

Brief 5: Domains

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I. Idea

The device I'm envisioning will be formed starting with the deconstruction of the fundamental conceptual basis that has always existed in photography, that of the unity of the element which captures the image and the element which stores the image. The camera I'm going to create will exist in the form of a divided object, split into two halves, each one able to perform just one specific function of either capture and transmit a visual memory or attract and play back a visual memory.

While the two halves will be displaced in both time and space they will be inherently connected to each other in remote. Until the two fragments are physically separated, some rules will control both the capture and attraction processes: for example the person who holds the capture device won't have at its disposal an unlimited amount of captures, but an equilibrium will exist, relative to the amount of the memories captured and their effective output on the Attractor device; if the person who receives the visual memories is not ready for them or has not time to dedicate to this event, then the person who holds the Capturer will have to wait, until the other person is ready again to receive his new visual memories.

From the Attractor side certain conditions will have to be met in order to retrieve and enjoy the visual memories intimately shared by the Capturer such as silence, darkness and the presence of the person who owns the Attractor half. These constraints will be present until the moment when the two halves will be finally physically reunited as, in that precise moment, the two parts will recognize each other, opening themselves up, letting the two persons freely enjoy the intimate sharing event. It is interesting to notice that in a possible scenario of usage this system enables a powerful interaction, that of the complementarity of experiences over the shared

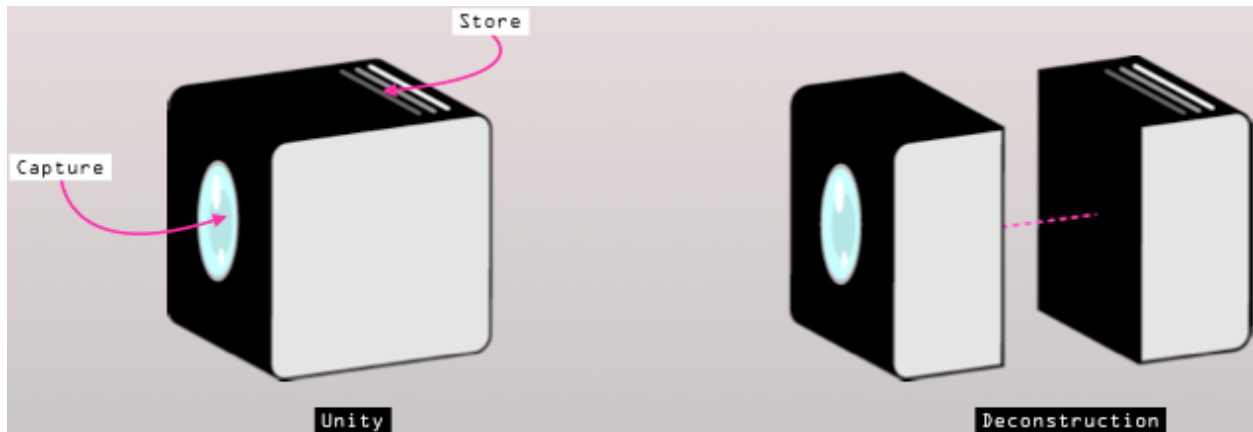
memories; the person who captured the visual memories will know everything about their context but has never seen them before, while the person who receives the visual memories has already seen them all, but knows nothing about their context. This way the sharing event will be empowered by the common need of each person to complete their “half” memory with that of the other.

The visual memory itself will be an hybrid artifact, inheriting main features both from the Photograph and the Video; it will live as light on a physical medium but won't be a print, it will seem to be still while instead will move over time. In reality it will be a high speed low resolution short video, visualized as an aggregation of light particles. The number of particles will be very low in relation to the actual resolution of the captured video, in the order of the hundreds, but thanks to a visual effect I discovered one year ago the image will still be coherent, just using a fraction of the actual data provided by the original video. This visual effect I'm talking about happens when our brain, fed with a blurred image, natively adds up information to it, building a more coherent, understandable picture. This technique will solve three main possible issues, the first, that of the visualization of a visual memory, which in my mind has always been a sort of short, partly clear, partly blurred moving image in which the main elements were present, but mixed with a more confused background. The second, related to the actual look and feel of the interface, as a lens will be present on the Attractor side, letting the person who uses it play with this focusing/defocusing dynamic in order to explore each visual memory almost as a magical item. The third, more on the technical side, will be the fact that I won't need an high quality video as an input, as I'm going to use just a fraction of its actual resolution thus lowering the technical requirements for the system to run efficiently.

