

Interaction as an aesthetic event

Lev Manovich

Media theorist Lev Manovich is a Professor of Visual Arts at the University of California, San Diego, and a Director of The Lab for Cultural Analysis at the California Institute for Telecommunications and Information Technology. He's author of *Soft Cinema: Navigating the Database* (MIT Press 2005), and *The Language of New Media* (MIT Press 2001) which was hailed as "the most suggestive and broad-ranging media history since McLuhan". Currently he is completing his new book *Info-aesthetics*. In *receiver*, Manovich takes a look at the playful user interaction in recent cell phone models and other personal information technology.

<http://www.manovich.net/>
Manovich's site

<http://mitpress.mit.edu/catalog/item/default.asp?tid=8830&ttype=2>
The Language of New Media

Have you realized that the phone that you own – assuming it is a model that came out in the last couple of years – constantly plays games with you? It seduces you with its animated icons and sounds, the shape and surface finishes, the feel of its buttons and every other detail of its material and media definitions. If you can recall the very first mobile phone you owned – let's say at the end of the 1990s or maybe even in the first years of this decade – the difference in design is striking.

The change in the design of mobile phones is just one example of a larger trend which I call "aesthetization of information tools". During the 1990s, interacting with information via computers and computer-based devices gradually entered people's lives outside of work. Because of its inherent multifunctionality and expandability, a computer and other devices built on top of it such as a mobile phone came to be used for all kinds of non-work activities: entertainment, culture, social life, communication with others.

As these devices – mobile phones, laptops, PDAs, media players, digital cameras, portable game stations – came to function as consumer objects to be used in all areas of people's lives, their aesthetics were altered accordingly. The associations with work and office culture and the emphasis on efficiency and functionality came to be replaced by new references and criteria. These included being friendly, playful, pleasurable, aesthetically pleasing, expressive, fashionable, signifying cultural identity, and designed for emotional satisfaction. Accordingly, the modernist design formula "form follows function" came to be replaced by new formulas such as "form follows emotion".

Something else has happened in this process. Until this decade the design of user interfaces was often ruled by the idea that the interface should be invisible. In fact, the really successful interface was supposed to be the one that the user did not notice. This paradigm made sense until the middle of the 1990s – that is, during the period when, outside of work, people used information devices on a limited basis. But what happens when the quantity of these interactions greatly increases and information devices become intimate companions of people's lives? The more you use a mobile phone, a computer, a media player or another personal information device, the more you "interact with an interface" itself.

Regardless of whether the designers have noticed this consciously or not, today the design of user interaction reflects this new reality. The designers no longer try to hide the interfaces. Instead, the *interaction is treated as an event*, as opposed to "non-event", as in the previous "invisible interface" paradigm. Put differently, using personal information devices is now conceived as a carefully orchestrated *experience*, rather than just a means to an end. The interaction explicitly calls attention to itself. The interface engages the user in a kind of game. The user is asked to devote significant emotional, perceptual and cognitive resources to the very act of operating the device.

When does this new paradigm appear? Over the last few years, journalists and technology observers have noted how designs of personal information technology came to emphasize aesthetics. (In retrospect, the key event which started this trend was the introduction of colorful iMACs in 1998.) But this is only a part of the story. Since industrial design has been central to modern consumer society for many decades, it enjoys recognition from press and cultural institutions. In contrast, because the fields of interface design and interaction design are quite young, so far they have been below the radar of public attention. Therefore, while journalists have noted how recent designs employ expressive shapes, make use of transparency and translucency, adopt interesting material finishes, and so on, they have not explicitly recognized that similar aesthetization affected another dimension of technological products – their interfaces.

<http://www.designmuseum.org/digital/jonathan-ive-on-apple>
Jonathan Ive on Apple

Today a typical information device such as a mobile phone has two kinds of interface. One is a physical interface such as buttons and the phone cover. The second is a media interface: graphical icons, menus, and sounds. The new paradigm that treats interaction as an aesthetic and meaningful experience applies equally to both types of interface.

The most dramatic example of the historical shift in how interfaces are understood is the difference in user interface design between the successive generations of the operating system (OS) used in Apple computers – OS 9 and OS X. Released in October of 1999, OS 9 was the last version of Mac OS still based on the original system which came with the first Macintosh in 1984. Its look and feel – the strict geometry of horizontal and vertical lines, the similarly restrictive palette of grays and white, simple and business-like icons – speaks of modernist design and "form follows function" ideology. It fits with gray suites, office buildings in International Style, and the whole twentieth century office culture.

The next version of the operating system introduced in 2001 - OS X - was a radical departure. Its new user interface was called Aqua. Aqua's icons, buttons, windows, cursor and other interface elements were colorful and three-dimensional. They used shadows and transparency. The programs animated when started. The icons in Dock playfully increased in size as the user moved a cursor over them. And if in OS 9 default desktop backgrounds were flat monochrome, the backgrounds which came with Aqua were visually much more complex, more colorful, and assertive – drawing attention to themselves rather than trying to be invisible.

