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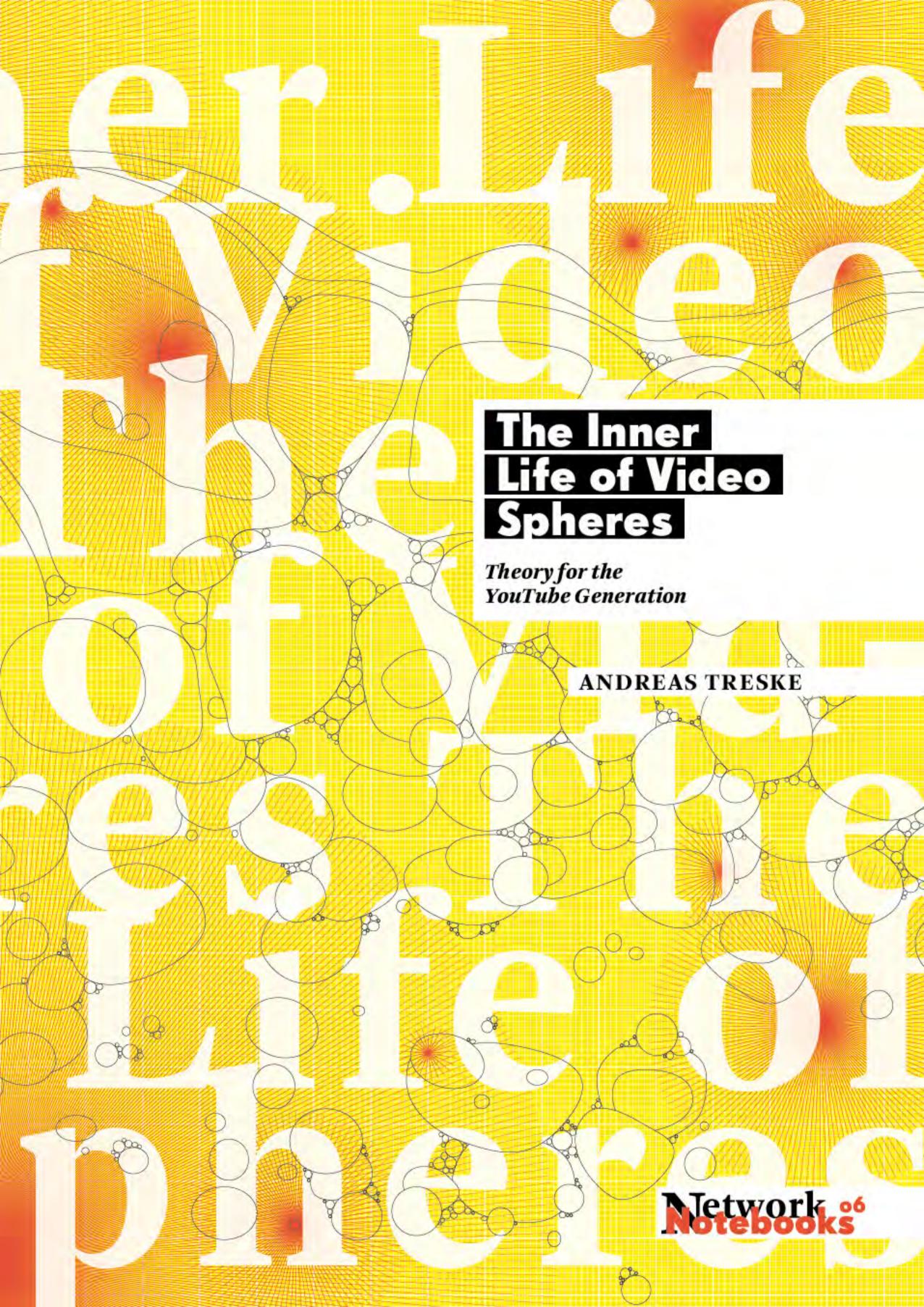
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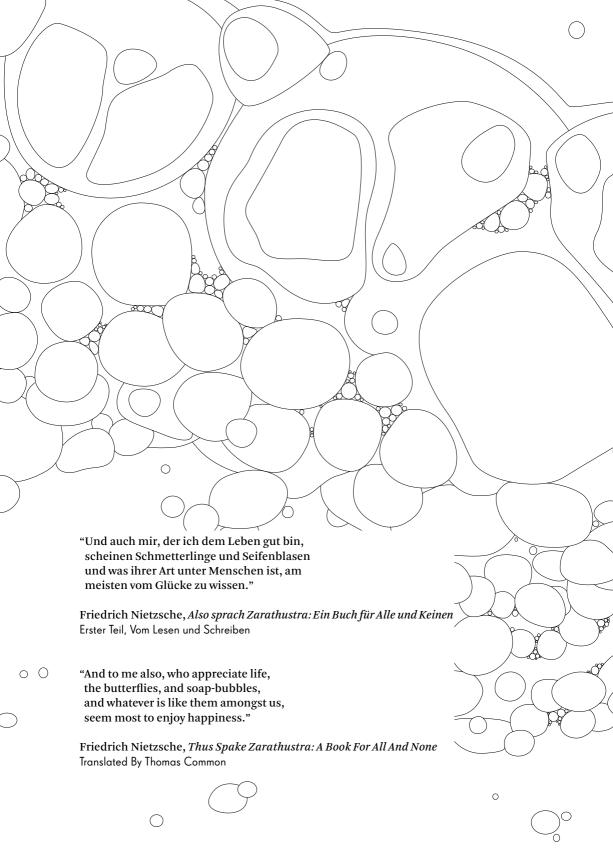




The inner life of video spheres

Theory for the YouTube Generation





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This essay is especially dedicated to Professor Dr. Johannes Müller, my teacher.

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This essay came into existence during the course of a project of writing about online video. The text itself expands on presentations I gave at the Video Vortex conferences in Yogyakarta in 2011 and Zagreb in 2012. Initiated through the second Video Vortex conference produced in 2007 by Geert Lovink at the Institute of Network Cultures in Amsterdam, the project continued as a constant meditation on the issue of online video, as well as an expansion of the Video Vortex events following the need and also demand to reflect on what is happening in our culture.

This essay would not have been possible without the generous support and help of my colleagues and friends as well as the institutions supporting my research. I am grateful to all the people too numerous to mention individually in the Video Vortex network for exchanging ideas, views and practices.

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Enter!

I am wearing video. Even the fibers of my t-shirt are video, shiny and gloomy. The shirt functions as my mood sensor, my changing look. I am astonished by its adaptability, its immersiveness, the speed and warmth of its lights and colors. My shirt is a wearable movie – I am its star! Now it becomes my skin, then my face, faithfully projecting my heart and mind. And when we are together, it is us.

Wearing video sounds like a nice fantasy, a detail that could appear in a cyberpunk novel or a news clip from the near future, or perhaps an object mentioned in the Wired Magazine column "Found: Artifacts from the Future." And though no one right now wears shirts exactly such as this, it no longer seems impossible or unrealistic. In fact it is easy for us to imagine such a scenario. It could even come into existence soon – technically, it is just a question of the materials and capabilities needed to transport and screen a video signal. If a t-shirt can be used as a wrapper for moving images, then we must toss aside the way we traditionally think about video. We should forget about the screen, the rectangular frame, the packaging and many other conventions of how video is typically conceived. Of the screen is the packaging and many other conventions of how video is typically conceived.

Essential to these near-future possibilities is that online video can be mapped onto objects connected by the Internet. Streamed, linked video from a controlled source could become skin-like surfaces; we then attach this online video to anything in a network environment. We just need to leave aside the conventions we are accustomed to. And given that online video is developing technologically at the same speed as the web, and since users and their practices are co-evolving, social conditions and conventions are also changing in a complex, technologically driven system that has already sped up our ability to adapt to new gadgets and processes. Online video today is very different from video we encountered just a few months ago.

The following text is an essay about online video. Its aim is to rethink online video as a complex ecosystem and artificial sphere of existence. Online video has reached a state that no longer corresponds to the conventional idea of simple, temporal media objects. Its status has shifted from being merely close to us to being together with us. To state this in a more radical way, we are 'with' online video in the world. This 'with' will be explored in this essay.

The starting point of this essay is similar to my former Video Vortex essays, which took a close look at the screen, online video and how its contextual environment is shared with other objects on the web, including us as users. This essay is split into several themes, inspired by movements of the kind used in musical compositions. These ideas are also set in the tradition of Nam June Paik and other artists who reflected on the way time-based

^{01 |} http://www.wired.com/magazine/found/.

^{02 |} Ted Nelson, the founder of the Xanadu Project, describes technology as a mask in his online video series "Computers for Cynics." Items such as the iPhone are just packaging and wrappers, visual conventions. Interactive software is a kind of movie, events on the screen that affect the heart and mind of the user. See http://hyperland.com/ccynPage.htm and http://www.youtube.com/watch?v=KdnGPQaICjk.

^{03 |} See 'Detailing and Pointing' in Geert Lovink and Sabine Niederer (eds.), Video Vortex Reader: Responses to YouTube, Amsterdam: Institute of Network Cultures, 2008, http://networkcultures.org/wpmu/portal/publications/inc-readers/videovortex/, and 'Frames within Frames – Windows and Doors' in Geert Lovink and Rachel Somers Miles (eds), Video Vortex Reader II: Moving Images Beyond YouTube, Amsterdam: Institute of Network Cultures, 2011, http://networkcultures.org/wpmu/portal/publications/inc-readers/video-vortex-ii/.

practices or art forms such as video art are grounded in categories and interpretations analogous to music. Just as John Whitney once noted, "My computer program is like a piano," ⁰⁰⁴ so images in the 'flow of time' are not painted. They are composed. ⁰⁵

Just as video was originally produced by an electronic beam in a cathode ray tube monitor, moving from dot to dot, line to line and frame to frame, or similar to how a musical composition moves from one notated line, page or tune to another, so I am developing a theoretical understanding of online video that is a reflection on these complex conditions in which *video* and we are together.

The first movement of this essay will be about the location of online video and modes of screening and viewing it, leading to the initial observation that video online does not exist alone. The second movement emphasizes the tools of online video, such as the operation of compositing and its impact on single video images as they expand in the space around them, thickening spherically in the networked environment. With the help of Peter Sloter-dijk's sphere project, the third movement recalls an older European line of thought about togetherness in spheres, here applied to video. Following this, the fourth movement examines how events can be transmitted in digital form and then, through digital video, become 'social' enactments in real squares in our urban centers, in effect creating a hybrid space. Finally, the fifth movement jumps into the video sphere itself, where from the inside it attempts to understand online video's essence and our togetherness in the world.

This is an essay about the time and space that we as human beings share with 'video', though it particularly emphasizes space, given that time's relation to video has already been much discussed. This space I call a *video sphere*.

^{04 |} John Whitney, cited from Siegfried Zielinski, [... nach den Medien], Berlin: Merve Verlag Berlin, 2011, p. 139. Siggraph hosts a special John Whitney biography page: http://www.siggraph.org/artdesign/profile/whitney/early.html (link from December 2012).

^{05 |} Siegfried Zielinski, [... nach den Medien], Berlin: Merve Verlag Berlin, 2011, p. 139: "Ein Zeitbild wird nicht gemalt, sondern komponiert." Reference to Gene Youngblood, Expanded Cinema, London: E. P. Dutton, 1970, p. 207.

First Movement: Never Alone

At IDFA DOCLAB in Amsterdam 2008, the Barcelona/Lisbon based company Bestiario demonstrated a data visualization based on the semantic relations between a set of TED videos, a work they called *Video Sphere*.

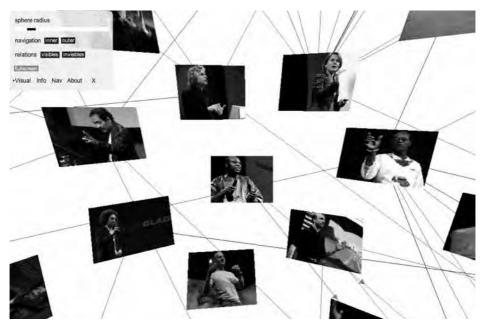


FIGURE 1: VIDEO SPHERE BY BESTIARIO, IDFA DOCLAB, SCREEN SHOT, 10 DECEMBER 2012 AT 10:21:05 PM

Their simple demonstration revealed how the videos link to and reference other presentations with related technological or design issues. The result is a spherical body of linked videos that can be viewed from inside or externally.⁰⁶

On the project's webpage, we see a single video with lines expanding outwards. Zooming out with the help of the provided controls, we realize that these strings are connected to other videos. Zooming out still further, we see that the graphical two-dimensional representation of linked videos forms a sphere. We have shifted to a perspective 'outside' the original, interconnected objects, an operation we can reverse if we zoom virtually back inside the sphere.

^{06 |} From the project's website: "Video sphere is a 3D sphere that reproduces videos from the renowned TED Talks archive and shows the relations between different presentations on technology, entertainment and design-related topics." http://www.doclab.org/2008/videosphere/.



FIGURE 2: VIDEO SPHERE BY BESTIARIO, IDFA DOCLAB, SCREEN SHOT 10 DECEMBER 2012 AT 10:21:34 PM.

Each TED video can still be viewed as a single video with its own time and duration. But as we move around Bestario's data visualization, we realize that none of the videos exist as a detached node. Each is linked to others that are themselves linked to even more. We could say that each of the videos has a neighbor. In their entirety, the videos create a spherical 3D object of the shared space. The sphere functions as a metaphor for their environment, and of the meaningful relationships between the videos.

