we acquire information. The third chapter questions how the way we are acquiring information is affecting creativity. It examines the effects of passive, and immediate access to an overload of information and defines how the web navigation environment diminishes the chance of being surprised and coming across unexpected information, relating it back to the concepts of curiosity, bisociation and creativity. Finally, the fourth chapter gives examples of practices such as Max Hawking's *Your Destination* or Ryan Gander's *Loose Associations* as well as my own experiment and practical resolution in order to evidence how chance and randomness can be used as tools and propose alternative systems of navigation towards the disruption of personalization.

1* ON CURIOSITY AND CREATIVITY

This chapter describes my approach to the concept of creativity, through the definition of curiosity and bisociation. I define curiosity as an information gap and bisociation as an association between unrelated concepts, and how these can be achieved through environments that provide the unexpected finding of information and that promote categorical openness.

1.1* IN ORDER TO BE CURIOUS

Taking into consideration George Lowenstein's definition of curiosity as an information gap, "a feeling of deprivation that occurs as an individual recognizes a gap in his knowledge" I draw the insight that in order to be curious, one has to be conscious of deprivation, of something that is missing or being hidden.

The information gap described by Lowenstein is the difference between "what one knows and what one wants to know".
An opening to the unknown denotes in the one that is curious, an ability to be surprised. Once the unexpected becomes expected, and the information is established and verified, it becomes familiar, and curiosity fades. Experiencing curiosity leads to the unlocking of knowledge through methods such as inquiry, investigation or experimentation, which can motivate creativity (Grossnickle, 2016).

1.1* OPEN CATEGORIES AND UNEXPECTED FINDINGS

The concept of creativity seems to be to complex to have one single definition. It is not a scientific concept, but a culturally and historically grown idea that varies from different places and times. Margaret Boden (2018) defines it as "a quality evaluated on a subjective scale, that brings into being or form out of nothing".

The approach to creativity in my research is based on Arthur Cropley and Phil Beadle's theory (2001). The sociologist and professor state that the ability to produce or use original and unusual ideas does not come from nothing. Instead, they propose it comes through bisociation, which is defined as "making associations between diverse and seemingly unrelated concepts".

It is on this associative thinking that I base my definition of creativity. We "bring into being or form" not through some mad moment of inspiration, but from making links between different concepts, combining our knowledge with unrelated ideas in new insights, discovering new connections and associations.

In *The Act of Creation* (1964), Koestler gives an example of the use of bisociation trough an episode that occurred to the physicist Niels Bohr. As a student, Bohr was asked in a test how he would use a barometer (an instrument that measures atmospheric pressure), to measure the height of a building. Bohr suggested three solutions: One could tie a string to the barometer, lower it, and measure the string – thinking of the instrument as a "thing with weight"; throw the barometer off the building and count the seconds until it hit the ground – thinking of it as a "thing with mass" or measure the length of the barometer and of its shadow, then measure the building's shadow and calculate its height – thinking of it as a "thing with length".

This ability to associate disparate types of information and seeing one concept in many different ways, reveals a categorical openness that is essential to creativity.

The Pale Fox, Camille Henrot (2014)

In The Pale Fox, Camille Henrot deliberately overwhelms the viewer splicing off different disciplines from diverse fields of knowledge and principles of classification. Her work focuses on human endeavour to make sense of the world by objects that surround us and the way in which they relate to one another.

The Universal Addressability of Dumb Things, Marck Leckey *(2014)*

An assemblage of artefacts from different epochs and places, Marck Leckey's work follows the cumulative logic of the web. Embalmed animals, prosthetic heads, machine parts, sound systems and digital avatars are combined to form what the artist calls 'technoanimism', which he defines as the inanimate operating at the threshold of life.

Cabinets of curiosities emerged in the sixteenth century as precursors of the modern museum. They consisted of whole rooms, in which objects drawn from far-flung places and times from all disciplines and art forms such as animal specimens, minerals or scientific instruments, inhabited the same physical space.