In OS X, the interaction with the universal information processing machine of our time – the personal computer – was redefined as an explicitly aesthetic experience. This aesthetic experience became as important as the functionality (in technical terms, "usability"). The word aesthetics is commonly associated with beauty, but this is not the only meaning which is relevant here. Under OS X, user interface was "*aesthetized*" in the sense that it was now to explicitly appeal to and stimulate senses – rather than just users' cognitive processes.

The transformation of Apple from a company making hardware and software to a world leader in consumer product design – think of all the design awards won by iMACs, Powerbooks, iPods and other Apple products – is itself the most clear example of what I call aesthetization of information tools. It is relevant here to recall another classical meaning of aesthetics: "the coordination of all parts and details of an artwork or design" – lines, forms, colors, textures, materials, movements, sounds. (I talk about classical aesthetics because twentieth century art has often aimed at opposite effects – shock, collision, and establishment of meaning and aesthetic experience through montage rather than unification of parts.) The critical and commercial success of Apple products and the truly fanatical feelings they evoke in many people to a large extent relate to the degree of this integration which until now has not been seen in commercial products in this price range. In each new product or version, the details are refined until they all work together to create a rich, smooth, and consistent sensorial whole. This also applies to the way hardware and software

work together. As an example, think of the coordination between the circular movement of the user's finger on the track wheel of the original iPod and the corresponding horizontal movement of menus on the screen (which borrows from OS X column view.)

At the beginning of the 2000s other personal technology companies gradually began to follow Apple in putting more and more emphasis on the design of their products across all price categories. Sony started using the "Sony Style" phrase for its catalogs, website, and Sony stores, and its VAIO laptops brought high-level industrial design to the category of Windows laptops. In 2004 Nokia introduced its first line of "fashion phones" declaring that personal technology can be "an object of desire". (Two years later this became true for the whole mobile phone market). By investing in industrial designs of its consumer products, Samsung was able to evolve from being an unknown supplier to a top world brand. Even the companies whose information products were almost exclusively used by professionals and business users started to compete in the design of their products. For instance, the new 2006 version of the BlackBerry smart phone popular with business people and professionals was introduced with this slogan: "BlackBerry Pearl – Small, Smart, and Stylish".

Since mobile technology products such as mobile phones are made by a variety of companies, each designing its own interface (at least until now), at any given moment in time we can find a variety of interface designs. However, if we look at the evolution of media user interfaces in mobile phones from the late 1990s until now (2006), in general it proceeded along the following lines. First, user interfaces were changed from black and white to color. Next, the menu items were changed to colorful icons which, depending on what a company has decided would appeal best to people buying a particular product, were designed as cute, or cartoonish, or elegant, etc. Still later, animation was added throughout the whole cell phone interface, with icons and menu items sliding, rotating, enlarging, and doing other more complex motions when activated. (Thus, when in 2006 the Samsung USA website introduced the company's mobile offerings with the heading "Never a Dull Moment", this could refer equally to a phone's media capabilities and the very act of interacting with it.) In parallel to this gradual movement from monochrome text-only UI to color, icons, and animation and Flash-based interfaces (as in LG Chocolate), mobiles were also made progressively more customizable – which simultaneously allows people to change phones to reflect their aesthetic preferences and patterns of use, and also supports a whole commercial market for customization elements such as wallpapers, ringtones, and themes.

In retrospect we can see that aesthetization (or perhaps, "theatrisation") of the user interfaces of laptops, mobile phones, cameras and other mobile technology which took place between approximately 2001 and 2005 was conceptually prepared in previous decades. Based on work done in the 1980s, computer designer and theorist Brenda Laurel published a ground-breaking book *Computers as Theatre* in 1991. She called interface an expressive form and compared it with a theatrical performance. Using Aristotle's *Poetics* as her model, she suggested that interaction should lead to "pleasurable enjoyment".

The notion of interaction as theatre brings an additional meaning to the idea that a mobile phone engages its user in a kind of game or play which I put forward at the beginning. In suggesting this I was thinking of how the buttons on LG Chocolate suddenly appear in glowing red when you switch the phone on; or how when you select some option on the same phone it confirms your selection by replacing the current screen with a whole new graphic screen; or how pressing the cover of Motorola PEBBLE opens the phone in an unexpected and unique way. In other words, I was referring to a variety of ways in which the current generation of mobiles responds to user actions in a surprising and often seemingly exaggerated manner. (This applies to both physical interfaces and media interfaces). The notion of interaction as theatre makes us notice another dimension of this play-like behavior. As I will describe in more detail below using the example of switching on an LG Chocolate mobile, various sensorial responses which a mobile generates in following our actions are often not single events but rather sequences of effects. As in a traditional theatre play, these sequences unfold in time. Various sensorial effects play on each other, and it is their contrast as well as the differences between the senses being addressed – touch, vision, hearing – which together add up to a complex dramatic experience.