Of course, it was clearly a design decision to visualize the data of interconnected videos in a spherical form, rather than other possible illustration choices in information design. But the resulting view of the spherical object-space reveals a powerful model that can be applied generally to online video. Videos that relate to each other are in a similar spherical environment, and we can also be connected to them in the same environmental condition.

Now, as we zoom out from a single TED video, it makes sense to introduce the theme of the first movement: An online video does not exist alone. A video's neighbor is another video, with a set of content data that is closer to the first video than others. Semantically the two objects have greater proximity, while also retaining their independent identities.

The Bestiario video piece of course has a limited range – it does not refer to the web in entirety, or to the sum of online videos hosted every day. But in general we could apply the concept of neighboring to any online video.

We most likely view online videos in a browser, which acts as a kind of container, a frame inside another frame. The his viewing condition the single video on a webpage is always surrounded by an environment of *things* in their place. The term 'things' here means anything that can be coded, that can be described or produced through software code.) It is possible that one of the things on the same page is another video, in which case the page recreates the function of a video jukebox. YouTube's design underlies this functional specification with its side panel of associated video suggestions.

Whatever appears or combines with online video, whether on the same page, within the same set of data, on a shared database or in a network, points to this essential characteristic of online video: It never exists alone. Other things exist simultaneously in qualitative relationships with each video, even if some relations are invisible to the user or only exist at the instant the video is playable. Altogether these things form spherical objects.

VIEWING CONDITIONS - SCREENS

Remarkably, online video differs from other audiovisual media by the simple but essential distinction of its screening practices. The classical viewing conditions of cinema and television involved a single screen with a single temporal object being screened. These mediums were designed to present singular temporal objects in an arranged sequence, using a linear programming style that treats objects as closed, complete entities. These classic media are also singular in the sense that only one work appears on the screen at any given time. There are no tags, no multiple windows or suggestion of another movie to click on the sidewalls. There is, of course, multiple layers of visual information on television screens when information bands run in the lower third, but these are combined with the main camera image to form a single, broadcasted, temporal object.

Today's viewing conditions have enormously expanded. A single video on a screen can play before us quite casually, in multiple formats and locations. Like bark around a tree-trunk, screens surround us in all circumstances. Just count all the screens on your way to work in the morning, after leaving your apartment or house; they are part of your daily environment. The interplay of colors and brightness on the screens fight for our attention, willingly interrupting the flow of our routine. We might not even notice them consciously anymore.

The screens around us are still singular, presenting temporal objects in programmed loops of variable length. They are still sequential. Yet in a networked environment these single screens are connected. Their temporal audiovisual objects, their videos, are served either from a central point or a connected server as a linear video stream.

Though their connectedness creates a plurality of semantic relations, these relations remain only an option at this point, not a necessity. Historically the video screen was simply used for monitoring a live electronic signal from a connected camera, and our use of screens reflects this former understanding of video. Interactivity does not yet seem like a

^{07 |} I elaborated on these conditions in more detail in my former Video Vortex articles. See Treske, 2011 and 2008.

^{08 |} Using the term objects appears to be limiting, but that remains to be discussed at another time.

natural usage of video. This situation can be altered however when the screen is not only a one-way broadcast but also allows feedback. Feedback refers to an action of input and, importantly, to the possibility of choice. So thinking ahead even further, the option of choice results in a change that takes place directly on the screen. This change is not necessarily a result of a viewer's action, but is one more likely of a sensation, a shift in the environment received by the attached or embedded screen sensors.

USAGES: SURVEILLANCE

While considering screens as monitors seems odd today, monitoring is still essential to our use of video. Video allowed simultaneity and multiplicity from the beginning and is therefore an ideal technological development for the surveillance of multiple unconnected spaces, from airports and shopping malls to banks and public squares in city centers – sites that Marc Augé calls 'non-places'.⁰⁹

The surveillance of space still calls to mind Daguerre's idea to use photography to document the movements of the enemy. The photograph freezes their location in a defined and known space depicted on a transportable object that could then be carried to the king. ¹⁰ The more recent, successful development of very small, light, high-resolution video imaging devices enables surveillance by remote controlled drones, robotic flies, swarms and supersonics. ¹¹ The increase of their use in the past few years confirms Daguerre's suspicion that there is a widespread need for surveillance capabilities. With the miniaturization of drones, very few places on earth remain out of reach.

USAGES: THE 'CINEPHILE'

To have on hand is another important development enabled by video technology: the possibility to store audiovisual temporal objects on physical carriers, namely videotape and the DVD. Videotape made video content transportable and capable of being viewed at any time. Video rental stores sprouted up on street corners, and audiovisual collections expanded in libraries and on museum shelves.

The practice of storing video content consequently led to the audiovisual archive, and the private archive in particular. The sum of widely collected archival video developed into the production of a 'canon', the superior list of audiovisual objects of value. Collectors began buying art videos in various analogue and digital formats; the most representative pieces of these became "exemplary finished 'products' from the video era." ¹²

Digitization, DVDs and the Blue Ray Disc are pseudo final storage developments that allow such habits to become exaggerated and have helped create the 'cinephile', the passionate

^{09 |} Marc Augé, Non-Places: Introduction to an Anthropology of Supermodernity, London: Verso, 1995.

 $^{10 \}mid Louis\ Daguerre, see\ Wikipedia\ http://en.wikipedia.org/wiki/Louis_Daguerre.$

^{11 |} Judy Dutton, 'Drones' Future: Supersonic Swarms of Robot Bugs', in Wired, 22 June 2012, p. 111, http://www.wired.com/danger-room/2012/06/ff_futuredrones/.

^{12 |} Tom Sherman, Video is a Perceptual Prosthetic, Halifax: Centre for Art Tapes, 2012.

private collector with his own quirks of archiving and screening his personal items. ¹³ The cinephile's video archive is connected to and constrained by a set of devices for viewing and replaying its items, such as the player/recorder and the monitor, allowing the videos to be accessed again and again.

SCREEN MODES: ONLINE VIDEO

But the single, full-screen, video-only device is becoming the exception. Video today usually refers to a mode of viewing audiovisual content on the Net and mobile devices. To talk about watching video automatically implies such viewing conditions and technological practices. A video on these platforms is embedded in a graphical human computer interface, where the full screen mode is just one option that can be chosen by the user through a designed interactive node – though most users will simply play back the video in its smaller dimension, as it is first presented by the browser.

Until a short time ago, the coding of a website defined the video as a single object, often stored elsewhere and referenced through a link, a text or an icon. The video had a distinct physical location on a server's hard drive. The website, as a simple container for the video link, was a separately coded object; it only opened a window or a frame inside another frame for viewing the online video. We had two individual objects, a video and a website, at two different physical locations, existing independently of each other but still linked. A loss of the link would not harm their individual identities, though they would no longer function in a networked environment as intended.

Even today the flat, two-dimensional browser appears to us as a representation of a window frame through which we can look on an endless universe of other windows. Online video is viewed within these flat frames and referenced through still photographic key frames, each with a static design and selected placeholders that initiate a time-based or durational experience with just a click. You can relate the browser's aesthetics to the layout of graphic novels, which appear as a panel board with a 'gutter' between each single-framed drawing. The browser's design also provides continuity between the singular frames' graphical arrangements as we move our eyes over the 'gutter' between each one. Content and design blend, for instance, in the layout of an online newspaper site or on a YouTube page, with its suggested videos on the side. The discreet panels blur together into a singular reading experience.¹⁴

Renaissance framing is a crude visual representation system, one that reflects a onceruling ideology begun in part by Leon Battista Alberti (1404 – 1472). The design of video's online presentation derives from these Renaissance representation techniques. Browsers on digital devices are still crooked, prosthetic, flat spaces that depict online moving image content. They are contextual hard-boarders framed under rigorous conditions of the website's layout and underlying style sheet. The single screen image acts as the border, limited by the physical shape of the computer.

^{13 |} For a detailed explanation see http://en.wikipedia.org/wiki/Cinephilia.

^{14 |} See Treske, 2011.

However new forms with multiple frames of online video increasingly blur the borders between what we still perceive as physical reality and representation. ¹⁵ We can now start to think of a setting with multiple screens connected through a wireless network. For example, on my desk sits a computer with one screen that has multiple frames open; all of these frames are somehow related and refer to some invisible content expanding beyond the screen. On the first screen, a ball jumps and is pushed to the side, then appears on the second screen, then jumps to the next and so on. Even without physical contact, the windows on the screen have expanded.

Another simple example is the SIFTEO games stones. ¹⁶ Instead of fixed physical objects, a user plays with cubes covered with a video skin. The image can move from a screen on one cube to another cube's screen, and the player can move the cubes himself in any way he wishes. The connections between cubes are not visible, yet each object senses its environment and can connect with the other objects. These are no longer simple networked connections, with one point connecting to another, but are multiplied, spherical relationships. Through this multiplication a shift occurs from the network to the sphere.

In his essay "Some Experiments in Art and Politics", Bruno Latour picks up on the features of this sphere in the artworks of Thomas Saraceno. "What Saraceno's work of art and engineering reveals is that multiplying the connections and assembling them closely enough will shift slowly from a network (which you can see through) to a sphere (difficult to see through)." Latour refers to Saraceno's work to illustrate the lack of visibility in a spherical environment, where its densities can hide single objects. However, representations that operationalize the networked environment could offer the opportunity to see what is actually 'around' an online video – that is, what is also there at the same time in the sphere.

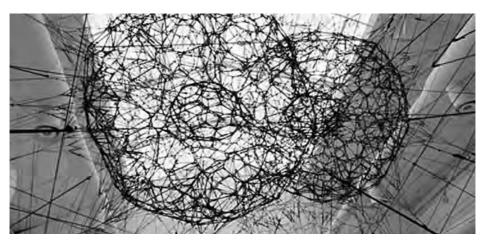


FIGURE 3: TOMAS SARACENO, "GALAXIES FORMING ALONG FILAMENTS, LIKE DROPLETS ALONG THE STRANDS OF A SPIDER'S WEB", 2009. http://www.e-flux.com/journal/some-experiments-in-art-and-politics/.

^{15 |} Ibid, p. 32

^{16 |} https://www.sifteo.com/.

ONLINE VIDEO NEVER EXISTS ALONE

Online video will always be attached to a range of items. By this I mean that what appears as a video's link or tag signifies the existence of at least one pair of objects: The video and its link. In a simple case this pair could be the online video and the html file it links to. In the same manner a website also signals at least one pair of things: a single page is a string of code paired to a css style sheet, video or user action. In all of these cases, when the other object pairs with the video they create a common space.

One difficulty needs clarification: A pair could also simply be defined as an assemblage of a small number of things that surround an online video. These few things can be individual digital objects or modules of code. The assemblage could be built from some existing modules to create a new entity with the video embedded in it (revealing modularity as a basic form for any new media item). If we analyze a video's relationship to its environment, we could say that the pair is the minimum amount of items that, when they come together, produce meaning.

With a new style of coding, the webpage environment will adapt in relation to the video it is embedded with, and the video will in turn adapt to its environment. The pair as a basic constellation is essential to this adaptability. The online video has a togetherness with an-other, and both act as two essential objects, simultaneously separated and unified. Any thing on the web can adapt when it comes together with an online video.

HTML5 provides a technology of programming that instructs the user about what a specific object's type is, how this object appears, what it looks like and what it can do. For this reason a video on a website looks and behaves like a video. But this is still an analog view and analog representation of video. In the digital world, a video should be treated as a temporal object related to other temporal objects that are each related to still other temporal objects. The temporal object can be modified and acted on as it interacts with other objects in a commonly shared environment. We could say that the environment understands the video, just as the video can comprehend its environment. The video is in a complex, nonlinear relationship with its environment, a relationship that can be described as neighborly and as having its own atmosphere. The things in the neighborhood come together with online video to create climatic conditions of hotness and coolness, attraction and attention. 18

Maybe we feel alone when we watch web videos on the handheld devices kept in our pockets. But we need to pay attention to the possibilities and multiplicities and others whom we are with while experiencing the video. These others, of course, are not the people we presently sit by in the train compartment. We are watching the video along with an undefined multiplicity of other beings. A video never exists alone. At first glance we find that we are in the smallest possible environment of togetherness: we create a paired constellation with the video. What this constellation means needs to be explored further.

^{17 |} From the announcement of the 9th Video Vortex conference: "Re:assemblies of video - Currently we see new configurations of the components of online video culture. Online video platforms such as YouTube are as assemblages of assemblages a sense pointed to by Deleuze, Latour and others: in flux and loosely effecting one another and neighboring contexts like television, journalism, activism or filmmaking. Online video spheres of use and production consist of assemblages in the same way, asking for new discourses, practices and reflections." 22 November 2012, http://videovortex9.net/about/.

^{18 |} Here, hotness and coolness is an indirect reference to Peter Sloterdijk's Sphere's Trilogy.

Second Movement: Thickening the Image



FIGURE 4: MOZILLA POPCORN WEBMAKER WITH THE LEGO MADLIB PROJECT READY TO REMIX. IMAGE FROM 26 DECEMBER 2012, HTTPS://POPCORN.WEBMAKER.ORG/TEMPLATES/BASIC/?SAVEDDATAURL=LEGO.JSON.