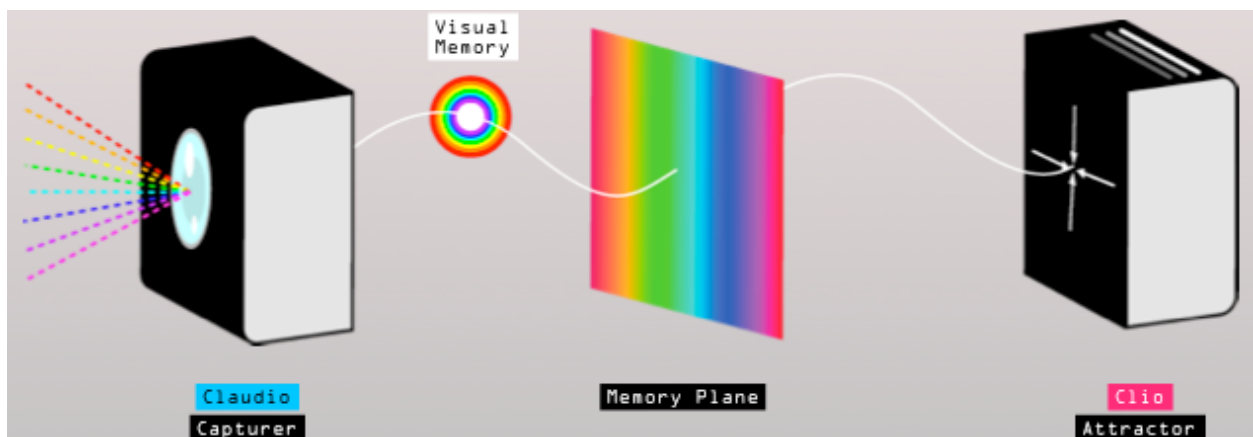
This project final goal will be the restoration and enhancement of digital visual memories emotional value, ultimately suggesting a different perspective over the relationship with digital consumer tools, not in the direction of productivity, guided by the elements of speed, quality and conveniency but in that of humanity grounded on emotion and meaningfulness.

II. Form

The following diagrams illustrate the system I'm creating, from a logical point of view. I'm going to provide the possible technical solution to achieve the completion of each step.

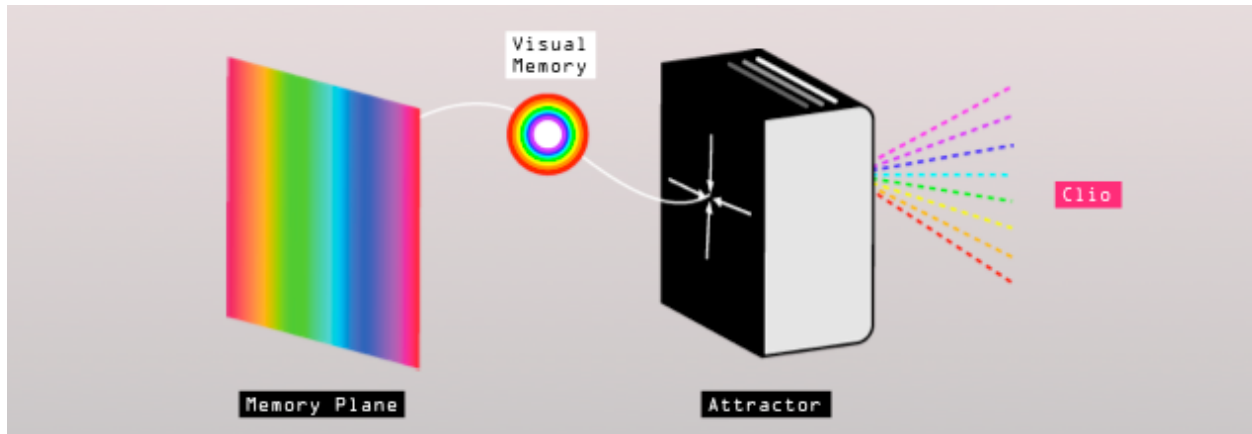


The system will start to be built upon the conceptual and physical deconstruction of the unity of any photo camera, the unity of the part which captures the image and that which stores it. I will physically build these two halves in order to let them meet a very precise behavior, illustrated in the next diagram.