2* HOW WE ARE NAVIGATING INFORMATION ONLINE

This chapter introduces the concept of navigation. Referencing the contrast between spaces for contemplation and how it improves deep thinking, and web navigation, which leads to a voyeuristic approach to information. It continues defining how navigation online is based on personalization and relevance and its consequences on the way we acquire information.

2.1* DIGITAL DYSTOPIA

Before the Internet, most professional occupations required a large body of knowledge accumulated over years of experience. A lot of time was spent in researching through various amounts of books, in order to find solutions to questions. In the quiet spaces opened up by the sustained, undistracted reading of a book, or by any other act of contemplation, we make our own associations, draw our own interpretations and analogies, and foster our own ideas. Deep reading, as Maryanne Wolf argues (2009), is indistinguishable from deep thinking.

Nowadays, one can retrieve information on demand, rather than their own memory. With the proliferation of sources on the Internet and the World Wide Web, vast amounts of information

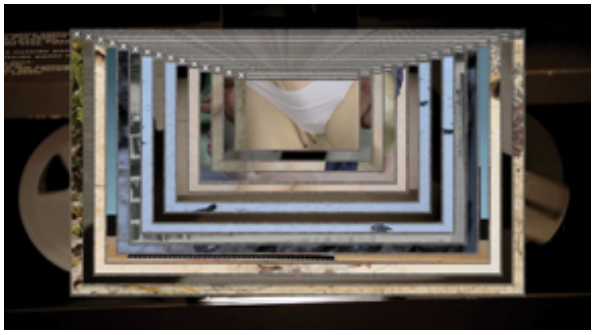
Open categorical associations benefit from an environment that supports divergent thinking[1], where the unexpected finding of knowledge is possible and diverse categories of information can be encountered. Contexts that allow serendipity[2] and random encounters with information promote the finding of unrelated subjects, and the discovery of ideas we did not know we were interested in, until we are.

In the age of the Internet, with so much information immediately available, is our curiosity too quickly peaked and just as easily fulfilled? What place does creativity hold when personalization is dictating the way we are navigating information online?

1 Thought process used to generate diverse and numerous ideas on some mental task, implying that not only one solution may be correct.

2 The ability to make fortunate discoveries by accident. The word was coined by Horace Walpole in a letter he exchanged with Horace Mann in 1754. He describes serendipity as "making discoveries, by accidents and sagacity, of things which they were not in quest for".

are instantly available, leading to the belief that we are entitled to all the information there is. This immediate availability and overload, lead to a voyeuristic and passive approach to information, with little time left for the interpretation and analogy that lead to deep and creative thinking.



Grosse Fatigue, Camille Henrot (2013)

In *Grosse Fatigue* Camille Henrot communicates a feeling of restlessness that we acquire when exposed to an exce-ssive abundance of visual information and knowledge. It leaves no space for interpretation, overwhelming the viewer throughout a cascade of images that implode and collide across a computer screen, which tell the story of the creation of the universe.

Is the way we are currently navigating information online reducing our desire to be inquisitive, to think, and to comprehend? Is the immediate access to the Internet jeopardizing our ability to know, in depth, a subject for ourselves and construct within our minds the set of associations that lead to creativity?

2.2* ECHO CHAMBERS AND FEEDBACK LOOPS

Navigation is defined as "*the process or activity of accurately ascertaining one' s position and planning on following a route, organizing and synthesizing timescales and orders of magnitude that cannot be visualized simultaneously*"[1]. The instant access and constant growth of information on the Internet creates an overload of content that requires navigation techniques to help us find information in coherent and contextual groupings.

Web navigation works through the curation of information using systems of personalization. Personalization is the process of gathering, storing and analysing data[2] about a user[3], in order to provide him customized and relevant information (Dreyfus, 2017). Using this data, personalization systems are shaping the way we are navigating the web, curating our access to information according to relevance.

