

## Is There Really Only One Word For It?

### The Question of Software Vocabularies in the Expanded Field of Interface Aesthetics

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Sometimes you experience something so new, so delightfully unexpected, that there is only one word for it. Wow! (Promotional video for Windows Vista).

Advertising – like every “event” – first distributes modes of perception in order to prompt ways of living; it actualizes modes of affecting and being affected in souls, in order to realize them in bodies (Lazzarato).

In his text “Struggle, Media, Event,” sociologist Maurizio Lazzarato points out how contemporary advertising to an increasing degree is no longer merely about the representation of a cultural object – instead, it is about producing forms of experience and engagement. He contextualises this change within what he calls “the paradigm of the event where images, signs and statements contribute to allowing the world to happen”. With the ‘Battle of Seattle’ as his primary example, Lazzarato contends that the event contains a revolutionary potential of making other worlds possible, while emphasising the way in which the event in the form of advertising is also incorporated to function as an essential part of contemporary capitalism and its fabrication of worlds. The essential challenge of Lazzarato’s text, then, is to ask which worlds the “images, signs and statements” of advertising allow to happen.

Responding to this challenge, the present text will discuss the way in which two advertisements for a proprietary and free software-based operating system respectively – a promotional video for the operating system Windows Vista (2005) by Microsoft, and a work of installation art about the operating system *X-Devian*. The New Technologies to the People System (2003-) by Daniel Garcia Andújar

– allow two very different worlds of software to happen.<sup>1</sup> Through their “images, signs and statements” the advertisements produce experiences and engagement with the two operating systems. They are not simply trying to convince the users to buy a product, but are also inviting them to invest in a practical and intellectual use of the software. In that sense, echoing the presumption that consumers are the true product of advertising, the video and the installation can also be said to allow users to happen.

In fact, the fashioning of users is fundamental for the making of possible worlds by these two advertisements because it is the users who will eventually realise those possible worlds through their uses of the operating systems. The first advertisement configures the user as a consumer who is happy with the operating system as it is sold and has no urge to ask questions; whereas the second configures the user as a kind of hacker who critically explores the operating system and the possibilities of developing it as a cultural phenomenon.



ILL. 1: Installation shot of *X-Devian. The New Technologies to the People System* (2003-) by Daniel Garcia Andújar (Aarhus Kunstbygning, May/June 2007). Photo by Jens Møller Sørensen.

The aim of this text, then, is more specifically to discuss how the different users that the two advertisements allow to happen outline two different trajectories for the use of software as a form of involvement in contemporary culture.

### **Vocabularies, interfaces and distributions**

Taking a cue from the punch line of the Windows Vista video, the discussion of the involvement can be conceived as a question of user vocabulary, i.e. what words, languages and discourses the advertisements offer the users. Hence, whether explicitly reducing the vocabulary to just one word as in the case of the Windows Vista video or augmenting it through a multiplicity of discourse as in the case of the installation about *X-Devian*, the vocabularies that the advertisements offer the user designate forms of involvement, albeit very different forms of involvement, with the software and the software culture of which it is part.

Moreover, in their offering of vocabularies, the advertisements function as interfaces.<sup>2</sup> In the context of software, the interface primarily refers to the user interface, i.e. the objects (the screen, mouse, keyboard) and the semiotics (graphics, metaphors, structures) that mediate the user's interaction with the software. The two advertisements do not function as user interfaces in this conventional sense. They do not help the users connect to the Internet and organise files like the screen interface does. Instead, their assistance concerns the relationship between user and software prior to any concrete use. They produce what in software terminology is referred to as conceptual models. A conceptual model is a representation of a piece of software that helps the users to create an abstract understanding of the nature and logic of the software, which then will help them in the actual use of the software.<sup>3</sup> However, the understanding that the advertisements create is not primarily an understanding of the operating system in a technical sense, but rather an understanding of the cultural significance of the operating systems.

While software design theory makes a categorical distinction between interfaces and conceptual models, designating the practical and intellectual interaction with the software, respectively, in the case of the two advertisements, the interface includes the conceptual model.