In 1991, when Laurel published her book, the use of technology products was still limited to particular professions but as the designers of iMAC have clearly recognized, at the end of the decade these products were becoming mainstream items of the consumer economy. And this economy as a whole was undergoing a fundamental change. In their 1989 book *Experience Economy: Work Is Theatre & Every Business a Stage*, Joseph Pine and James H. Gilmore argued that the consumer economy was entering a new stage where the key to successful business was delivering experiences. According to the authors, this new stage followed previous stages centered on goods themselves and later on services. The authors stated that to be successful today, a company "must learn to stage a rich, compelling experience". If Laurel evoked theatre as a way of thinking about the particular case of human-computer interaction, the authors of *Experience Economy* suggested that it can be a metaphor for understanding the interaction between consumers and products in the new economy in general.

The aesthetization (my preferred term) of hardware design and user interfaces of information products which took place throughout the industry in the following decade fits very well with the idea of the "experience economy". Like any other interaction, interaction with information devices became a "designed experience". In fact, we can say that the three stages in the development of user interfaces of computers – command line interfaces, classical GUI of the 1970s to the 1990s, and the new sensual and entertaining interfaces of the post OS X era – can be correlated to the three stages of the consumer economy as a whole: goods, services, and experiences. Command line interfaces "deliver the goods", that is, they focus on pure functionality and utility; GUI adds "service" to interfaces; and at the next stage, interfaces become "experiences".

<http://www.nokiausa.com/phones/fashion/>
Nokia

The concept of the experience economy works particularly well to explain how the physical interaction with technological objects - as opposed to their physical forms and screen interfaces only - was turned into the stage for delivering rich sensorial and often seductive experiences. For instance, early mobile phones did not have any covers at all. The screen and the key were always there and they were always visible. By the middle of the 2000s, the simple acts of opening a mobile phone or pressing its buttons were turned into real micro-plays: very short narratives complete with visual, tactile, and three-dimensional effects. In the short history of mobile phones examples of particular models whose commercial and critical popularity can to a significant degree be attributed to the innovative sensorial narratives of interaction with them are the Motorola RAZR V3 (2004) and LG Chocolate (2006).

<http://www.mobile-review.com/review/motorola-v6-en.shtml>
On Motorola's Pebble

<http://www.mobiledia.com/reviews/lg/chocolate/page1.html>
On LG's Chocolate

LG Chocolate sold over one million units in only eight weeks following its introduction. This phone offers (from a 2006 point of view) a unique interactive narrative which can be called a real Gesamtkunstwerk – directly engaging the three senses of sight, hearing and touch, and evoking the fourth sense of taste through the phone's name and color. When the phone is closed and off, it appears as a solid monochrome shape with its display and touchpad completely invisible. It is a mysterious Thing. When you switch the phone on, the whole multimedia drama unfolds. The Thing gradually awakens. Suddenly, previously invisible buttons appear in a glowing red

color. The screen lights up and it begins to play an animation. As the short animation unfolds towards its finale, the phone suddenly vibrates at exactly the same time as the LG logo comes onto the screen.

Given that the process of aesthetization of information tools started less than a decade ago, I am sure that what we have seen so far are just initial shy steps. More wild effects and experiences which we cannot even imagine today await us in the future. But for now, I have to admit that I am so mesmerized by the simple act of switching on my LG Chocolate, I keep switching the phone off and on again much more often than is "functionally" necessary.

This article was written for *receiver*
Contact: manovich.lev@gmail.com

As an aesthetic entity, Test Site can be approached in different ways. To view the work at a distance (from without) means to engage with it as a sculpture; that is, contemplatively and reflectively. Apprehended from this perspective, the work (indeed, any work) still operates within a relational field but in a way that affects a separation between work and viewer. Here, the objective or material qualities of Test Site take precedence in its formal aspect, such that the beholder remains passive. A brief comparison to minimalist art is instructive in describing how it operates on an aesthetic level. Thus, to approach the relational aesthetics of Test Site, the entirety of the human interactions that define it are to be understood as a coherent "world" of form. An important aesthetic perspective is for understanding and designing interaction. Before we do so, we would like to add one more introductory comment. It is clear, and sports events carry a lot of mass culture aesthetics. They, and by far outperform the aesthetics of fine art. The computer has become so popular and ubiquitous that it is on a par with the telephone, radio, or television. One important aspect of this tremendous spreading is the Graphic User Interface (GUI): a mass culture aesthetic phenomenon of, perhaps, unparalleled significance for culture on a global scale. Think of work situations as well as. Mew is an interactive sound piece. As you walk towards the curious and gawky object, it begins to emit a soft purring sound. If you stroke the fur, it will emit distorted meow sounds that are manipulated by the direction your hand moves. Pushing on the object will also alter the sounds, but pressing too hard will make Mew hiss. Mew was part of a collaborative sound object project between Design Products, Information Experience Design and Visual Communication students at the RCA, London. Sensors and sounds were programmed with Arduino and Max MSP. # vimeo.com/87721828 Uploaded 5 years ago 65.