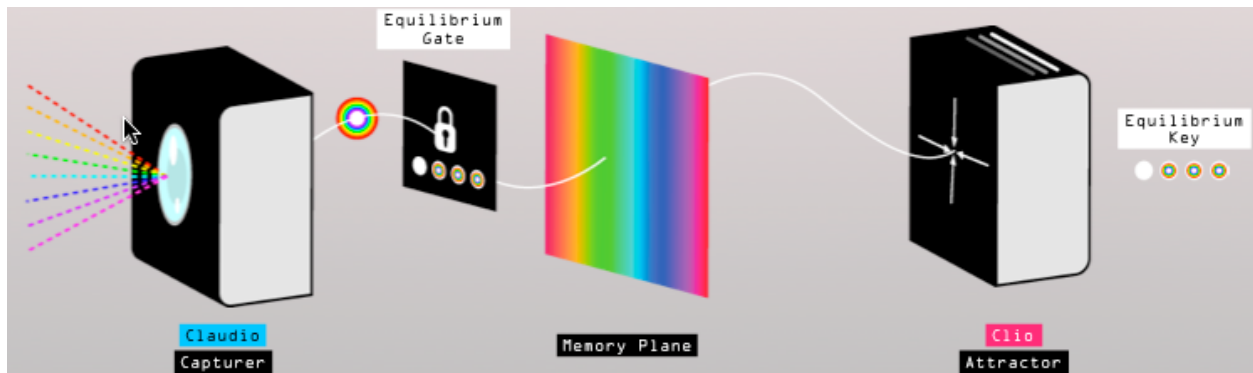
One half, the Capturer, will just be able to capture visual memories. It will achieve this using a dedicated computing platform, the Aigo P8860 and an industrial grade hi speed, VGA resolution camera such as the Matrix Vision mvBlueFOX camera. This process will be controlled by a custom c++ application.

Each visual memory after being captured will not be displayed back to the person who uses the Capturer device but will be immediately transferred to the Memory Plane, a middle dimension where all the memories shared by the two person using the device are stored, waiting to be attracted by the other half of the interface, the Attractor. A wireless internet connection will enable this communication system to work in conjunction with an HTTP server and a Database application, the two elements which enable the Memory Plane to work.



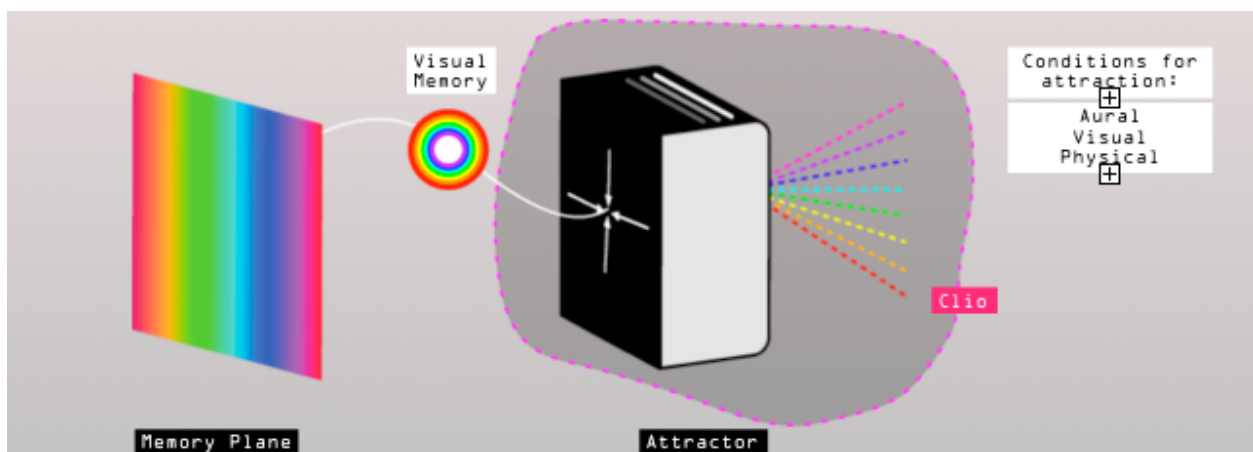
The Attractor half will rely on the wireless internet connection, either 3G or WLAN to receive the attracted visual memories from the memory plane, which will be then displayed using the Aigo P8860 LCD touchscreen.