"Tell the story of a minifig hero by changing the location of Google Maps, text and images. A great way to learn the concepts of 'Web Native Cinema!'"19

WEB-MOVIEMAKING 101

Web documentaries and web movies are typically promoted as easy to produce and share without the necessity of learning complex code. Remixing and mashing up a previously posted story, such as the example of the Lego fantasy character in figure 4, have become attractive to an expanding community of web moviemakers. What is 'web native' about these applications is not just that the video image must be composited, but also that it can connect to other things on the web, such as content that adds a narrative element at certain timeframes when the video is played. Rather than posting an isolated video, a more complex story can be built using the opportunities specific to the web. This is how Mozilla and other web companies envisioned the web in 2012 for instance, when they described how online video will offer a seamless integration of moving images with other web content such as text, pop-ups, Google maps, images, Wikipedia and Twitter. Video becomes just another part of the story along with these other elements; it is the temporal compo-

^{19 |} See https://popcorn.webmaker.org.

nent advancing the story and setting the timing for events to take place in its flow. And while this type of web-based, linear storytelling adopts conventions and operations from a diverse range of familiar audiovisual narrative forms, with the additional operation of compositing it can combine these with the architecture of the web to produce expanded, complex forms to generate advanced levels of storytelling.

Earlier this essay described online video as existing within a neighborhood environment. This neighborhood is spherical; its shape is constructed through semantic relationships that are built as videos relate to other videos and all other things that the web at that moment is assembling. An operation, a strategic action, can be performed in real-time on a single instant of a video, allowing the web to become a part of the video.

The HTML5 video framework provides a toolset to create online movie entertainment that can be expanded to include the features of the web. The web understands online video; this means that the software on the web has learned to manage video-like, temporal objects. Online video is applicable to the media operations of its software environment. This should not be remarkable, since software began adopting more conventions of the movie world as its wider assimilation took place. In his videotaped critiques of computer technology, Ted Nelson points out this evolution when he describes interactive software as a kind of movie, with a similar ability to create events on screen that affect the heart and mind of the user. The video framework in HTML5 simply tries to encourage users to create stories with the tools provided by the software code. The flat front-end of websites has evolved into a narrative environment, arranging its coded objects more and more into story worlds. Of course, constructing a narrative is also one way to arrange elements in a database, if you are provided with a plan for reading these elements in a certain coherent way. As Lev Manovich noted in *The Language of New Media*, database and navigable space are the two major forms of new media. Both forms are in focus here.

OPERATION: COMPOSITING

Constructing a web movie requires one of the most basic operations of new media: compositing. Compositing transforms any single image found in the video, by combining new layers with the basic background layer in a way that transforms not only pixel values but adds further elements, and so it can produce meaningful relations between a wide range of objects.

Practically for the beginner creating a simple web movie, the users' operations are nothing more than copying and pasting items on top of an underlying video that was loaded from the media browser provided through the graphical user interface of the software. The library to the side of the video player presents the items to be added, ranging from text to Twitter.

The video "Bring the Web into Your Videos" promotes adding value to a video through additional content that can help analyze it or mash it up. ²² In the same promo the slogan

^{20 |} Ted Nelson, 'Computers for Cynics', see http://www.youtube.com/watch?v=KdnGPQaICjk.

^{21 |} Lev Manovich, The Language of New Media, Cambridge: MIT Press, 2001

^{22 |} See http://popcornjs.org.

"Lets make video and the web play nicely together", used to promote Mozilla's popcorn. js project, suggests that these operations are somehow not sufficiently smooth yet. There is seemingly no standard for either browsers or native applications for IOS and Android devices in 2012 to support this kind of online video framework. Nevertheless, they demonstrate a set of tools that could transform the way we will create online video by using the most basic new media operations.

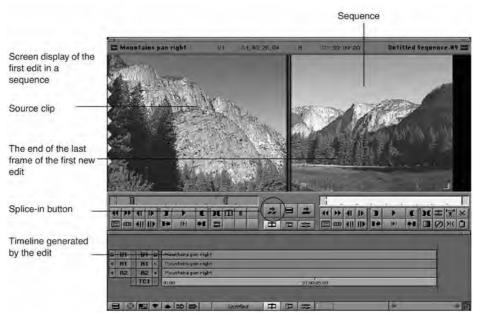


FIGURE 5: AVID MEDIA COMPOSER EDIT MONITOR WITH COMPOSER CONSISTING OF A PLAYER AND RECORDER, EDITING TOOLS AND TIMELINE. GRAPHIC BY AVID TECHNOLOGY, AVID MEDIA COMPOSER USERS GUIDE RELEASE 7.0, 1998, P. 381.

TIMELINES AND EVENTS

Looking at the screenshot of Mozilla's Popcorn Webmaker in figure 4, we see how the conventions of video editing and image compositing were adapted by the web editor provided by the Popcorn.js project. These conventions of interface, and especially that of a nonlinear video editor (NLE), are employed to make these new tools familiar while allowing interactive storytelling with online video content from the web.

Like every non-linear editor, the Popcorn Webmaker features a timeline, a canvas and a container for the assets of a project, whether producing a newscast or a pop-up video event. The outcome of the project assemblage is defined as an event that can be shared through various online services. It has underlying sub-events referring to added text, maps, tweets or other plug-in outputs also available as an object library. What was once a cinematic narrative, whether a videotape of a wedding or any personal memory of a special occasion, is

^{23 |} From Kaltura's notes and slides on the HTML5 Developer conference from October 2012, from http://html5video.org/kaltura-html5-presentation/HTML5Dev2012/ (the the link is now dead).

now redefined as an event in a digital, networked environment to be viewed on any screen in the cloud. An event is in this way a condensed instance of a defined duration, similar to a disruption in the flow of life. 24



FIGURE 6: TIMELINE OF FINAL CUT PRO X, HTTP://WWW.MACLIFE.COM/ARTICLE/GALLERY/10_BEST_NEW_FEATURES_FINAL_CUT_PRO_ X#SLIDE-0.

A video is displayed with a timeline, a graphical two-dimensional visual representation of the time span of the video, its length and its internal sequence of shots. A shot is the smallest unit of continuity with a single identity. The digital clip is actually a variation of the definition of the shot, since it refers to the shot's GUI representation; the clip either stands for the full length of a shot or a played back part of it, displayed as a graphical bar or rectangle. The shot's rectangle is horizontal, stretched in relation to the viewed duration. Objects are arranged on top or below, before or after or even inside the video. In a non-linear editor, these objects would be other videos, shapes and text elements arranged in a hierarchical formation. The process of editing is then the organization of the material based on the story or narrative.

Continuity and duration are the main characteristics defining the clip. The frame is the single division inside the video signal (for instance, one second of video in PAL has 25 frames, NTSC 29.97, etc). The frame, as an area, defines the image, delimiting it with a location between its borders; it acts as its container. While the photographic image is more a question of storage, the video image is rather a question of transportation or movement. Due to its movement, the video image is written and read pixel-by-pixel and line-by-line

^{24 |} A digital event, in contrast, could simply be the interaction of the user and the response of the acted-on object to display a temporal object. In software code an action would be initiated through a placeholder, so you could for example write "on this, do that", so when I click the play button, the click highlights the button as well as initiates the code for the video to play in the window.

from the left to the right and top to bottom. Motion occurs between pixels and between the lines, in combined horizontal and vertical movements.

The timeline of non-linear editing software can expand vertically to display the hierarchically structured video tracks, which are layered on top of each other. The relationships of These video layers are defined algorithmically by a mathematical operation that describes the relationship between the top layer and the lower layer. For the output of the sequence, the vertical layers on the graphical Y-axis are collapsed into a single output stream; they can also collapse at any one point into a single image composite.

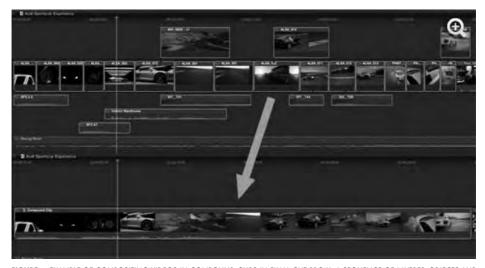


FIGURE 7: EXAMPLE OF COMPOSITING VIDEOS IN COMPOUND CLIPS IN FINAL CUT PRO X. A SEQUENCE OF LAYERED OBJECTS AND VIDEOS IS COLLAPSED INTO ANOTHER MAIN SEQUENCE. HTTP://WWW.MACLIFE.COM/ARTICLE/GALLERY/10_BEST_NEW_FEATURES_FINAL_CUT_PRO_X#SLIDE-0.

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FIGURE 8: A TYPICAL ADOBE AFTEREFFECTS TIMELINE SHOWING A CONSTRUCTION OF LAYERS OF IMAGES FOR A VIDEO ANIMATION WITH KEYFRAMES FOR POSITION AND SCALE CHANGES. SEE HTTP://LIBRARY.CREATIVECOW.NET/ARTICLES/ONEIL_BILL/LIGHT_STORM/TIMELINE LGJPG.

VIDEO PROCESSING FOR THE WEB

When we display the timeline of the online video, any additional objects we have incorporated also exist in their original place on the web. For example, a Google map integrated into the video is also somewhere else on another server, wherever Google left it. These additional objects are juxtaposed with the original layer in the video editor as it were, creating another axis or dimension entirely different from the space directly viewable in the graphical representation on the screen.

We need to think of this flow of images expanding not only in time, but also as each frame extends into the space around, behind, nearby and in front of every visible frame on the two-dimensional screen. A map, a blog and a wiki are all objects within reachable closeness that can add to this dimensionality.

With compositing, the process of constructing a two-dimensional image out of layers of other images, shapes or texts is nothing new (Figure 7). The content of the frame is built with the understanding that external objects are there, but they are now invisible. The outside exists, but it is a virtual space beyond what is immediately before us. Online video however presents an entirely new environment, one that is not simply two-dimensional; the environment changes with the single frame as the latter is also changing, in a real-time moving image stream. What is new therefore is the space expanding around and shifting along with each single frame at the same time, creating a multiplying effect.

Furthermore, the object that is added as a layered element in the web movie editor – for example, an arrow pointing to a location on a Google map – has the characteristic of a *behavior*. In software terms, a behavior of the video is an interactive node appearing at a specific time in the video. This added ability or behavior opens up an expanded story world. For instance, while the video is playing, the user could act on it directly by clicking on an interactive Google map; the map could either appear at the side or replace the video through a soft transition without losing the feeling of continuity. Or in another instance, a Twitter box could appear and show streams of tweets related to the video. Again, the user is able to interact.

Temporal objects such as the overlay on a video or a side box with maps, for instance, can exist as content outside the viewable framework, independent of the assembled sequence. The important fact here is that these independent things have a relationship with the video at the same time, while retaining their own identity and independent existence. They appear in one instance as a layer of the video, but in the same instance they exist separately from it. While traditional compositing creates a fixed unity, this more recent operation of compositing produces the semantic relationship of a pair.

ELASTIC REALITY

Compositing, as Lev Manovich argues in *The Language of New Media*, is a very basic operation that defines the image as a montage. As a mathematical operation, compositing typically adds or multiplies elements; it can also subtract the available information or data that defines an image, as when two pixels create black. The components of this process

keep their separate and modular identity during the editing. ²⁵ With video the shot as a 'block of duration' is divided into a 'montage cell'. The frame defines the borders of this cell. When we combine the shot with new layers we have "the application of transformations of discrete mathematical values through different kind of operations." ²⁶ D.N. Rodowick describes this as the transformation from physical reality to 'elastic' reality through the process of compositing a two-dimensional moving image. The aesthetic of compositing creates smoothness, continuity and seamless boundaries. The criteria for these aesthetics include the invisibility of all layers, continuity of movement and the devaluation of filmic editing. With compositing there is no necessity for 'cuts', and therefore no need for the edit as a form of expression. Montage as Eisenstein defined it never actually takes place. Compositing in a web movie creates a fluid movement between web objects, while still allowing them to identify with and be differentiated from each other.

THE VIDEO SOURCE

As a quick side excursion, it seems worthwhile to have a look at the significance of the source data of an online video. In contrast to a non-linear video editing system, the editor software on the web has no relationship with the physical location of the video source. The physical video as an original source does not change after editing starts. The video is in the cloud and therefore accessible from anywhere at any time, able to be edited in infinite variations. Editing is simply a command with respect to what and how parts of this video will appear when. Video storage is therefore not related to the video as a digital object. Once captured in the cloud, it has a definitive, assigned physical location as well as a fixed size and volume – its own physical dataset with a beginning and an end. If the video is played back from this physical location, then its playback is just one possibility out of endless variations of playbacks. There is always the opportunity to play back a shorter or smaller section; we can simply select the length we want. If there were another version of the source, there would also be another temporal video object existing in the form of another unique digital event. The cloud itself does not differentiate between the source and the other possible variations of playback.

The physical video has no life in itself until it becomes an event, that is, until it becomes an assembled video.²⁷ Until this transition it is purely the body of a time-stamped moving image, a recording that has not been remixed or mashed-up. It is just a chunk of data. The software environment and the user can bring the chunk of data to life as an online video through the basic operation of compositing web things together; in this way the video finally transforms into an event.

^{25 |} D. N. Rodowick, The Virtual Life of Film, Cambridge: Harvard University Press, 2007, p. 167.

^{26 |} Ibid, pp. 169-170.

^{27 |} In the past the assembled video was called an edit or a sequence; now Apple Final Cut Pro X calls the sequence of moving images assembled on a timeline an 'event'. An event can also be the recording of something that is happening live and streamed over the Net with users switching in and out.