Reflective design, Arthur Roing Baer (2013)

Reflective Design is a project about the personalized persuasion and the contextual-data from social computing. It questions how context-aware design is predicting needs and targeting individual psychological profiles, engaging the user with new adaptive media.

While navigating information online, we are exposed to "*a unique universe of knowledge which fundamentally alters the way we encounter ideas and information*" (Pariser, 2011). The Internet is showing us what it thinks we want to see, which drastically decreases information diversity. Eric Schmidt states that "*It will be very hard for people to watch or consume something that has not in some sense been tailored for them*". Being exposed to information according to relevance, is getting us into personalized feed-back loops, where the information we are seeing is being informed by the one we have seen in the past.

Consequently, the possibility of being surprised or of coming across unexpected information is limited. Even though we can be challenged and exposed to new information, it is only within the coordinates of what we already understand. We become limited by our ontological understanding of the world.

1 Navigation. (n.d.) In Merriam-Webster's collegiate dictionary. Retrieved from http://www.merriam-webster.com/dictionary/navigation

2 Information that can be stored and used by a computer program.

3 A person who makes use of a computer.

3* HOW IT IS AFFECTING CREATIVITY

This chapter examines how the way we are navigating information online is affecting creativity. It examines the effects of passive, and immediate access to an overload of information and how online navigation provides an environment for confirmation bias and the lack of meaning threats, which diminishes the chance of being surprised and of coming across unexpected information.

3.1* SHORT TERM MEMORY

It is not clear that we ought to speak of creativity when what is at issue is immediate access to information rather than the sometimes arduous acquaintance with knowledge. Can we still talk of curiosity when the contemporary online archive gives up so easily objects, anecdotes and images that were once obscure?

While we are navigating information online, our focus continues to be transferred. The web never encourages us to slow down. Many links on one page connect to others, sidebar advertisements flash and divert attention, web pages contain tantalizing pictures, and other factors all contribute to distractions while looking up information. When we are constantly distracted and interrupted, and we are not paying close attention to a new piece of information, there is no space to associate it with knowledge already established in our memory. These associations are essential to bisociation, to understanding concepts in different ways and make meaningful connections, which leads to creativity.

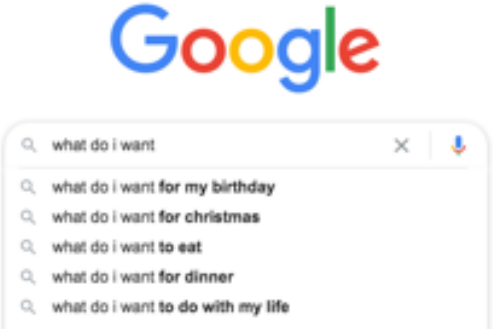
Nicholas Carr states that "*we are evolving from cultivators of personal knowledge into hunters and gathers in the electronic forest, assembling disjointed bits of information into and then out, of short term memory*". The Internet is affecting the capacity for engaging in attentive and much quieter modes of cognition that underpin contemplation, introspection and reflection. An overloading access to information, hijacks the brain's ability to focus and remember, which limits the creation of meaningful associations that give depth and distinctiveness to our thinking, and that help us to think creatively.

3.2* THE ADJACENT UNKNOWN

Learning is an encounter with what you could not conceive and what you never understood or entertained as possible **(Grossnickle, 2016)**. In order to learn, we have to come across what we do not know or understand. As discussed in the previous chapter, the echo chambers created through personalized filters build an environment that consists entirely of the adjacent unknown. The Internet answers the questions we have, but does not suggest questions or problems that are out of our sight altogether. The search for perfect relevance and the kind of serendipity that promotes creativity push in opposite directions.

While navigating information online, we are not aware of the filtering methodology. We are only exposed to supposedly relevant information, and cannot see which information the algorithm classified as unwanted. Because this filtering process is invisible, there is no "information gap", no feeling of deprivation essential to curiosity. We are not conscious of the information that is being hidden, and consequently not as compelled to learn about what we do not know.