Some rules will regulate the system, each one targeted specifically at one phase. In relation to the capture phase an equilibrium will have to exist between the activity of the holder of the Capturer and that of the holder of the Attractor. If the person who holds the Attractor hasn't seen the last n memories the Capturer has reserved for him, then the Capturer won't be able to catch other visual memories, until the other person gives him attention again watching the memories that were previously recorded for him, finally giving the Capturer the ability to capture again.



This will be achieved using an internet connection from the Capturer which will connect to the Memory Plane which stores the most current status of the activity of the Attractor. The memory plane will return the number of new memories waiting to be seen by the holder of the Attractor, if the number is greater than a given limit, then the Equilibrium Gate will be closed and the Capturer device will inform the use with a feedback that at that time he cannot capture anything as the other person is probably not ready to give the attention his memory deserves at that moment in his live. This feedback will be available before the Capturer actually tries to capture a memory, in order to prevent the excess of frustration which would be generated if he tries to capture a beautiful moment just to later know that it wasn't recorded because of the equilibrium rule.

This rule just to propose a solution to the inflation of the memories captured in a visual form.

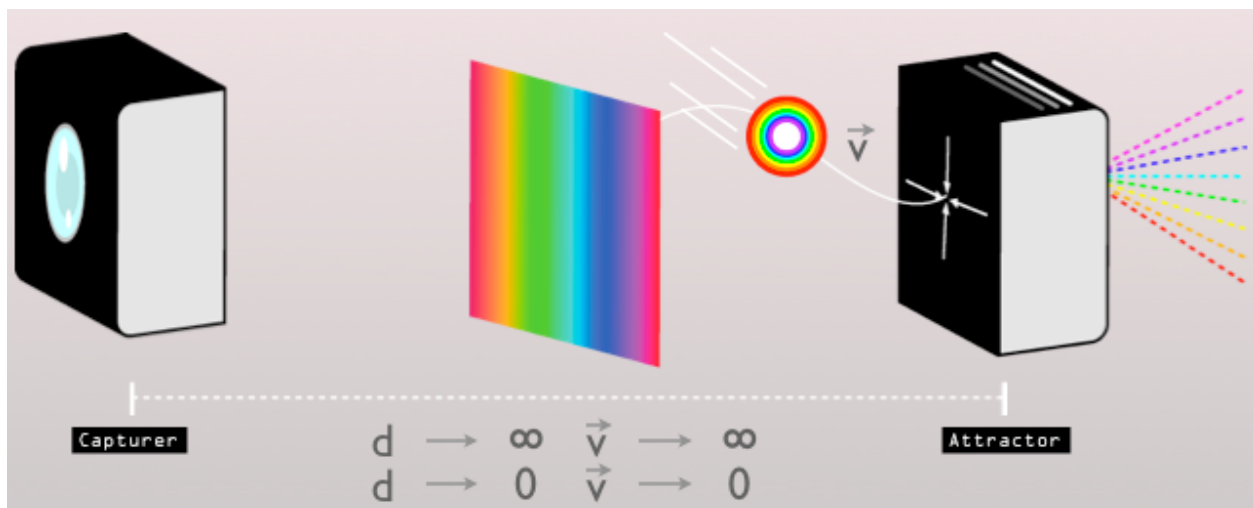


Another rule will exist, this time related to the attraction phase. Certain conditions will have to be met by the holder of the Attractor to successfully initiate the attraction process of visual memories from the memory plane.

One condition will be of aural nature as the need of silence or quiet in the environment where the attraction is going to happen. This will be achieved by using a microphone and a simple volume analysis of the environmental aural setting.

Another condition will be physical as that the person who wishes to see a memory actually picks the Attractor in its hands and looks through the lens placed in the center of the interface. This will be achieved by using touch sensors on the sides of the device in combination with an Arduino Nano microcontroller to feed the sensors data to the Aigo computer.

The motivation for this is easily understandable from this example. If a person is telling you an important personal memory you want to look him in his eyes and listen carefully to his words and not look at your mobile phone screen or listening to your Ipod, you need to give the other person you attention.