THICKENING THE VIDEO IMAGE

In a digital nonlinear video editing system, the horizontal operation in the timeline is based on the conventions of the traditional film edit as shots are assembled one after another. The vertical operation of these systems however is specific to video editing. Video clips are placed on top of each other in the form of tracks, and calculations can be performed on them or they can be mixed together. Both operations are essential to the traditional production of movies or films. Now a third operation can be added, one that simultaneously compounds objects together such as maps, tweets, other frames or even screens, such as the screen of my computer and the screen on my smart phone together on the table, while keeping their discreet identities. As the x-axis is defined by time and the y-axis is defined by shape and layer; it is a very simple step to add the z-axis to the moving image stream and build a three-dimensional image object – a sphere.

I call this operation *thickening the image*. The image is still the original, but it expands into a 3D space beyond it. The thickness would be equal to sculpting or modeling the image into a spherical object. No longer a screen image (a 2D slice of an image), it can expand spherically into the actual physical space around the screen. This could be done in several ways, for example by continuing the image frame onto another surface in the same physical location, or by remote-controlled drones that are both manipulated by video and also project it. The same phenomenon could apply to a sports video game played on Microsoft's Xbox with the Kinect sensor attached, or a Wii with a wireless remote in the hand of the player. The image in this instance carries into the physical space of the player; it appears as one game 'body' but is actually composed of more than one material surface.

At a certain point the terms 'image' and 'video frame' are just necessary explanatory categories for an entity that now has the density of an object and a defined area of an event or a form, depending on context and discourse. While the image object is visual (rather than a mental or neuro-image), what we mean by an image form remains a possibility. Screens are also technological possibilities, and as such they shouldn't be taken for granted anymore. The emergence of new patents will radically transform devices of course, but so might the need for objects with video skins that can project out towards us, around us and around themselves. Nanotechnology might even enable video-like clothing, as mentioned before.²⁸

The 'axes' of Euclidian geometry – as when x and y refer to vertical and horizontal dimensions that can be said to resemble the two-dimensional physical surface of screens – are clearly not adequate for describing the qualities of an image, but they can help us characterize it in these early stages. In this equation, z refers to depth. The depth of the image object is associated with other visual and temporal objects surrounding any online video, giving the video a cultural and linguistic depth. The video is not only put in an informational context, based on its semantic content for instance, but also in one that is relational, and therefore social.

In other words, I am suggesting that we consider the 'flow of time' as a continuous horizontal dimension. This continuous dimension or flow is intersected by and has addition-

^{28 |} Tm uncertain about continuing to talk of screens as they appear in our living rooms, as I see this technology soon transforming into other kinds of devices, such as objects with video skins able to project towards or around us and around themselves. In my fantasies my t-shirt is a video

ally vertical overlays of other blocks of video. This intersection then creates a third dimension, and this depth is filled with simultaneously occurring events and things, both social and cultural. It is never empty or nothing.²⁹

A timeline of temporal objects like this is not yet familiar to us. Simplified, we could imagine this timeline as a chain of pearls or small spheres flowing or floating in time. While you focus on one pearl, you see that another chain also goes in another direction.

We are dealing with the simplest form of the construction of choices found in various kinds of objects. The link refers to an existing, parallel stream or flow of images, and it ends up unveiling yet other thickened images. The link refers to another space, related to other objects intersecting with the first. These spheres can all be different sizes depending on what takes place at a particular moment. At the same time, at a single intersecting point in the flow, the expansion of the image into a space or depth has the ability to crossover into another space. We could describe this movement as a link or an action that has interactivity.

Exactly what an image is, as defined in the conventional sense, has become ambivalent. The expanded image object goes beyond Vilém Flusser's descriptions of image carriers and the portability of images:

Among other things, an image is a message. It has a sender and it searches for an addressee. This search is a question of its portability. Images are surfaces. How does one transport surfaces? It all depends on the physical bodies on whose surfaces the images are affixed [...] Recently, something new has been discovered. Disembodied images, 'pure' surfaces, and all the images that have so far been in existence can be translated (transcoded) into images of a new kind. In this situation, the addressees no longer need to be transported. These pictures are conveniently reproduced and transmitted to individual addressees wherever they might be. However, the question of portability is a little more complicated than it has been described here. Photographs and films are transitional phenomena somewhere between framed canvases and disembodied images. There is, however, one unambiguous tendency: images will become progressively more portable and addressees will become even more immobile. 30

Yet by referring to the image as a spatial object or even as a form, the question arises as to whether an image can ever be purely a 'form'? A pure form would make the image devoid of any signifiers that create linguistic, affective and cognitive associations and references.³¹ The video image without a web operation would be a kind such as this, a video without life.

If the operation cannot be described as a thickening of the image, then it is simply a process of connecting one image to another, similar to connecting one container to another

^{29 |} In a further discussion of this issue I would like to recall and analyze historical aether theories, which would clearly state that there is not 'nothing' between the objects.

^{30 |} Vilém Flusser, 'Images in the New Media', Writings (Electronic Mediations), ed. Andreas Ströhl, Minneapolis: University of Minnesota Press,

^{31 |} Quoted from an email conversation with Aras Ozgün as a response to an earlier version of this text.

container or one temporal object to another. There is nothing special in this action. The images remain mechanical and lifeless, and they ignore what is actually happening on the web already: a series of spherical connections, as the web video visualization piece by Bestiario shows explicitly.

3D EXPANSION AND IMMERSIVE PLACES

Several years ago, our idea of an expanded screen would have been a 3D video stream coming towards us, or a wall of parallel monitors, as we still see every evening in the news on some TV channels worldwide.³² Both representations are related to our established screen-viewing position and the conditions of a single vanishing point perspective; they situate us in the same emotional position as the Renaissance viewer in front of a wall painting. These representations always suggest a single screen, not a multiplicity of them surrounding us at the same time, in every instant. The virtual reality cave was one of the first attempts to break this basic condition by creating a simulation of what the digital environment can be. The cave could visualize the information surrounding the researcher and therefore embed her in an immersive space. As an artwork that utilizes a virtual reality setting, Char Davis' Osmose (1994-95) for instance succeeded in immersing a person in a multilayered world of light, shape and organic forms, similar to an underwater dive. In this work breathing is used to navigate the virtual space as visualized through a stereoscopic head-mounted display with three-dimensionally localized, interactive sound. For Davis, "such environments can provide a new kind of 'place' through which our minds may float among three-dimensionally extended yet virtual forms in a paradoxical combination of the ephemerally immaterial with what is perceived and bodily felt to be real."33

Today's 3D films still rely on planar representation technology. The visual space is filled with objects in order to give the feeling of something extending out in front of the audience. Individual elements continue to be perceived as cutouts, and viewers experience an uncertainty about the distance between objects and the space that separates them. Stereoscopic viewing is analogous to the 3D experience: the denser the object space is, the greater the experience is.³⁴ However, these films remain in the realm of the Cartesian representation of space. A movie such as *Avatar* still operates on the single planar surface image; it has the flatness of the surface carrier and the portable image slice, even as the image spills into the space in front of the screen. The 3D film hasn't left the representational realm of Renaissance measurements. A thickened image is more than this. A thick or fat image, an image object with a body, does not involve the same continuity suggested by these representational conventions. The continuity and duration of its inner space is of an entirely different semantic kind.

^{32 |} Lev Manovich uses one of the largest monitor walls for representing visual data in academia in his research lab in San Diego.

^{33 |} Char Davies, 'Changing Space: Virtual Reality as an Arena of Embodied Being (1997)', Multimedia: From Wagner to Virtual Reality, Randall Packer and Ken Jordan, eds. New York: W.W. Norton & Company, 2002, pp. 293-300.

^{34 |} Jonathan Crary on stereoscopic images in Jonathan Crary, Techniques of the Observer: On Vision and Modernity in the Nineteenth Century, Cambridge: MIT Press, 1992, p. 125.

'SPACE OF FLOWS'

When the image object expands into the flow of time by pairing with various other objects, including the user's physical body in the expanded space around the screen, it calls our attention to another important question: Where is the user's place in relation to these flowing, continuously changing, real-time temporal objects of variable density? What kind of a space is this?

Manuel Castells formulated the term 'space of flows'.³⁵ Castells proposes a new spatial form, a space dominated by social practices characteristic of a network society. "The space of flows is the material organization of time-sharing social practices that work through flows."³⁶ *Space* brings together practices that take place simultaneously as people engage in social relationships that assign form, function and social meaning to space. While spatial forms are reflections of social structures, space is not just a reflection of society – it is society itself. Social action is therefore deeply connected to time and space. *Flow* can signify variously the flow of capital, of information, of organizational interactions, of technology, of images, sounds and symbols. Flows are the expression of the dominant processes in our life. Crucially, technology as a flow is developing so fast and with such complexity that we feel the need to follow it at the same speed. How we use media and even our experience of daily life changes with these developments; a process of adaptation ensues, and through this we will be able to handle even more complex issues. The thickening of an image, whether through or within an online video, is another possible means of managing this adaptation of fast technological flows.

Some questions to ask now are: Where are we exactly, when we share a space with these temporal objects of various density? What is the nature of our position towards these objects? Are we still only watching them from the outside or are we surrounded and therefore inside with them? Is this space immersive? Can we dive in?

 $^{35 \}mid Manuel \ Castells, The \ Rise of \ The \ Network \ Society, New \ York: \ Blackwell \ Publishing \ Ltd, 1996.$

^{36 |} See Felix Stalder: The Space of Flows: Notes on Emergence, Characteristics and Possible Impact on Physical Space, http://felix.openflows. com/html/space_of_flows.html, and Felix Stadler, The Status of Objects in the Space of Flows, Dissertation, University of Toronto, 2003, http://felix.openflows.org/html/objects_flows.pdf. See also Wikipedia on Castells http://en.wikipedia.org/wiki/Space_of_flows.

Third Movement: In-Relation / Soap-Bubbles

For many years we've tried to describe and analyze video's relation to time. This orientation is based on a technological focus that did not take into account, outside of an artistic avant-garde, other possibilities that the electronic image could offer the future. We do of course experience togetherness with the moving image in the architecture of cinema houses and the entertainment rooms in our home, just as there is the literal togetherness we share with the things and furniture in our apartments. Still, there was never much attempt to place humans in a spatial relationship with video, or to describe a kind of togetherness in the space we co-inhabit, or even to assume that video inhabits a space or has any depth at all. Depth is a quality of digital, networked video, not of the analog signal-writing video.

Video in the past was technologically defined as a system of recording, reproducing or broadcasting moving images. For some generations even today video is still a tape in a box on a shelf.

OF TAPES AND SIGNALS

In the context of video art, Yvonne Spielmann made an immense effort to work through the specifics of video as an art practice and as a medium. Her book *Video: The Reflexive Medium* is packaged together with a curatorial edition of 40 years of German video art along with similar projects in the UK and at the Pompidou center, just to name a few. During this span of time there seemed to be a global attempt to freeze the state of video as an artistic practice, as well as a medium and a media technology. In the shadow of a continually evolving media art scene, video became an established and now well-categorized and identifiable item in the art archive, with a certain value on the market. In an economy such as this video can be catalogued and made collectable, all of its potential clearly identified and no longer subversive; though if this were not the case, many works could have been lost.

Once Nam June Paik noted ironically in a podium discussion that it would be impossible to write a PhD on video art, because it is simply unfeasible to watch all the minutes and hours of a video signal. Here, at least in the citable catalogues and publications, numerous works are listed with a title, an artist, a photograph and a value (though of course, the last is usually not published) implying that these videos have been watched. This activity produces a 'canon' of video art, classified in a database archive alongside other historical, national, European and Non-European artworks. The archive necessarily categorizes the single video work, numbered by year; it also defines the artist in the gallery discourse, adding credibility that can open the doors of contemporary museums.

Clearly, then, the evolution of video into the living space of the online environment is contradictory to the canon's needs for a stable work of identifiable authorship.

Returning to Yvonne Spielmann's definition of what video is, she writes:

Video is an electronic medium. This means its origin depends on the electronic transfer of signals. Video consists of signals that are kept in constant movement. Video signals are generated inside a camera and can circulate between recording

and reproduction equipment (closed circuit). They can be variously modified by processors and keyers and transmitted both auditively and visually. Video is the first truly audiovisual medium that, in contrast to film, does not generate images as a unit and does not display the materiality of a filmstrip...

The way the electronic signals are processed and transformed alternatively into audio and video denotes the media-technical conditions for realizing a medium, whose forms of display derive directly from these electronic signal processes.³⁷

For Spielmann, the important characteristic of video is that it breaks the material unit of the image. The image is created by a signal that is continuously moving, flowing and processing. She explicitly references the first video devices as they were used in video art's early days, highlighting closed circuit installations in particular. This emphasis neglects the original intentions of artists and art works, such as those by the Flux artists and other provocations against TV and mass media. While she does not neglect these works, her book displaces their provocative origins to make them more palatable to art recipients and art historians interested in creating a commodity, a piece of art. In this matter she has recreated the aura of the curated market and the art historians' catalogs. Some of the early provocations of video art simply disappear from the record with this approach. Her depiction of video-in-use also brings to mind Raymond Williams' description of television as a constant flow of real-time immediacy. These media-technical conditions arrest video in the analog world. Of course, this is done to exhibit the specific aesthetic of these videos and so to distinguish them clearly from a perspective that situates them within a passage to the digital medium. It is necessary to keep these references, as there continues to be a need for them.