Surrounding ourselves with information we are already familiar with, amplifies confirmation bias, defined by Emily Grossnickle as "the tendency to interpret new evidence as confirmation of one's existing beliefs" (2016). If we are only strengthening our



The Google's search engine provides access to knowledge by offering lists of documents in response to keywords entered by the user. It is a classification system based on language rather than affinity. The results served to a user by Google for any particular keyword are personalized, varying by location or based on a user's search history. However, the rules that govern this personalization are concealed from sight.

4* NAVIGATION TOWARDS CREATIVITY

This chapter presents examples of practice that disrupt personalization. It proposes ways of using the algorithm against itself, as mediator of information using randomness and chance as tools, and alternative systems of navigation. Where ambiguity and surprise are used to create new possibilities of discovering information, and new forms of reading that allow space for multiple meanings and interpretations.

Your Destination, Max Hawkings (2015)

Max Hawkings uses alghoritms to craft a series of randomization applications. *Your Destination* is part of a series of activity generators that explore an alternate strategy for dealing with information overload. When the attendee presses a button, a computer selects one location from a list of thousands nearby. An attached printer makes a take-away receipt with this destination and a set of rules about what to do once there. The destination is chosen entirely at random, pointing to the role of serendipity and suggestion rather than relevance.

existing ideas, and we are not coming across other points of view, we are limiting our capacity to perceive one concept in many different ways, which goes against the ambiguity and categorical openness needed in creativity.

Another concern with the echo chambers created by personalized filters is that they can affect curiosity by blocking meaning threats – the incoherencies in meaning that fuel our desire to understand (Proulx, 2018). Meaning threats are incomprehensible events that foster enquiry and investigation in order to make sense of something we do not comprehend. Without contact with difference and diversity of information, the probability of encountering meaning threats is much more difficult, which affects the opportunity to experience curiosity.

In a personalized environment there are no random encounters with information, and there is little chance of being surprised by coming across the completely unexpected, which creates a difficult environment for bisociation to occur, therefore affecting creativity.

4.1* TURNING THE SPELL AGAINST THE WIZARD

"*Think of the language and imagery that are casually used to descri' be our relations with online text, sound and images. We talk of being distracted by, or immersed in, or addicted to those things. As if being diverted from our proper stated path, taken out of ourselves or away from the things at hand, were truly the opposite of curiosity.*"
(Dillon 2013, p.8)

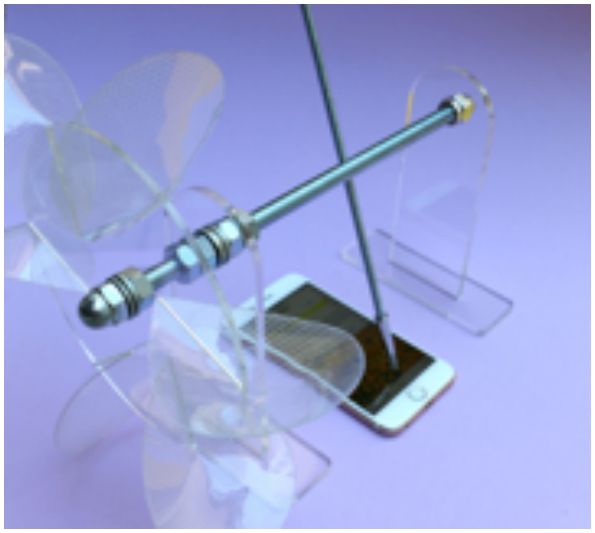
Taking control of the algorithm using randomness and chance as tools, can help create alternative navigations that push pass personalization. Pointing to the role of serendipity rather than relevance, we need systems of navigation that promote encounters with the unexpected, and the finding of unrelated information.