Hence, the advertisements motivate an expanded notion of the human-computer interface beyond the isolated relationship mediated by the design of machines, screens and software and include the cultural images, narratives and ideas that are associated with and inform these designs. Such an expanded notion of the human-computer interface can be conceived in terms of a cultural interface in the sense that the interface gives access to forms of involvement in software culture. Instead of conceiving human interaction with computers as an interaction with stand-alone technical entities, the interfaces constructed by the advertisements for Windows Vista and X-Devian concern human relations to a cultural context through software or to software as culture.

The expanded notion of the interface also implies an expanded notion of interface *aesthetics* beyond questions of usability and smart desktop design. In connection with what he calls “the distribution of the sensible,” Jacques Rancière has introduced a notion of aesthetics which, although it makes no reference to software interfaces, points to something relevant about the interface aesthetics of the two advertisements (Rancière, *The Politics of Aesthetics*).<sup>4</sup> According to Rancière, aesthetics conceived as a distribution of the sensible is, “a system of self-evident facts of sense perception [...] that determines the very manner in which something in common lends itself to participation and in what way various individuals have a part in this distribution” (12). Whether they serve structures of control or processes of empowerment, aesthetics designate ways of seeing, thinking and saying that produce subjectivities and the possibilities of these subjectivities’ participation in, and organisation of, social contexts. As such, aesthetics are fundamentally political. Transferred to the interface aesthetics of the advertisements, the point is that their “images, signs and statements” determine the users’ involvement in software culture and not simply the use of the operating system.

Essentially, this expanded notion conceives the difference between the two advertisements as a matter of the production of “political subjectivity” (9).

### “There’s only one word for it”

In the context of proprietary software, advertising plays an increasingly important role. Ever since Apple’s legendary presentation of their first Macintosh computer, which introduced the graphical user interface, in a commercial broadcast during Super Bowl XVIII in 1984,<sup>5</sup> proprietary software culture has been as much about cultural development as about technical development.<sup>6</sup> Hence, when Windows Vista by Microsoft was launched in 2007, it was accompanied by an extensive advertising campaign involving a package of marketing stunts in public space, in the mass media and of course on the web, including a theme song by a famous Indian pop singer.<sup>7</sup> One of the campaign’s leitmotifs was that there was only one word for the experience of the new operating system: Wow. The word was part of the title of the aforementioned theme song, but it was most explicitly used in a promotional video.<sup>8</sup>

The video starts in the mountains with a sequence in which a modern-day version of the figure in Casper David Friedrich’s painting *Wanderer above the Mist* (1818), a fully equipped tourist of nature – on crutches, even – is hiking with fellow tourists and a guide. On the way to the top, the ‘wanderer’ stops to admire the pleasing view and in awe he exclaims “Wow”. The implied reference to Friedrich’s painting seems to be very consciously employed to announce the coming of an extraordinary phenomenon, and the opening sequence is followed by sequences referring to phenomena such as first love, the rock’n’roll revolution, the courage of children, a golf miracle, the wonders of agriculture, the magic of fairytales, and the architectural magnificence of The Great Wall of China. Finally, the video ends with a sequence showing a man who sits down at his shiny, crispy, clean desk and opens his laptop to “experience something so new, so delightfully unexpected, that there is only one word for it. Wow.”<sup>9</sup>

On the face of it, the promotional video is simply an involuntarily comical expression of a somewhat naïve branding strategy. Yet, on a deeper level, it reveals itself as a cleverly crafted example of the kind of advertising that Lazzarato points to; and if analysed in further detail it reveals something essential about the world and the users that the operating system allows to happen.<sup>10</sup>

Basically, the video presents the operating system as a technological wonder comparable with the biggest events in human history and life. The substantial criticism of Windows Vista has ridiculed this comparison from a technological point of view.<sup>11</sup> However,



ILL. 2: Caspar David Friedrich: *Wanderer Above the Mist* (1818)

The opening sequence of the Windows Vista video makes an obvious reference to Caspar David Friedrich's painting *Wanderer Above the Mist* (1818) and its alleged description of a sublime experience. While it has been impossible to get through to Microsoft to obtain a still from the sequence, let alone the right to reproduce it, the painting is public domain because the copyrights have expired.



instead of reiterating this criticism the aim here is to give a critical outline of the cultural perspectives of the comparison.