SWEEPING THE SCREEN

From the point of view of the educational practices of established film academies, the Brazilian Professor Maria Mourão strongly emphasizes that video is "analogous to the concept of time". 38 In a report for CILECT in 1997 she calls the construction of the image point-by-point, or pixel-by-pixel, an act of "sweeping the screen within some fixed time" over which the image is built. It is video's 'sweeping' which differentiates it from film. In contrast, the cinematic image is a fixed block of photographic origin, moving in a sequence. In the projection system of the cinema, the image of light is also paired with the image of pure black – no screened image can exist without its counterpart of blackness or darkness, at the moment when the shutter closes on the image projection in order to advance a frame. The cinematic-photographic image has causality, an indexical value and a totality. It is a transported image, and the Maltese cross defines the rhythm of the flow. There seems to be sadness in Mourão's writing over the loss of the causality essential to film's photographic image, along with its ability to index. As the video image refers to a pixel-by-pixel construction, and an act of reading and writing point-by-point, it is never the same as film's sped-up slide show. The video image is in continual flux.

^{37 |} Yvonne Spielmann, Video: The Reflexive Medium, Cambridge: MIT Press, 2008, p. 3.

^{38 |} From an internal CILECT Project Report by Maria Dora Genis Mourão and Joel Yamaji called 'The Influence of New Tools on Contemporary Conceptions of Film Language as a Mode of Expression', http://www.cilect.org.

Video has an incredible power to embody all other media forms. As Tom Sherman notes:

Video is a liquid, shimmering, ubiquitous medium that absorbs everything it touches. This liquidity makes video synonymous with intermedia, the art of filling the gaps between media. Today's media culture and media art are composed of complex, hybrid forms of multi-sensory information. Nothing is very pure and one-dimensional these days. Print media, from on-line newspapers to blogs, feature video feeds. Books talk. Music and advertising are synonymous. Digital cable television functions like a DVD player. Audiences are active, scanning multiple sources of information, usually simultaneously. Artists choose to work in media that overlap and offer multiple paths to and from audiences. Video flows through and around all other media. Video saturates – it really connects.³⁹

Video has enormously influenced our moving image culture, and its merging or dissolving into the digital has clearly redefined and transformed it. Video early on enabled the mixing of multiple images in time, and the networked computer only intensifies this ability to capture images through many different means (cinema, stills and drawings), and to mix and remix them, allowing entirely new levels of representation. If electronic video gave birth to simultaneity, the computer then extends simultaneously into multiplicity. But video is not really about representation. With television and cinema we are locked in an academic discourse of representation. Video has an additional spatial quality. A video image, a full video frame, field or even signal expands beyond the horizontal and vertical; it has depth, it surrounds us, it is like a garden or belly. A thickened video image shares a common space with us.

The ability now to network, to share and map videos in a digital environment, as well as the operation of thickening the image as outlined before, brings into question not only the form of content, but also the position of the viewer or spectator as she coexists with multiple videos, screens and other viewers. Prior definitions foreclosed any attempt to reflect on such questions. In our Renaissance-grounded Western education, there was only one ideal vanishing point to view exactly what was intended to be seen. Now after more than 100 years of moving images, we are beyond the state of viewing a single video at a time from a single electronic or digital signal. It may be impossible to refer anymore to only one vanishing point and one directionality.

"ARTIFICIAL SPHERES OF EXISTENCE"

The historically diverse development of screens and devices for viewing moving image content and online video has had a distinct impact upon moving image composition and production. The multiplication of cinematic frames inside other frames and screens, the aesthetics of close up shots that move towards us, as if pointing in our direction, the intimacy of shots (in German their nearness or *Nähe*), and the juxtapositions between the web's various other content of multiple image frames – all create the need for a reassessment of what we call video.

What is the impact of an image that has depth, an image thicker than anything else we have had till now?

What is the impact of an image object set in a spherical environment?

When we are referring to a shared space and a kind of togetherness, can we rethink video in an ontological way?

What are the possibilities of thinking of video as an 'artificial sphere of existence'?

When we were living with the desktop metaphor and the ideology of windows – and we still haven't left this – we believed that through the window on our screen a virtual space carries on behind our computer, expanding outwards on all sides. There was one ideal screen, with its totality of view and its fixed and defined position. Today, I prefer to neglect this view and argue instead that, even as we physically sit in front of one screen, there is a virtual multiplicity of screens surrounding us, and therefore multiple videos around these screens, forming a world viewed under the specific conditions of that very instance. These screens construct a complex system. This system could be called an 'ecosystem', or an 'artificial sphere of existence'; it is ecological because objects or 'beings' interact with each other. Such a system is built out of complex relationships and conditions, similar to other human-built communities, habitats or even biological systems. These complex relations rely on having a shared space. We can imagine them composing neighborhoods or *Umgebungen. Umgebung* is an object's close surroundings. It is a defined, delimited place related to things, objects and beings in a shared space. The *Umgebung* of my house, for example, would be the streets within walking distance. *Umgebung* can also mean having an overview perspective of a place, by definition.

I have borrowed the phrase 'artificial sphere of existence' from the spheres project of the German philosopher Peter Sloterdijk. Sloterdijk's trilogy on spheres, published between 1998 and 2004, is an intensive and expansive experiment aiming to retell the history of humankind through a theory of spheres. It is grounded in the simple attempt of asking where humans live after realizing that their home is a globe.

Spheres are the spaces where people actually live. I would like to show that human beings have, till today, been misunderstood, because the space where they exist has always been taken for granted, without ever being made conscious and explicit. And this lieu or space I call a sphere in order to indicate that we are never in fact naked in totality, in a physical or biological environment of some kind, but that we are ourselves space-creating beings, and that we cannot exist otherwise than in these self-animated spaces.⁴¹

In other words just as we are sphere-producing, we are also sphere-dependent. We not only live on a sphere, we also cannot exist without this sphere – the one sphere – and other spheres in our various lives. Our interactions and relationships with each other as beings necessarily create such constructs. These spheres can be small or large. Some might explode or vanish within an instance, existing only for a limited time, while others "stubbornly endure through time". Spheres are temporal objects.

^{40 |} Again maybe the naming of frames or image bodies, or even sometimes image containers, might be helpful for understanding this matter, even if also confusing.

^{41 |} Peter Sloterdijk, quoted after Esther Weltevrede, 'On Spheres and Media Theory', http://mastersofmedia.hum.uva.nl/2008/04/06/on-spheres-and-media-theory/.

Compared with spheres, bubbles have a shorter duration and less volume. The first volume of the trilogy, *Bubbles*, describes small micro-spheres as they form between individuals. In this text Sloterdijk concentrates in particular on pairs. For him we have never been alone but have always existed in pair relations. Bubbles are the basic molecules of the relationships between beings. Human pairs are 'interfacial spheres of intimacy'. These spheres create 'gattungswirksame Zwischengesichts-Treibhaus-Effekte' (interfacial greenhouse effects that form the human species).⁴²

An interior is formed when human beings come together. This interior can itself create various temporal effects, conditioned through togetherness. As a construct based on a relationship, the pair is the strongest of all; that is, it builds the strongest relations. The human face is necessary because we are in pairs; it allows us to identify and turn to each other. The immunity of 'we' is deeper and stronger then the immunity of the 'I', and the ability to resist together provides more strength and protection.

'Bubbles' provides an excessive theory of pairs, a theory based on a fundamental irony. While everyday thought is firmly convinced it knows everything about pairs namely, that they are the result of adding one plus one (biographically speaking, this means the effect of an 'encounter') I undertake the experiment to demonstrate to what extent the 'being-a-pair' [Paar-Sein] precedes all encounters. In my pair analysis, the number two, or the dyad, appears as the absolute figure, the pure bipolar form. Accordingly, it always takes precedence over the two single units of which it seems to be 'put together'. This can be most easily demonstrated in the relationship between mother and child or, even better, between fetus and placenta. With this we enter the terrain of a radicalized philosophical psychology that departs from the general faith in the priority of individuality. The truly esoteric is not found in the books on sale at the airport bookstore; it is depth psychology, which reminds us of pre-individual, pre-subjective, pre-egoistical conditions. 43

What is first of all a bipolar relation becomes pluripolar in highly developed systems. The second volume, *Globes* is dedicated to the macro-sphere; it narrates a history of the political world and its various forms of globalization, based on the representation of the world as a 'globe' as was conceived from the beginning of ancient Greek times.⁴⁴

In *Foams*, the third volume, Sloterdijk finally develops a plural sphereology. *Foams* delivers a theory of the development of our society under the perspective of multiple focuses of life, therefore re-describing the social and finding a model for society.

By contrast, in addition to its metaphorical meaning, foam as I use it instead of the completely exhausted term society has of course also a literal sense. From a physical perspective, it describes multi chamber systems consisting of spaces formed by gas pressure and surface tensions, which restrict and deform one another ac-

 $^{42\ |\} Luca\ DiBlasi, `Beyond\ The\ Spheres', trans.\ Christian\ Thomas, http://www.altx.com/ebr/REVIEWS/rev9/r9dib.htm.$

^{43 |} Peter Sloterdijk, quoted from 'Against Gravity: Bettina Funcke Talks with Peter Sloterdijk'. Bookforum, Feb./March, 2005, http://www.bookforum.com/archive/feb_05/funcke.html.

^{44 |} The sphere or globe is used by Sloterdijk as a thought-figure, not as a metaphor; 'bubbles' and 'foams' are metaphorical.

cording to fairly strict geometric laws. It seemed to me that modern urban systems could be easily understood with analogy to these exact, technical foam analyses. Spheres III emerged out of this intuition.⁴⁵

The metaphors in *Bubble* and *Foam* recall the biologist Jakob von Uexküll's notion of *Umwelt*, which is rendered as spherical bubbles (elaborating upon Leibnitz' concept of monadic isolation):

[...] the space peculiar to each animal, wherever that animal may be, can be compared to a soap bubble which completely surrounds the creature at a greater or lesser distance. The extended soap bubble constitutes the limit of what is finite for the animal, and therewith the limit of its world; what lies behind that is hidden in infinity.⁴⁶

Umwelt is the perceptual world in which a life form exists and interacts. In *Foam* Sloter-dijk refers to Uexküll's later extension of his theory of *Umwelt* as not only one 'soap bubble' but millions of them coming together. There is not only the singular *Umwelt* but also the existence of millions of *Umwelten*. Rather than arguing for a single, mono context of metaphysics, Uexküll takes the step towards to a pluralistic ontology. There are as many worlds as there are sensors or eyes, not just one all-encompassing perspective. In addition, the human world is not the one and only 'stage' for all other life forms. Uexküll's pluralistic approach can be transported from a biological to a cultural-theoretical discourse. Human soap bubble multiplicities are much more complex than life forms defending their biological spaces and borders through immune reactions and specific escape behaviors.⁴⁷

For Sloterdijk, until recently we have been spatially blind. We were focused on temporal problems, which we emphasized as progressive and 'cool', understood here, of course, as attractive. Questions of space were previously ignored or thought of as conservative and old-fashioned. Now the quest to reconsider human space is finally gaining traction.⁴⁸

Sloterdijk brings our attention to Gaston Bachelard's *Poetics of Space*, first published in 1958; he particularly references Bachelard's phenomenology of roundness. Bachelard recalls old-European 'sphere thinking' in his philosophical approach, similar to Karl Jaspers remark that every "being in itself is round", ⁴⁹ or even Van Gogh's "Life is probably round." Already between Goethe and Heidegger the word 'sphere' was employed as an approximate synonym for the circle of life, or world of meaning. According to Sloterdijk:

We have simply forgotten that in the era between Plato and Leibniz almost everything to be said about God and the world was expressed in terms of a spherology.

^{45 |} Ibid.

^{46 |} Quoted after Brett Buchanan in 'Chapter 1: Jakob von Uexküll's Theories of Life', Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze, New York: SUNY Press, 2008, p. 23. See also: http://www.archive.org/stream/theoreticalbiolo00uexk/ theoreticalbiolo00uexk_djyu.txt.

^{47 |} Sloterdijk, Sphären III: Schäume, Suhrkamp 2004, p. 248-250.

^{48 |} Peter Sloterdijk and Funcke, 2005.

^{49 |} Karl Jaspers, 'Jedes Dasein scheint in sich rund'. See 'Raumrevolution um 1900', http://www.fu-berlin.de/presse/publikationen/fundi-ert/2009_01/12_zeisberg/index.html (in German).

Think about the magical basic principle of medieval theosophy, which says, God is a sphere whose center is everywhere and whose circumference is nowhere.⁵⁰

There is of course a clear philosophical extension of Heidegger in the background of Sloterdijk's thought project. Heidegger's "im Dasein liegt eine wesenhafte Tendenz auf Nähe" motivates Sloterdijk to take a closer look at the 'in' in Heidegger's being-in-theworld. The 'in' and the *Nähe* are the two birth-giving keywords. Heidegger's work includes the 'seeds' of a 'revolutionary' treatment of Being and space. *Dasein* for Sloterdijk is a spatial design. The *Da* of *Dasein* means not simply being there, or being in a space, but that a space has been specially opened up. Humans have given form and substance to that space. And humans add a relative duration of *Da* to inhabit that space. For Sloterdijk the concept of spheres points to this *Da* of *Dasein*. 'Being in the world' means 'being-in-spheres'. Spheres are "the original product of human being-together". The consequence of this line of thought leads us to consider spheres not only as spatial constructs, but also as social objects or 'round systems' (in the classic European metaphysical sense of thinking 'everything is round', and of the circle as a basic shape for human life as well as the world). Spheres are both social and spatial, just as being itself is never isolated but is social. "Spatial being is always a co-existence." ⁵¹

The atmosphere of being together creates a symbolic place to stay, in the wording of Sloterdijk. With 'climate installations' built by humans, they enable a "symbolic climatization of shared space". As such, they are always "morpho-immunological buildings". "Spheres are therefore shared spaces of perception and experience." ⁵²

Perhaps in this respect Sloterdijk wrote the *Space and Time* or the *Raum und Zeit* that Martin Heidegger never wrote. The question 'where is man?' "...finds the answer in the creative building of spheres as psycho-social containers in historically varying shapes."⁵³

Sloterdijk takes on and elaborates Heidegger's limited analysis of 'Being-with-the-world'. Heidegger points out that Being-in-the-world is a thrownness in the world, and this thrownness delivers the 'thereness' afterwards. As we come into the world as Beings, we are thrown into it, delivered to a certain point. It is actually after this moment of delivery that the Being becomes *Dasein* (with an ontological questioning of itself). It is the 'with' which is formgiving and creates the *sein* of *Dasein*. Of course, a more detailed reading is necessary.