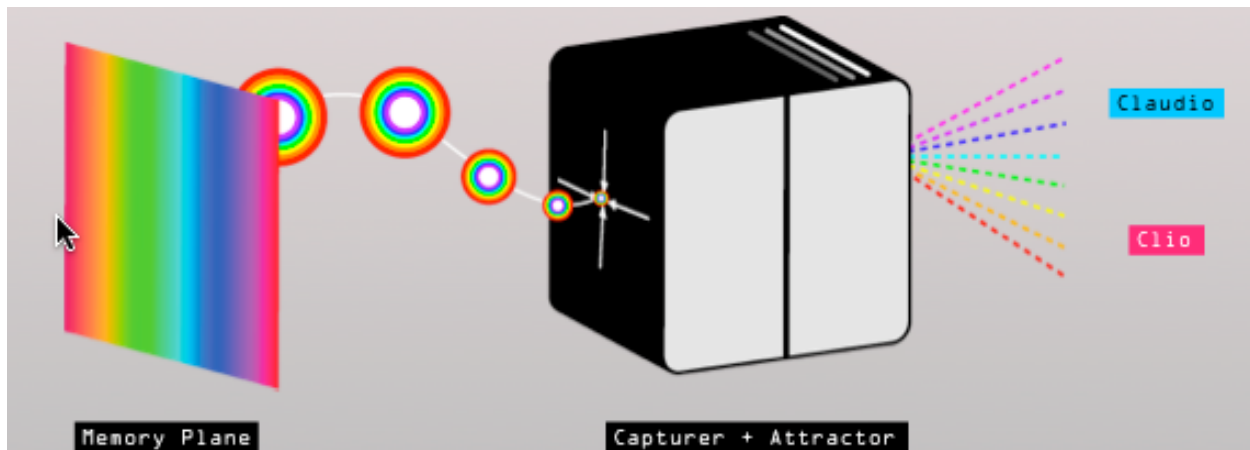


A third rule will control the way the visual memories are attracted. It works on the concept of direct proportionality between the actual physical distance over the surface of the earth of the two halves of the device and the speed by which the visual memories will be attracted.

In order to better understand this concept the following example can be clarifying. Two people emotionally close to each other live very far away one from the other. Using the device I'm creating the Attractor would receive the memories of the Capturer in a very short time. This is understandable as when two persons who love each other are separated from great physical distance they want to know about the other person as soon as possible. The opposite scenario would be two persons who, again, are emotionally linked, but lives in the same house. The Attractor will attract the visual memories of the other person with a very slow pace, receiving them at a much later time than they were actually captured. This is very human too as when you live 24-24/7-7 with another person, even if you love him/her, you are always updated on what's going on in his life, thus receiving immediately something so quotidian would just diminish its true value, while receiving it at a later time would enhance it.

This will be technically achieved using a mix of GPS and internet technologies. Both the devices will always keep the Memory Plane updated with their most current position on the surface of the Earth. The Memory Plane will inform then one half of the position of the second half and will calculate the physical distance between them. Based on that value it will set the speed of the attraction accordingly. In case the GPS is not working an IP trace-route will give the raw geographic position of the ISP server each device is connected to. This way the mechanism will work everywhere an internet connection is present.

The motivation for this rule is to enhance curiosity and novelty towards the memories a person has reserved for another person, through digital means.