Through its montage-style narrative, the video establishes a relation between Windows Vista and the user, and as such it functions as an interface in the aforementioned expanded sense. Without a word about the actual functionalities and design principles of the operating system, Microsoft delivers a clear point. With Windows Vista you are not using a computer any more (or at least: you are not aware of doing so). Instead, like the people in the video, you are having an experience.<sup>12</sup> What distinguishes Windows Vista from other operating systems on the market is the experience of it, how it feels, rather than what it can do. Parallel to this, the video also connects with the new “experience economy” in which the product is staged as an experience that engages the consumer “in a personal, memorable way” (Pine and Gilmore). With Windows Vista, the user is buying not goods or a service but an experience, and one to remember.

### **Facing the “absolutely great”**

But what more exactly characterises the experience of Windows Vista? The video presents the operating system as more than a piece of software for the everyday activities in software culture. According to the video, Windows Vista is an experience of life when it is most poetic, most amazing, when the users are free to live in the moment.<sup>13</sup> It fills them with positive emotions, expands their view on the world, and, as the name indicates, lets them envision the future. The video cleverly plays on numerous such references and associations, all intended to conceptualise Windows Vista in the minds of the possible buyers and users as a product with a scope far beyond the technological realm, a product that is inseparable from the essence, the biggest and the best of what it means to be human and to live in today’s world. Not just in any part of the world but in the technologically developed part of the world, where software is mostly proprietary and commodified, serving the advancement of information capitalism in its neoliberal, globalised form, of which Microsoft is one of the most powerful exponents. The licence “only gives [the user] some rights to use the software. Microsoft reserves all other rights.” The user is thus encouraged to consume the software like any other product in the experience economy.

So while the thought that Windows Vista possesses enriching existential value might be fascinating, the suggestion seems to imply a set of values and premises that should rather generate scepticism. Hence, the new, open horizon of experiences of possible worlds that Windows Vista supposedly lets the users enjoy is framed by very specific ideas of how the users live their lives through the use of the software, how they perceive and act upon the world through the operating system. These ideas are based on strategies of regulation, administration and (ultimately) control, working in the service of the information politics of proprietary software. In other words, they establish a relation of power. As such, Windows Vista can be associated with the notion of “governmental technologies” as introduced by Michel Foucault. Generally speaking, governmental technologies designate a modern, neoliberal form of power, in which the subject is governed through organised life practices that encourage the subject to behave according to a specific self-perception, specific internalised ideas one might say, of its position and potential in the world (Lemke).

How do this relation of power, these implied values and premises manifest themselves in terms of the experience of the operating system according to the storyline of the video? What user self-perception does it sell, what position and potential does it assign to the user? The opening sequence outlines an answer. What the video is actually telling the user with the implicit reference to Friedrich's painting is that the experience of Windows Vista is a sublime phenomenon, i.e. an experience of “the absolutely great” as Kant writes in his *Critique of Judgement* (94).<sup>14</sup>

Faced with the sublime experience of Windows Vista, the user is in no position to question the operating system. All the user can do is to realise the greatness of the operating system and his own subservient role as a user configured as a consumer. The user might be enriched by using Windows Vista, but only to the extent that he/she recognises the authority of the operating system and engages in software activities that consent to its values and premises. To paraphrase the title of Stanley Kubrick's *Dr. Strangelove* (1964), which refers to the ‘sublime’ experience of the nuclear bomb,<sup>15</sup> the user should stop worrying about Windows Vista as a technological artefact and love it as a sublime experience in contemporary software culture.



As several users have experienced, Windows Vista is not exactly the ‘technologically sublime’ operating system that the video pictures it to be. So the user should worry. However, not so much in relation to the functional stability of the system but in relation to the ‘technologically sublime’ having a dominant influence on the making of possible software culture and defining of software experience and engagement.<sup>16</sup>

A principal function of the video’s linking of Windows Vista with the sublime experience is to depoliticise the operating system and its use. As a sublime experience of technology, engineering and science, the operating system is dissociated from the discussions and negotiations of disagreeing and dissensual positions that (according to Rancière) constitute the field of democratic politics (Rancière, “Ten Theses on Politics”). Hence, the user should stop worrying not only about the advanced and complicated technological architecture of Windows Vista but also about the information politics embodied in the operating system and the conflicts of interest and relations of power they involve. Instead of employing the operating system in forms of political involvement in software culture that challenges industrial authorities, like Microsoft, the user should simply love the experience of it as a naturalised (albeit extraordinary) part not only of software culture but also of the totality of human existence.<sup>17</sup> In other words, Windows Vista makes worlds possible through an experience which transcends the field of politics as a field where humans make worlds possible through discussions and negotiations. Nevertheless, the system is presented as the liberation and empowerment of human existence.