The spheres model seems to be the right approach for describing contemporary media and culture. Today's media continuously constructs various companions. We are sharing our social spaces with these artificial companions, not only in the physical world, but also in the world beyond our screens. In a Sloterdijkian sense, media constructs the *mit*, German for 'with' or togetherness. Media becomes a substitution for togetherness between humans.

^{50 |} Sloterdijk and Funcke, 2005.

^{51 |} Wilhelm Schinkel and Liesbeth Noordegraaf-Eelens, In Medias Res: Peter Sloterdijk's Sphereological Poetics of Being, Amsterdam: Amsterdam University Press, 2011, p. 12.

^{52 |} Schinkel and Noordegraaf-Eelens, p. 33.

^{53 |} Schinkel and Noordegraaf-Eelens, p. 11.

BEING WITH VIDEO

This is the essential meaning behind the term 'video sphere'. If a medium becomes a substitute for togetherness, there must have been a hole, an emptiness that has been filled by this medium. Previously regarded as a technology, video now becomes slippery and invisible on the one hand, while on the other it gains a thickness or depth that transgresses the intersection of human space. Video is ultimately about building relationships and acting as an artificial companion in a sphere of being together. Once located or perceived as a sphere, video becomes more about relations, rather than representations of relations; it is both spatial and social. We could also describe all the video we see and experience as linked, connected, neighboring or near us in the same spatial condition. Video is just as social as we are. This is not a physical condition, but a virtual touch, a togetherness. Or let's say, video became a *Mitbewohner* (roommate).⁵⁴ Could video also become our next skin? What kind of symbiotic form is developing? Video's status has transformed from being a neighbor to a roommate sharing our space, closing in on us. Video has moved in.

Another example of a spherical environment is the already somewhat-historic blogosphere. In a detailed analysis Anne Helmond describes the blogosphere as constructed through a variety of technically enabled relations formed between blog software, search engines and bloggers. These relationships create a unity between the users and objects and underlie the conditions of a spherical environment.⁵⁵

At his lecture at Harvard, Bruno Latour commented on Sloterdijk as follows:

Unlike networks, spheres are not anemic, not just points and links, but complex ecosystems in which forms of life define their 'immunity' by devising protective walls and inventing elaborate systems of air conditioning. Inside those artificial spheres of existence, through a process Sloterdijk calls 'anthropotechnics,' humans are born and raised. The two concepts of networks and spheres are clearly in contradiction to one another: while networks are good at describing long-distance and unexpected connections starting from local points, spheres are useful for describing local, fragile, and complex 'atmospheric conditions' - another of Sloterdijk's terms. Networks are good at stressing edges and movements; spheres at highlighting envelopes and wombs.⁵⁶

Even when we describe networks, we still imply and even accept a degree of ordered and controlled movement. This movement must follow marked-out paths and well-trod roads, reading signs and measuring distances in a given direction between settled places. In a sphere, the comeback of the *flâneur* merges with the pathfinder or explorer wandering between seemingly disconnected objects that come together in a single space. The sphere is a more narrative world, a story world. Story and narrative are two possible constructive methods and descriptive tools that can be used to create a meaningful organization of

^{54 |} I prefer to use the German word for roommate, as it emphasizes the 'with' (mit) of Mitbewohner, of living in the same space together. Also Bewohner is not the one who is living in a space but rather the one who occupies a space.

^{55 |} See http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/3775/3142.

^{56 |} Bruno Latour, 'Some Experiments in Art and Politics', e-flux Journal, 23, March 2011, http://www.e-flux.com/journal/some-experiments-in-art-and-politics/.

inner space, and therefore the inner life of a sphere. Even more characteristic is that the conditions in the sphere, and by extension the video sphere, is lifelike, very much alive. This is contrary to any attempt to build archives of online video artifacts, boxing them in pre-formatted containers, shapes and coffins. The inner life of the video sphere is in constant flux; it is developing and growing, expanding and transforming. It depends on a complex system to stay alive. It needs to breathe. It is fragile.

Our audiovisual experience is not fixed within any ontological domain. If we believe this, then the spherical thought-project of video as social idea can be used as a model for social theory. This social theory would be similar to a biological interpretation of the walls and other components making up a cell, and it would use immunological models to describe our interactions with our surroundings. This spherical *Umgebung* (or environment) is inhabited by video-enabled devices or objects, which we touch or which touch us in order to intersect with a space opening up. We inhabit a hybrid space in this sphere. This sphere is an actual sphere – it is the space where I am now.

Fourth Movement: Crowds On and Off Squares

"Die Ereignisse kommen zu uns, nicht wir zu ihnen."GÜNTHER ANDERS, 1956

The most popular use of video is to treat it as a shared object, whether it is embedded in a variety of devices that record and deliver content or posted directly to social media. When you play and then pause a video on a mobile phone, you're often immediately asked what you would like to do with it. The option of sharing the video on Facebook, Vimeo or YouTube is right at your fingertips.

We have long shared collective and individual memories through oral traditions and painting; in the twentieth century we began capturing memories through photographs, audiovisual 8mm films and analog videotapes. Now we share videos with each other through a network operating in real time. These shared online videos are not only records of our private events, but also small dialogues, quotes, rants and even fragments of unspoken sentences between people in the same network, sharing the situation in the collective moment. Distant relatives or friends who are physically apart can now share an event as it unfolds. We witness what would have been reported back to us before; now we are part of the narrative, with a first hand, first person perspective. The theater chorus, the singers who relay an event, is now substituted by the immediacy of video. We freely participate in the video stream – we can leave the stream any time, whenever we want. Participation is a matter of choice. We are also free to share or highlight the stream, and consequently any live event, so that people in our circles (such as other Google or Twitter users) or beings in our sphere are able to see how it relates to us. This is the Facebook or Twitter condition: someone tweets from an event, which we then retweet so that others can read about it. The event is not necessarily even personal; it can be educational or political, such as the Occupy movement, or the protests in southern Europe or the Arab spring.

A video can be shared from a designated physical location. Amazingly we watch the situation as if we were there. We are witnesses and actors in a shared environment, in the same sphere built by the video now in our sight. Simultaneously we are able to multiply the video, whether we select and share seconds of it or its full length. We've entered the place without being there, by narrowcasting the event through re-posting, responses to re-posting and sharing.

Though geographically distant, both the event and the user's physical location are mediated by the network. The event is witnessed, expressed and retold by users participating in front of the comfort of their screen.

^{57 | &}quot;The events are coming to us, we are not coming to them." Quoted after Günther Anders: Die Welt als Phantom und Matrize. Philosophische Betrachtungen über Rundfunk und Fernsehen, in: Die Antiquiertheit des Menschen, Bd. 1: Über die Seele im Zeitalter der zweiten industriellen Revolution, München: Beck 1987 (Beck'sche Verlagsbuchhandlung, München 1956), http://www.uni-due.de/~bj0063/doc/anders.pdf.

How did we first become aware of any one particular video? What was the initial instant of observation? How did its message reach us? Were we looking for such an event? There had to be a spatial relationship created through the shared sphere that encouraged our awareness.

Just as we saw earlier in Bestario's data visualization of TED videos clustered and linked in a visible sphere, at some point the spherical view will become cluttered. When several videos appear close to others, even overlapping each other, they create a density in the flow of videos. The more that people share a video or one related to it, the more this density is multiplied by the videos inhabiting the same space. In this way, an event accumulates greater visibility, in the manner of a tonal shift or discoloration on the wall next to us, or a fleck in the colors of dirt. This awareness-creating effect is density.

If we view the Internet as a constant flow with the basic temporal category of real-time immediacy, several videos in this spherical place will all refer at the same time to a specific locale in the present. A digital event can unfold with this spatial multiplicity; such was the case with the Arab Spring uprising and the Kony 2012 video..⁵⁸



FIGURE 9: PROMOTION POSTER FOR THE KONY 2012 VIDEO, SEE HTTP://EN.WIKIPEDIA.ORG/WIKI/KONY_2012.

^{58 |} http://invisiblechildren.com/movedc/.



FIGURE 10: TWITTER AND FLICKR USAGE IN EUROPE, SEE HTTP://WWW.PCMAG.COM/SLIDESHOW/STORY/266935/STUNNING-PICS-TRACK-TWITTER-FLICKR-USAGE/8.

We are enamored with maps of the world. We share them with excitement, impressed by how many different shapes our physical location can take. Some maps show us data in the form of lines and accumulating dots, as can be seen in figure 10's display of the amount of Twitter messages in Europe at a particular time of the day. Maps such as this one could also possibly visualize and narrate the inner walls of our video sphere. Big dots on the map would refer to bubbles in this ecosystem, to traceable densities or thickenings that are temporal and exist only for a short time span. If we want to observe this phenomenon throughout a series of videos, we would need to follow them in real time to become aware of any bubbles inside or outside the sphere. But we won't want to spend our days monitoring a series of videos; we want to go about our daily life. There must therefore be a filter attached to these daily objects, monitoring the environment while at the same time tracking us. That is, we are already thickened objects in the system, with volume or a body related to other sites and objects. The filter must then create an 'us' from our online calculated, algorithmic behaviors. Our identities are not singular anymore.

As things create a common space, they share it with more and more objects that have similar identifiers and signifiers. The sphere, or rather here a bubble, must then shift its density in relation to everything else as these related objects localize in its environment. Just as a flame can ignite and spread, so an event can also suddenly proliferate. The event produces a kind of magnetizing effect. But rather than single bubbles growing bigger and bigger through intensified participation, imagine many bubbles converging to build foam, which disseminates the event further, expanding it in space.



FIGURE 11: FELIX BAUMGARTNER, STEPPING INTO THE VOID FROM 71,580 FEET DURING A TEST JUMP IN MARCH 2012. PHOTO:
JAY NEMETH/RED BULL CONTENT POOL, SEE HTTP://WWW.WIRED.COM/PLAYBOOK/2012/10/FELIX-BAUMGARTNER-STRATOS/FELIX-BAUMGARTNER-RED-BULL-STRATOS-01-2/.

As an example, Felix Baumgartner's space jump created a super bubble in October 2012. A single, controlled video composed of selected camera streams that followed the event created apparently extreme activities, mainly in Twitter, piquing commentary, appreciation, astonishment and curiosity. The dive itself in the live webcast is hardly anything more than a dot or blip of light followed by a camera physically positioned out of the vicinity of the user. But the web in this case had replaced the role that television broadcast once played in the 1969 moon landing; the web captures an event of similar fascination while overcoming an enormous distance for the user. The web also exhibits its commercial power by securing users' attention enough to satisfy the event's sponsor, Red Bull. What takes place in any case is a celebration of real-time. The video of the jump produces foam, a multi-bubble environment that expands and collapses accordingly.⁵⁹

In recent years it has also been interesting to see the expansion and spread of online events out into the physical world. The digital event is not just observed on screen; it has another component that can take place directly outside in city squares. What at first looks like virtual participation – signing up, browsing the Net, then leaving – is a situated enactment. In the space jump example, the interaction is not just with an imitation of a 'Houston'-like control center by the Red Bull observation team or even with the family members of the 'hero'. The interaction is in the hands of the user; it is the possibility of a reciprocal exchange in the system of the constructed sphere. A user's action now has an effect, even if this effect is just to add or share a video and therefore thicken it.

^{59 |} Felix Baumgartner jumps, http://www.youtube.com/watch?v=5eVjhQXRDa4 and Yahoo News from October 2012, http://news.yahoo.com/blogs/lookout/felix-baumgartner-space-jump-captivates-internet-twitter-191838284.html.

The phenomenon of gathering in city squares or other physical places is impacted by the massive presence of cameras and video recording devices. This massive presence has been observable for the past several years at pop concerts and now is even more widespread due to video on smartphones. Carrying a live video recording and streaming device has become a part of everyday life, allowing any instance to be observed by anybody in theory. We have potentially infinite witnesses, just as we also have potentially infinite events. Each event can be amplified or 'bubble-ized', rising to greater visibility and accessibility. With this accessibility, everything is of course also open to being remixed.

Videos that go viral or live-streamed events allow not just participation but a new kind of companionship for a short duration. The activist and the sympathetic user are linked, sharing a common space of action.



FIGURE 12: A NON-ACADEMIC LECTURE ABOUT THE USAGE OF MOBILE PHONES DURING THE SYRIAN REVOLUTION, 29 AUGUST 2012.

SEE - HTTP://WWW.ERSTESTIFTUNG.ORG/BLOG/RABIH-MROUE-THE-PIXELATED-REVOLUTION-BY-TRANZIT-CZ/.