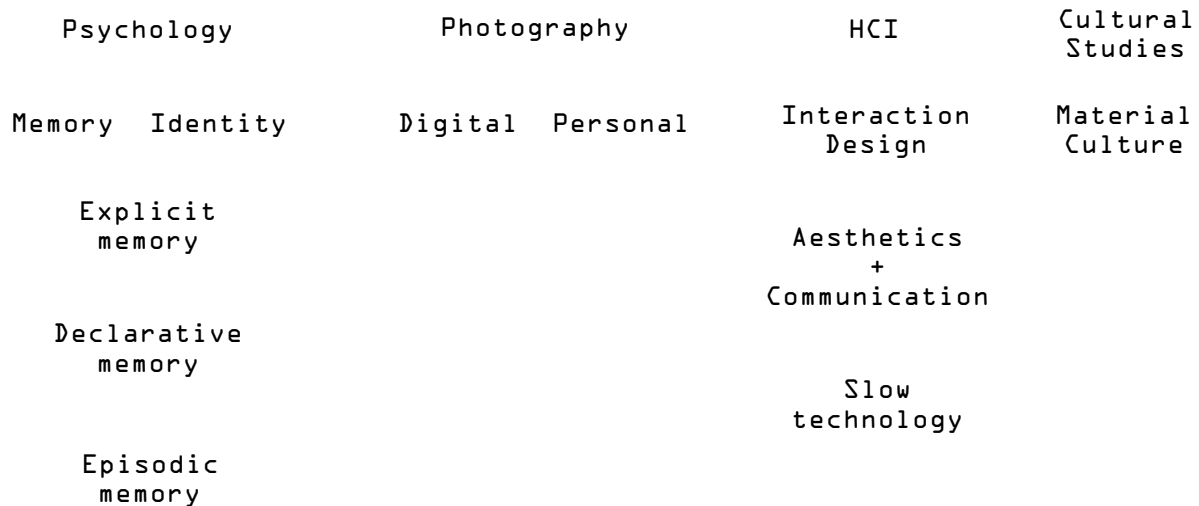


Lastly when the two halves will be finally reunited, they will first recognize each other, opening themselves up letting the two holders of the two halves physically join them together recreating the object original unity. In that moment all the previous rules will cease to govern the system letting the users freely control the visual memories attraction and playback process, until the two halves will be divided again.

This will be achieved using RFID tag and reader on the devices, so they can recognize each other if put at a small distance. Magnets will be used on both devices to damp the opening of the interface. In addition to that the Attractor will have an electronically controlled locking mechanism. After the two halves have recognized each other via RFID the lock on the Attractor will unlock, revealing the magnets put on the side of the frontal aperture which will exactly match in shape and position the other two magnets put on the frontal aperture of the Capturer. When the magnets in the first half touch those on the second half they will link the two halves together, reconstituting the original unity. Technically wise this will be achieved checking through a mini Arduino board inside the Attractor if there is current flowing through the magnets.

III. Domains Map

The following map visualizes the knowledge domains which have resulted as most connected to the conceptual dimension this projects is living within.



IV. Domains

The Photography domain is where this project took its original impetus from. The changes that the transition from analog to digital technology applied to the photographic field made me reflect on the gain and losses that these changes brought with them particularly in relation to the design and conception of non professional digital cameras. Quality, speed and convenience were enhanced while the more human like aspects of photography such as implicit value, surprise and intimacy were minimized, productivity driven design was the chosen path over that led by humanity.

“The result, as the computer industry merges with other industries, is that the optimization of the psychological fit between people and electronic technology, for which the industry strives, is spreading beyond the work environment to areas such as the home that have so far acted as a counterpoint to the harsh functionality of the workplace. When used in the home to mediate social relations, the conceptual models of efficient communication embodied in office equipment leave little room for the nuances and quirks on which communication outside the workplace relies so heavily.”¹

From this point a multitude of connections spring to the other three domains. First Psychology, as the devices I’m focusing my critique upon are non professional cameras, tools which are used not to capture an image for profit, but just for its implicit emotional value, personal memories which the Psychology domain organizes as Explicit memories:

“Explicit memory is the conscious, intentional recollection of previous experiences and information. We use explicit memory throughout the day, such as remembering the time of an appointment or recollecting an event from years ago. Explicit memory involves conscious recollection, compared with implicit memory which is an unconscious, non intentional form of memory. Remembering a specific driving lesson is an example of explicit memory, while improving your driving skills during the lesson is an example of implicit memory.”²

A sub category of explicit memories touches more in depth the material non professional, personal photography works with, that of Declarative memories:

*“Declarative memory is the aspect of human memory that stores facts. It is so called because it refers to memories that can be consciously discussed, or declared. It applies to standard textbook learning and knowledge, as well as memories that can be 'travelled back to' in one's 'mind's eye'. It is contrasted with procedural memory, which applies to skills. Declarative memory is subject to forgetting, but frequently-accessed memories can last indefinitely. Declarative memories are best established by using active recall combined with mnemonic techniques and spaced repetition ”*³

Declarative memories comprehend both Semantic and Episodic memories, with the latter being the ultimate link between the domains of personal Photography and Psychology, defined as:

*“Episodic memory is the memory of autobiographical events (times, places, associated emotions, and other contextual knowledge) that can be explicitly stated. Semantic and episodic memory together make up the category of declarative memory, which is one of the two major divisions in memory. The counterpart to declarative, or explicit memory, is procedural memory, or implicit memory. ”*⁴