"*We should investigate and challenge the assumption that our future actions should be determined by our past behaviour. We must preserve and promote the systems by which it is possible to surprise and investigate.*"
(Hawkings 2015, p.27)

4.2* DRIFTING BETWEEN ASSOCIATIONS

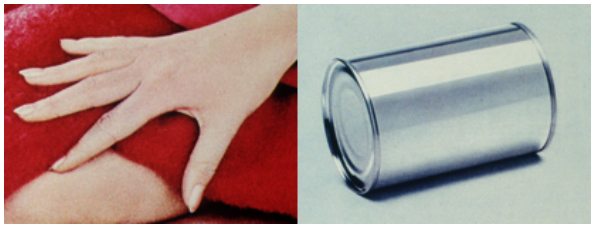
"*Computers will only serve us when they can incorporate dream logic. One problem with the cyber' century is how to add ' drift' to the net so that your view sometimes wanders into places you had not planned to go. We need help overcoming rationality sometimes and allow our thoughts to wander and metamorphose as they do in sleep.*"
(Gelernter, 2016, p.57)

Often when we are tired or a sleep, our mind starts to wander into places we had not planned to go. Places not immediately connected to each other, but new domains that have deep emotional connections (Popova, 2011). Overcoming rationality, and allowing our thoughts to wonder as they do in sleep,



Stop the Algorithm, Stephanie Kneissl and Max Lackner (2017)

Stop the Algorithm is series of interactive machines moderating and regulating the content on a variety of social media sites. The machine manipulates the system by randomly reposting and liking, tricking the algorithm into filling the feed with more diverse content.



Associations, John Smith (1975)

John Smith's *Associations* sets language against itself by using the ambiguities inherent in the English language. The artist re-combines words and moving images with a voice over, to reflect on the subversive potential of language. Images, words and sound work together and against each other to destroy and create multiple meanings at the same time.

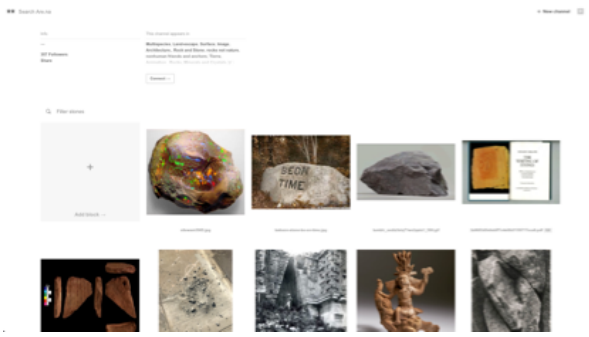
expands our ability to associate unrelated information, and therefore establishing bisociation, fostering creative thinking.

As mentioned before, passive, continuous, overloading access to information, affects creative thinking by removing space for comprehension. A way to avoid rationality when displaying information, is allowing the creation of space for interpretation, which turns the process of learning into an active attitude, and opens up space to follow what we might call intuition, meaningful coincidences, or chance.

For the work in progress show I presented an experiment in video and publication format. This experiment is an encyclopaedic network of an online catalogue of images that leads to nowhere. The image linking is carried out progressively through visual similarity. In an attempt to disrupt personalization towards the finding of the unexpected, images are displayed one after the other, jumping through completely different contexts. Within an identified set emerges an image of another genre, which is disturbed by the emergence of a new image and so on. The switch from one theme to another is not organized or signalled, it is based on visual resemblance only. I tried to create a visual language that invites the audience to create its own associations and narratives, continuously reconfiguring meaning, giving time for interpretation.

Constellations, WIP SHOW (2019)

From the microscopic, through the cosmic, to the bodily and infinite, WIP SHOW (2019)



Platforms such as Are.na provide a new way of navigating content on the Internet. built for collaborative and independent research, Are.na let's the user build collections of content by adding links and files from diverse sources. With the ability to build shared collections, through the association and production of different content with various people, it provides a place to create new forms of knowledge.