In a lecture-performance called *The Pixelated Revolution* at the 2012 Documenta 13 in Kassel, the Lebanese artist Rabih Mroué illustrated the influence of mobile phones in the Syrian revolution. Through the use of mobile videos downloaded from the web, Mroué demonstrated that "Syrians are filming their own death." Mobile phones with video ap-

^{60 |} Some detailed information and critique on Rabih Mroué's work can be found here, http://www.artandpoliticsnow.com/2012/02/rabih-mroue-the-pixelated-revolution/, and a part of the performance can be viewed on Vimeo, http://vimeo.com/44123255. See also http://www.mitpressjournals.org/doi/abs/10.1162/DRAM_a_00186?journalCode=dram.

pear as the essential source for sharing information and mobilizing people. Here online video is not only a bodily extension; it is also a reflection on ways to act politically in a place of chaos.

As device carriers we are aware of a parallel, secondary space, a hybrid space that is composed of squares as well as spheres. This space consciously expands beyond the screen, though it is not continuous; it always varies in density and thickness, duration and appearance. This hybrid space, or video sphere, allows us to connect and disconnect. But even if we are not connected, we still share this space with everyone else in togetherness.⁵¹

Theoretically this hybrid space and Sloterdijk's spheres relate to Deleuze and Guattari's concept of smooth space. In contrast to 'striated space', this space refers to a landscape-like environment in which subjects operate.

Smooth space is filled by events or haecceities, far more than by formed and perceived things. It is a space of affects, more than one of properties. It is *haptic* rather than optical perception. Whereas in striated space forms organize a matter, in the smooth space materials signal forces and serve as symptoms for them. It is an intensive rather than extensive space, one of distances, not of measures and properties. Intense *Spatium* instead of *Extensio*. A Body without Organs instead of an organism and organization.

Conducive to rhizomatic growth and nomadic movement, smooth space consists of disorganized matter and tends to provoke a sensual or tactical response rather than a starkly rational method of operation or a planned trajectory. 62

Being in a space while transmitting the event creates a situation in which the technical processes of recording and transmission (or streaming) are collapsed into one action; this situation highlights the haptic quality of the moving video image. In addition to the optical, then, we also need to distinguish a haptic visuality in this practice. How we access the space and how we transmit video are based on intimate physical relations. It is a matter of capturing the event and moving it into the personal sphere. But video is more than images that capture action. The video is itself action, a transmission of situations and events. The transmission streams both relationships and difference: this is, you can transmit details of your immediate environment or something entirely unrelated to this external content. Here the video and the web have the same tension as that found between visual and haptic modes of perception.

Media has made us accustomed to certain overdetermined images such as poverty, war, death, hunger and theft but also happiness, health and love – images already laden with

^{61 |} Eric Kluitenberg, Legacies of Tactical Media, Amsterdam: Institute of Network Cultures, 2011.

^{62 |} http://www.rhizomes.net/issue5/poke/glossary.html

^{63 |} In German I would describe it here as an image that you can *eingreifen* – intervene or rather step into. It is more of an action like this than an image to look at, an image that you can *anschauen* – view, behold, or examine.

^{64 |} For more on the web check out Vito Campanelli, Web Aesthetics: How Digital Media Affect Culture and Society, Rotterdam, Nai Publishers, 2010, p. 141.

certain meanings. These images are no longer shocking because we have become part of them, inhabiting the same space.⁶⁵ There is therefore no feeling of strangeness, no othering enacted on these images, since we have grown accustomed to them in our daily life.

New media has begun functioning as a story world. The basic narrative structure of interactive storytelling is now the primary model, overtaking the classic sender-receiver model of broadcast media. Story worlds and story spheres produce environments that offer straws that you can walk by and pick up as you wish. These straws float between the 'virtual' and the 'real', increasing the possibilities of physical space. For instance, commercial initiatives such as Meet-up exploit the trend of locative media, prompting keywords and clicks to interface with a physical location. This application appeals both to local commercial interests and online companies, and it breeds a new form of customer relations for the technically literate.

As we continue to think through these technological shifts, we become aware that we can no longer disconnect anymore. We should also realize that we are always traceable. Our technological drive creates and craves novel developments of increasing densities. New forms of control and command are in place, and it is not necessarily the state power that is behind them. Tracking and tracing are normal social activities. What we call a cloud is technically overloaded with identification systems. There is not one person being watched, but simply people watching, recording, tagging, registering and reporting from the global village, users who have the ability to upload instantly to the cloud above and follow our every step. Welcome to the tribe of the dark cloud carriers. It is not surprising that the Occupy movement already has its own open source drone. 66

Are we devolving back to a time similar to when elderly people in small German villages would sit at their kitchen windows, watching the street for hours then reporting later on all that happened – who passed by, who came from the hairdresser and who's been having problems with her husband? Or is this an entirely new flavor of neighborhood watch?

As we move increasingly towards systems of control and commandment, there is a simultaneous counterforce caused by uncontrollable explosions, acting as a stain on the otherwise well-behaving system of expansive, shared temporal objects. Atmospheric conditions are developing.

It is fascinating to observe how crowds coalesce, how foam gathers and thickens in space. Bubbles join together then float apart. The duration of these actions is related to the energy or temperature of the event. A spontaneous appearance can inspire a similar, equally spontaneous disappearance. You can see this with the phenomenon of Facebook parties. For instance in fall 2012, Project X in Haren, the Netherlands, saw more than 4000 young people show up for a party that ended in 'chaos'. A simple invitation to a 16-year-old girl's party went viral and 'riots' ensued. Similar events took place in Germany, Australia and the US, all of them reminiscent of the 2012 US teen film *Project X* that featured flashmobs and

^{65 |} Recalling Bergson's becoming of images.

^{66 |} Here just one simple example of such a drone, http://www.openpilot.org.

a spontaneous street party.⁶⁷ YouTube videos and tweets are essential ingredients leading up to these hybrid events. But what exactly is the nature of an event in the sphere? What differentiates or characterizes a digital event? How do crowds behave? How does participation relate to emotions? These are just a few questions that are still to be explored.

^{67 |} Project X Haren videos, http://www.youtube.com/watch?feature=endscreen&NR=1&v=KRFES3xhfPI; http://www.youtube.com/watch?feature=player_embedded&v=3qVuDNpesyE&noredirect=1; http://www.youtube.com/watch?feature=endscreen&NR=1&v=fA8Z
BNO-GU. "Published on Sep 18, 2012 - Het grootste feest ooit georganiseerd op Facebook in Nederland. We zijn hardopweg de barrière te
doorbreken van 100.000 uitnodigingen! Dit feest in Haren (Groningen) mag je niet missen!" and the news, Al Jazeera English, "Teen Facebook
Party Goes Viral in Netherlands - Europe, 22 December 2012, http://www.aljazeera.com/news/europe/2012/09/20129221652150556.html.

Fifth Movement: Swimming and Floating

"We're just two lost souls Swimming in a fish bowl, Year after year, ..."

What is in a video sphere? What are video bubbles?

Could we be swimming in an ocean of video, entirely submerged? Is it like the experience described in Jar Davis' *Osmose*? Would it be like diving under water, surrounded by jellyfish, or like an astronaut floating in outer space?

This fifth movement is a jump, an absurd dive into a space that is of course neither water nor the infinite nothing of outer space. We know that our space, the physical space of the planet, has an end. Anything beyond that is not in our reach and might well never be. The space we now plunge into is video, a concept we apparently are unable to grasp, even while it has an ease of touch, like floating in space or in the flow of a river. This experience is nothing like walking through the streets or stopping to stare out of windows; this is a free, subjective space that the user controls. A space without emptiness. There are no singular objects anymore, only temporal formations dependent on the need to navigate the pool of data. Shapes in this space are not necessary; they are actualizations and formations to be adapted and modified in each successive present.

Like an advertisement for a health center, we could write that floating in this video ocean "is a way to pause the hectic, saturated world and enter a state of deep mental and physical relaxation. It is breaking off from the endless input of sensory experiences, giving a chance to recharge, rest, and emerge to face the world in a renewed perspective and energy."

This dream is also real, or it suggests a different kind of reality. The video sphere, the space of flows and streams, is still in part controlled today by the programming industries (to reference Bernard Stiegler). This state of things is in question, however, for a new generation of users that has already advanced beyond this early 2000 perspective. "The programming industries, and more specifically the mediatic industry of radio-televisual information, mass-produce temporal objects heard or seen simultaneously by millions of 'consciousnesses': this massive temporal co-incidence orders the event's new structure, to which new forms of consciousness and collective unconsciousness correspond." ⁶⁹

New modes of consciousness do not take the existing forms of media for granted; rather they emphasize the historically contingent development that has given rise to the forms we already know. Yes, we may call moving images cinema or television or even video. The

^{68 |} Quoted from 'What is Floating?' http://www.floatshoppe.com/floating/what-is-floating/.

^{69 |} Bernard Stiegler, Technics and Time, 3. Cinematic Time and the Question of Malaise, Trans. Stephen Barker, Stanford: Stanford University Press, 2011, p. 1.

aesthetic at each moment already points towards an *aesthetics of continuity*. And of course, we must now add real-time to this equation.

What the programming industries haven't understood yet, and what the whole 2012 copyright war reflects, is that rather than being a matter of producing temporal objects, we must confront an issue of radical availability. We navigate through an environment of pre-existing similarities, equalities, multiplicities and operations that we can manipulate at ease. This is the video sphere; it is a *space-medium*.⁷¹ All things or objects are already at hand and therefore ready for remix and reuse.

This is the point I want to make in this final movement. The end of movement three defined a spherical environment, stating that this sphere is inhabited by video-enabled devices and objects that we either touch or that touch us in our physical space. Movement four tried to demonstrate how such intersections take the form of hybrid spaces, crossing over from what was formerly defined as the virtual space of the Net into the so called 'real' – that site of power, history, memory and stability in form of the city square. In the earlier chapters we saw that the thickened image creates what we could characterize as Castells' space of flows, but which seems to be more conveniently understood by way of Sloterdijk's philosophical description of spherical conditions.

NAVIGATIONAL SPACE

Inside the sphere we are no longer a lone spectator watching a single screen. A video is no longer a single object. The cinematic frame is just one possible organization of space. Inside the sphere we now navigate, we can walk from corridor to corridor, exploring freely. Through our various movements we can discover and come to understand an entirely new logic and its secrets. This exploration is similar to an "ancient form or narrative in which the plot is driven by the spatial movement of the main hero, traveling through distant lands to save the princess, to find the treasure, to defeat the dragon, and so on." As Michel de Certeau reminds us, in the classic Greek storytelling tradition narration guides, transgresses and passes through other meanings; when a story is a passage, then behind the story there might be a more abstract concept or task that the story is aiming for. Today in a computer game narrative also encompasses action and exploration.

We move through a space to explore it. Looking around us motivates us to act, to seek further; looking and acting occur together. Navigating through space, simply using this navigable space, is an essential force driving culture. In digital culture, space becomes a media type that

[...] can now be instantly transmitted, stored, and retrieved, compressed, reformatted, streamed, filtered, computed, programmed, and interacted with. [...] In other words, all operations that are possible with media as a result of its conversion to computer data can also now apply to representations of 3D space. 73

Digital media space is always a space of navigation.

^{70 |} Manovich, p. 285.

^{71 |} Manovich, p. 259.

^{72 |} Manovich, p. 246.

^{73 |} Manovich, p. 251.

SPACE-MEDIUM

We are not referring to a space built by individual objects; that is antiquated thinking, as Panofsky has already shown. In post-Renaissance modernity we see space as continuous and systematic. The video sphere is an environment in which objects are embedded and affect each other; these objects are related and can be explored at the user's own leisure. Similarly, Manovich brings to our attention the work of Pavel Florensky, who wrote in the 1920s that "The space-medium is objects mapped onto space. [...] We have seen the inseparability of Things and space, and the impossibility of representing Things and space by themselves."

Modern painting already eliminated notions of distinct objects and empty space. Euclidean space needed to be challenged, because we also experience the area that lies between objects. Space is never empty.

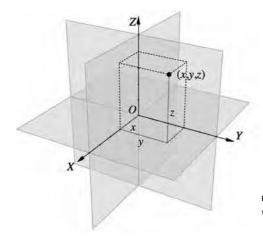


FIGURE 13: EUCLIDEAN SPACE, SEE HTTP://EN.WIKIPEDIA.ORG/ WIKI/EUCLIDEAN_SPACE.

Florensky distinguishes three layers of space that are quite distinct from each other. They are first, abstract or geometric space; second, physical space and third, physiological space, which can in turn be subdivided into the spaces of vision, touch, hearing, smell, taste and a generally organic sense, each with their own more subtle divisions. In abstract terms one can think in an entirely different way about these designated divisions of space, both the large and the minuscule. An entire series of extremely complex questions can be deflected simply by referring to a geometric doctrine about the similarity of figures in three-dimensional Euclidean space; such a conception would not even touch on the difficulties of the issue here. First and foremost, it should be noted that the answers given to various aspects of the posed question of space turn out, quite naturally, to be extremely diverse. In abstract geometric terms, Euclidean space is just one particular instance of utterly heterogeneous spaces, with the most unexpected characteristics vis-a-vis the elementary teaching of geometry, characteristics that are highly revealing about a direct relation to the world. Euclid's geometry is one of countless geometries, and we have no foundation for saying that physical space, the space of physical processes, is specifically

^{74 |} Manovich on Florensky, p. 255.