A connection to a different domain emerges after the analysis of how these memories living in the form of digital photographs are captured, consumed and shared, a connection to the massive field of Cultural Studies, in particular to the Material Culture subfield:

*“Material culture study is, therefore, the study through artifacts and other pertinent historical evidence) of belief systems--the values, ideas, attitudes, and assumptions--of a particular community or society, usually across time. As a study, it is based upon the obvious premise that the existence of a man-made object is concrete evidence of the presence of a human mind operating at the time of fabrication. The common assumption underlying material culture research is that objects made or modified by humans, consciously or unconsciously, directly or indirectly, reflect the belief patterns of individuals who made, commissioned, purchased, or used them, and, by extension, the belief patterns of the larger society of which they are a part. ”*⁵

Looking attentively with a fresh eye at the way digital personal pictures are captured, consumed and shared, it is possible to identify the specific patterns the previous definition refers to,

specifically related to our contemporary society. Pictures can be captured one after the other in an, almost, infinite sequence, just partly limited by the amount of, ever growing, digital space each camera comes equipped with. As a consequence it is common to notice how many different pictures are taken of the same subject, in the search of the “perfect” shot, the one who represents the idealized version of the actual, real thing photographed. This leads to the first consequence of inflation. As many pictures can be taken and discarded, the implicit value of each one is greatly diminished. A second consequence would be the proliferation of artificial versions of personal memories, consciously built to represent the “perfect” version of the captured event.

Disposable perfected memories seems a tight but coherent definition of such panorama. Going on to the second point of this analysis, how these disposable perfected memories are actually consumed? Well they are instantly consumed, as soon as the picture is taken is immediately displayed back to the person who captured it who enjoys it for some seconds before storing it on the camera hard drive, ready to be shared with the rest of the world.

Disposable perfected immediate memories is the updated definition of such panorama. Lastly, how these memories are shared? Thanks to the advancements of the web technology the most popular trend in digital photographs sharing are those web sites which enable each user to deliver his images, virtually, to the rest of the world.

Disposable perfected immediate world delivered memories is, not only the definition of such panorama, but also a hint to the direction our society has been carefully pointed to, a direction which leads to a place where everything is fast, easy, painless, cheap, effortless, comforting, ready to be consumed, but totally and desperately deprived of the value of humanity... a path to self destruction.

“Successful interaction design requires a shift from seeing the machinery to seeing the lives of the people using it. In this human dimension, the relevant factors become hard to quantify, hard to even identify. This difficulty is magnified when we try to look at social consequences. Will the computer lead to a world in which our concept of individual privacy is challenged or changed? Will online addiction become a social problem to rival drug use? ... ”⁶

As a designer, paradoxically as it may sound, the only way I can react to such a situation saturated with “wrong” objects is to create a new one, a Post-optimal Object whose conception and design follows the perspective Anthony Dunne illustrates in the seminal Hertzian tales:

“The position of this book is that design research should explore a new role for the electronic object, one that facilitates more poetic modes of habitation: a form of social research to integrate aesthetic experience with everyday life through “conceptual products.” In a world where practicality and functionality can be taken for granted, the aesthetics of the post-optimal object could provide new experiences of everyday life, new poetic dimensions.”⁷

The device I’m envisioning lives within the intersection of the four major domains I’m taking into account: Photography, Psychology, Human Computer Interaction and Cultural Studies; it precisely resides in the tiny, but incredibly fertile design territory determined by Episodic memory, Personal digital photography, Slow technology and Material culture. The object I’m going to create will be designed to counter attack the current design trends in the digital non professional photographic field. First of all it won’t be user friendly, will be neither comforting nor consumable. The person who uses it will have to take a risk and sacrifice some of its time in order to commit to the experience the device proposes. A precise set of rules will be in place in order to re enact in the system I’m creating the same pattern that always appears in any respectful human to human interaction, a pattern which can be synthesized by the following statements:

When one person tells something important to another person, one person talks and the other listens and then, if needed, reacts.

When one person tells something important to another person, the two persons commit to the event, giving each other their attention.

When one person tells something important to another person, the setting surrounding the event needs to be adequate to the intimacy of the moment.

When one person receives the attention of the listener, it needs not to overflow the listener with information, but proceed step by step, respecting an implicit equilibrium in the discourse.

Ultimately the device I'm creating won't let the user perform but rather feel.

References

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