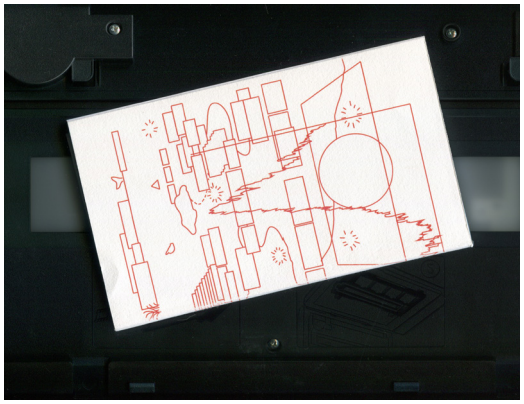
4.3* NO SINGULAR NARRATIVE

It is possible to navigate information through systems that do not trap us into feedback loops of our interests, or shield us from fields of inquiry that are not our own. Alternative navigations based on disruption, surprise and the attempt to defeat expectation, that spark curiosity and bisociation, working towards creativity.

For my practical resolution I designed a publication with multiple narratives, allowing the reader to navigate one story in different ways. Through the appropriation of images from disparate online archives and of writings from different authors, I created eleven versions of one story. Each author's version is told from a different perspective, attributing the story to various sources, in a parable for how truth relies on unfixed beliefs. The visual narrative is built similarly to my previous experiment, navigating the images through visual resemblance, in an attempt to surprise the reader with the unexpected, jumping through completely different content and contexts.

Dividing the different versions of the story throughout the publication, I invite the reader to follow the story and the ongoing visual narratives at will, weaving a path back and forth, without a fixed course or intention. Various modes of navigation are created through the appropriation and reassembly of existing material from diverse and disconnected origins, refusing linearity and coherence.

Through an open navigation and unconnected meeting of the images with the texts, the publication aims to explore the making of associations between diverse sources, assembling images and stories from different eras and origins, with the hope that somewhere between these associations lies the germination of creativity.



No Singular Narrative, Major Project Outcome (2019)

CONCLUSION

This paper has had the aim to identify and critique the different contexts in which online personalization is affecting creativity. The first chapter has been focused on my description of creativity through the definition of curiosity as an information gap and bisociation as an association between unrelated concepts, and how these can be achieved through environments that provide unexpected findings and categorical openness. The second chapter provided a critical review of online navigation, expressing the voyeuristic approach to information that limits deep thinking and the curation of content through personalization based on relevance.
The third chapter examined the consequences of an online navigation, which provides an environment for confirmation bias and lack of meaning threats, thus limiting creative thinking. Finally, using examples of practice based research as well as my own experiments, the fourth chapter proposed ways of using the algorithm as mediator of information, using randomness and chance as tools, and speculates on how ambiguity and surprise can be used to create multiple meanings and interpretations.

The beginning of the Internet brought us to a "network culture", based on instant communication and global information exchange. In this way, information has become a valuable currency, modelling our understanding of the world and the way we acquire knowledge. The connection of people online enables users to be curators who sort, organise and distribute networked information, using content created elsewhere as raw material for the making of meaning. Instead of relying on hierarchical methods for prioritising and categorising information, users can take advantage of the horizontal organization of the Internet – where all data is linkable to other data – to find forms of intervention that disrupt personalization.

The confines on creativity studied in this paper are demanding a collective response. We need systems of navigation that disrupt personalization, and build a shared knowledge space of learning. This could be achieved to the creation of platforms of collaboration, where diverse information can be shared to make connections, resulting in many forms of knowledge that expand our way of thinking about the world. We need to create open-ended narratives that thrive from multiple perspectives, where ideas develop organically through associative thinking. Non-hierarchical narratives based on disruption, surprise, and unexpected finding of information. We need non-linear narratives with multiple navigations and forms of interpretation, that destroy and create multiple meanings.

It is possible to navigate information through systems that do not trap us into feedback loops of our interests, or shield us from fields of inquiry that are not our own. Alternative navigations based on disruption, surprise and the attempt to defeat expectation, that spark curiosity and bisociation, working towards creativity.

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