Euclidean space. It is just a postulate, a demand that we think of the world thus and adapt all other notions to this demand. The actual demand itself arises from an *a priori* belief in physico-mathematical science of a specific stamp, involving the principle of continuity, absolute time, absolute solid bodies and so on.⁷⁵

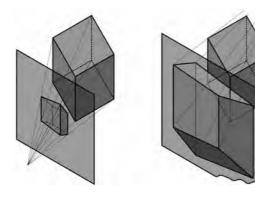


FIGURE 14: REVERSE PERSPECTIVE AS AN EXAMPLE FOR A NON-EUCLIDEAN SPACE. "ON THE LEFT THE PERSPECTIVE OF A CUBE, ON THE RIGHT THE REVERSE PERSPECTIVE", HTTP://EN.WIKIPEDIA. ORG/WIKI/REVERSE_PERSPECTIVE).

The video sphere shows clearly that our relationship to the world has dramatically changed. We employ more and more tactics and strategies to create our own "trajectories through the spaces defined by others.".⁷⁶

Space is becoming a mirror of the users' subjectivity, as determined by their interaction with society.

VIDEO AS TRANSIENT MEDIUM

Looking back, video evolved from its mode as a technical vehicle or device employed by the programming industry, into a technology in the social sense, that is, as a web of social relations in a social space. Video performs not only as a social system, but it also forms a social, spatial system together with us. Video is given a social role in the system as well as acting as such. The system is homogeneous, one of continuity and real-time interaction between humans, other organisms and their communication. This is simple society.

In its historical development the medium or technology of video

becomes ubiquitous, permeates 'meaning' and other 'things', rather than being a 'thing', a 'representation' which is 'meaningful' by itself, whose meaning is closed in and on itself. If video by itself is not a 'thing', it is difficult to describe it simply as a device, a technology or idealistically as a medium.⁷⁷

 $^{75\ |\} Pavel\ Florensky, Beyond\ Vision: Essays\ on\ the\ Perception\ of\ Art,\ Ed.\ Nicoletta\ Misler,\ London:\ Reaction\ Books,\ 2002,\ p.\ 267.$

^{76 |} Manovich, p. 268.

^{77 |} Aras Ozgun, quoted after an email discussions on an early draft of this essay.

Therefore, we can't treat video as representation anymore; we have to consider it a relation referring to a temporal network of images, things, subjects and objects. Video spreads meaning or meaningful acts around parts of the network or our inhabited spaces. This network of temporal relations has a kind of thickness – the third dimension of a timeline as mentioned earlier. A video doesn't simply represent a linear flow of time but has a depth of time, a 'spherical depth of temporality'. Video is a kind of *zwischen*, an in-between that we are with (philosophically a *mit* or 'with').

Of course, here Bruno Latour's actor-network theory intermingles with the concept of spheres articulated by Peter Sloterdijk. Both concepts take on the task of searching for space. In a globalized environment, they allow for re-localization and re-embodiment.

At one point in history we realized that we are bound to a round planet, even if we wanted to expand into space. We remain limited by its contours. Now that we understand this notion, ideas related to our development on this earth that we once rejected are now being reconsidered – ideas such as communal and sustainable sharing of resources and ecological sensitivity. We are in the midst of clashing definitions to describe the space around us: What defines it exactly, what is its temperature, its color? Where is the inside? What type of objects and subjects does it contain? How do these objects and subjects connect to each other? Are these connections also 'space'? What precisely is in-between?

Video is to be understood as *Umgebung*, the surrounding that faces us or that we face. In a sphere we share space together. Video is our companion, whether in the form of temporal images or as events and situations. We no longer depend on camera-recorded images. The frame itself is not even a necessity at this point. Framing is defined by duration and borders, whereas the object of interest is a coded entity. If an object on the laboratory desk is numerical data, it can vary within an instance, shaped by the specific temporal conditions of any object or situation. In the same instance we could distinguish a single *Begleiter* (companion) in our environment, even as it takes on multiple forms or appearances – shape shifting.

It is the depth of the video sphere surrounding us that we relate to temporally, by passing through it. The sphere can be large or very thin; it can expand or collapse in space. It can be shared with other humans and objects, forming as we pass by. In the sphere interaction takes place through our ongoing relationships. As humans we can *feel* its existence.

In a less philosophical attempt to understand our present situation, what we now call video is vastly different from its original technical development. Video in the eighties, when the televised music video debuted, already appeared very differently from technology in the sixties. Video has changed its appearance under continuous commercial pressure. Its technology was produced to spread rapidly; therefore it had to become cheaper, more flexible, more adaptable and mobile. This development intensified the demand for simultaneous imagery as well as for flexible and cheap means of storage. From the beginning video had no fixed identity; it rejected being specific. It hid in its essence (or in German Wesen).

It was Raymond Bellour who once pointed out video's ephemeral quality:

Video can be considered as a transient medium that crosses or transgresses the border of photography and cinema and of the three media only video can integrate and transform the two others. As such it is a medium of liminal passages across and between images, a rite of passage that impedes us from assigning stable borders to the image per se. Video cannot be defined as a singular field or entity but, rather, has to be defined at the level of what Gene Youngblood, early in video art's development called intermedia.⁷⁸

Video resists simple definitions. When Bellour points out that video is liminal, he means that video offers a passage to someplace else. Video is ambiguous; the medium does not respond to the order of the image. Video even gets in the way of the frame, becoming its own handicap. If the image per se refers to the 'image in general' or 'image as such', then video offers contrary images of its own. Neither photographic nor cinematic, video images are thick and expansive, spatial and round.⁷⁹

The video sphere does not yet have a physical expression in the living room of our apartment, and it might never have one. The television and the monitor, standing or attached to a wall, still dominate furniture design, but it is an unavoidable necessity that these furniture-objects are now plugged-in automatically to the web to search for suitable content. This situation already goes beyond the Internet of Things in terms of our speculative theoretical approach. These technologies are already the normal condition for the generation growing up with them. The web has transformed the traditional shape of video. The second contents of the

SPHERICAL PRACTICES

As Roy Armes noted, the impulse to turn a profit is parasitical on new forms of art and entertainment, as we see when capitalist demands constrain the current system of direct and unmediated reproduction. Video as a technology has been a guarantee, a product, a method and medium for representing the real and the actual. With its ability to be numerically coded, split into modules, automated and transcoded, video has confounded ideas deriving from classic forms of art and entertainment. Even so, as video art, it finally became an object of interest to art historians, museum curators and collectors. As an historical and archeological piece of culture, it can become part of the archive. Media art collections are the modern media technology museums. Nam June Paik and Bill Viola appear as the Rembrandts of the pre-digital area.

^{78 |} Raymond Bellour quoted in Mourão and Yamaji.

 $^{79\ |\} This\ discussion\ of\ Bellour\ goes\ back\ to\ an\ email\ conversation\ with\ Mahmut\ Mutman\ during\ the\ writing\ process\ of\ this\ essay.$

^{80 |} Once JVC built a CRT TV in a spherical form and called it video sphere.

^{81 |} Of course, the web in 2012 is still under the influence of the paper paradigm, as most websites are layed out on paper, and video is assigned a frame inside another wider rectangle in the design space. HTML5 code for describing the design space offers the possibility to define the video as an embedded object and with it several conditions for change. This takes away the dominant design hierarchy of the page while adding interactivity, correspondence and response to input and output. A page or a site visited twice does not appear the same. An HTML5 website doesn't have much in common anymore with websites two or more years ago.

^{82 |} See Lev Manovich's criteria for new media in The Language of New Media.

Producing video or media art today outside of the museum or the white cube has become standard practice. With production tools at our fingertips, an invisible campaign of media literacy has begun, and we now adapt to new media with the speed of light. The Hollywood mode of production is certainly still around and will continue to exist, but dominant emphasis is now on reproduction, economies of attention and participation. This will lead to new styles of appropriation and an optimized aesthetic response in the videos to come. ⁸³ In other words, as we develop new forms, video as we experience it now will change yet again.

Sean Cubbit has already argued that the purpose of video art is to attack *mediocracy*! Art can become the force that resists mediocrity and conformity. Artist-activist groups like Ruangrupa in Jakarta base their video works on urbanity and inhabited space; their video not only records and documents the world around them but becomes a living space. That way it defines a place and is embedded in daily life; it acts as a force connecting us to social movements as we advocate for change. For this reason we should acknowledge those urban regions less well-lit on the global map but that are still aware of the impact of the video sphere. Video not only creates the need for functional literacy, it also becomes a form of social training for our society. Just as we learned to write, we now must learn to look through and act with moving images. The video activist is exemplary for exploring and defining a trace or a path of narrative action in this navigable space.

Video literacy training still involves a degree of cinema imitation, only this time with digital video tools and online distribution and appropriation. Short films and documentaries in hi-def resolution are relatively easy to produce and have created a wide range of new and talented filmmakers around the world. A few of them are even able to leave more than just a little splash on the web. Festivals come and go, pointing out the social relevance of these products. The cinema was never able to exist commercially and still meet the necessity and demand for more diverse moving images. Television also lost its bid for depicting alternative ways of life.

In the video sphere, all these practices leave traces of smaller or bigger dots, flashes, waves, tsunamis, even supernovas. They are part of the subjective experience of the user. In the 'video foam' they come together to be shared, and we can dive in and out at any time.

With video as a daily practice in a shared network environment, knowing the source of any single video will not be as relevant as it has been up to now. Such information has become redundant, because we no longer think to reference any index or about the ability to index. Lawmakers should become aware of this situation and act with foresight. 84 YouTube or any video website has shifted attention away from the production process to a video's pure real-time existence, to the flow of images. The flow is not archival or even watchable in its totality. Images are just one of several conditions and relations. Forms and shapes are exchangeable on demand, within the process of us coming together to talk, laugh, cry or love.

^{83 |} See Stefan Heidenreich, 'Vision Possible: A Methodological Quest for Online Video', Video Vortex Reader II: Moving Images Beyond YouTube, p. 13.

^{84 |} Law has never had much foresight, and lawmakers never understand something in flux and in process. In these matters law might be reluctant for years to come and will be used by commercial interests to the extreme to stop what is already unstoppable.

The point is no longer to adopt traditional practices of film production. Video is only watchable by being with it. We need to share the space it inhabits, existing in a space with it.

Paik asked, if video could be time, then how can you inhabit it?⁸⁵ Implicit in this question is an awareness of the activity of the viewer, the interference, the settling in; this is the operational activity of a pair. We are not viewing or watching. We are acting and navigating. We are with video in our basic act of exploration.

A sphere occurs wherever you localize a mutual point of interest at any time, in any space. From the second I've shared something, this connection becomes my space, and we have moved inside the video sphere. The sphere is with us and we with it – we are inside.

'Video', throughout its historical development from analog electronic signal to its current shape, has not dissolved or vaporized into the digital but has 'absorbed' (to use the wording of Tom Sherman) the digital as a practice.

Now that the digital has become social, it brings to the foreground what video always has been; video's special vocation is to embody relationships. Video was always about 'beingwith-the-world' rather than representing the world.

As Sean Cubitt wrote in his 1993 essay "Videography":

If technology is a relationship between people that appears to them as a thing, and video is a relationship between technologies, then video is the relationship between relationships; it is not so much an interpretation as a mood (subjunctive?) in which relationships are affected, so that relationships, hermeneutic or no, are central to understanding it, not representation.⁸⁶

As Raymond Bellour put it, if video produces such a relationship, then it appears as an in-between space or a passage. This point is crucial for defining a new theory of video. This passage is a spherical space. The sphere of video is a kind of proximity and a togetherness built on relations and relational activities and events. In this sense, the video sphere could be a model that describes further developments of a medium, moving on from its historical cinematic and broadcasting conditions to become increasingly social. Online video is a direct expression of this relational condition. It is a zone of intimacy.

The sphere is a metaphor. The sphere responds to a new materiality that includes both video and us. We are swimming in the same pool, the same ocean. This ocean does not toss us about as a foreign object. It is a presence. It is an essential part of existence.

^{85 |} Nam June Paik, quoted after author's notes without reference.

^{86 |} Sean Cubitt, Videography: Video Media as Art and Culture, New York: Palgrave, 1993 p. 204.

Epilog: The Forest of Şeker Ahmet

All of a sudden, while writing this text, I find myself again puzzled. What I'm writing about somehow reminds me of John Berger's discussion of a painting by Şeker Ahmet. In this painting another reality takes place, where the forest is a thing by itself, a being that comes to us. But more...

In telling the story of the woodcutter, Seker Ahmet found himself facing the forest like the woodcutter. Neither Courbet in painting nor Turgenev in literature (I think of those two because they are contemporary and they both loved forests) could possibly have faced it in the same way. They would both have placed the forest, relating it to the world which was not the forest. Or to say the same thing differently, they would have seen the forest as a scene in which significant things took place: a deer dying or a hunter thinking about love.

Seker Ahmet, on the other hand, faced the forest as a thing taking place in itself, as a presence that was so pressing that he could not, as he had learnt to do in Paris, maintain his distance from it. This, I think, is what caused the disjuncture to open between the two traditions: the disjuncture in which this forest painting has its being.⁸⁷



FIGURE 15: PAŞA: PAŞA (1841-1907), WOODCUTTER IN THE FOREST

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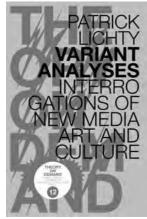
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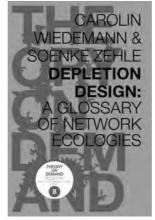
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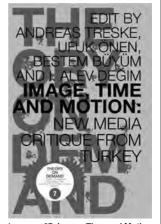
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