More specifically, this depoliticised experience manifests itself as a reduction of the user’s software vocabulary to one word, a general exclamation of wonder that says nothing about the specific capacities and possibilities of software, neither technologically nor politically. The “Wow” is an expression of a software discourse where knowledge of, reflection on and involvement with software is replaced by sensations and feelings. This replacement feeds “the human propensity to place faith in and assign higher power to an agency that is not completely understood,” which computer scientist Alan Kay identifies as a problematic impact of computers on cul-

ture (Kay, “Microelectronics and the Personal Computer” 135). The user cannot completely understand Windows Vista and is given little other alternative than to trust its technology and politics.

According to Kay, counteracting this trust in computers, including software, is not a question of mistrusting them but of developing the computer literacy of the user (Kay and Goldberg). “Computer literacy” to him, however, is more than simply learning to read and understand computer manuals. Instead, it is a matter of “contact with the activity of computing deep enough to make the computational equivalent of reading and writing fluent and enjoyable” (Kay, “Computer Literacy” 53). In other words, it is a question of being able to use the new language of software code to write programs, like being able to use traditional languages to write stories. Hence, in relation to the Dynabook and very appropriate for the current discussion, he writes: “One can imagine one of the first programs an owner will write is a filter to eliminate advertising!” (Kay, “A Personal Computer for Children of All Ages” n. pag.). Only through the continuous development of such literacy, he argues, can the full potential of software be realised and make possible a software culture in which humans (users rather than the industry) constitute the true creative force.<sup>18</sup>

### **From tool to experience and back again**

Essentially, the video is symptomatic of a strong tendency in contemporary proprietary software culture to conceive software as an experience rather than a tool.<sup>19</sup> As Lev Manovich has demonstrated, the tendency is particularly noticeable in the design of user interfaces within the fields of ubiquitous computing and mobile digital devices – but it also has an impact on the design, conception and promotion of software for personal computers (Manovich “Information as an Aesthetic Event”). Notwithstanding the exciting, spectacular and constructive experiences that the tendency generates in terms of human interaction with technology, it has the propensity to reduce the critical aspect of software use and the users’ involvement in software culture. As an experience, like the sublime experience that Windows Vista is depicted as, software is defined by the positivism of technological progress rather than by the critical

discourse of cultural development. It is a way of living given to the users by the industry rather than a possibility for the users to create their own autonomous ways of living.

The industry has good reason to advance the tendency since it, in accordance with B. Joseph Pine II and James H. Gilmore's account of the experience economy, accommodates not only the behavioural patterns but also the needs and desires of contemporary consumers and thus represents a profitable business opportunity. However, while the users on their part have good reasons to worry about this tendency since their critical agency is being replaced by consensual participation, there is no reason for despair as there are equally strong tendencies to explore the notion of software as a tool for critical involvement in software culture, especially within the practices and discourses of free software and software art.<sup>20</sup>



**ILL. 3:** Installation shot of *X-Devian. The New Technologies to the People System* (2003-) by Daniel Garcia Andújar (Aarhus Kunstbygning, May/June 2007). Photo by Jens Møller Sørensen.

### “The Evolution of the Species”

The artwork *X-Devian. The New Technologies to the People System* is one of the most extensive manifestations of, and contributions to, these tendencies.<sup>21</sup> The work is centred round the fictive operating system *X-Devian*, which is in fact a conceptual packaging or a designed version of a distribution of Ubuntu’s latest desktop version.<sup>22</sup> However, while the work literally distributes an actual piece of free software and the accompanying catalogue includes a so-called LiveCD plus installation instructions, it is not so much the technical specificities of *X-Devian* as the cultural vocabulary (the discourses and ideas in which the operating system is embedded) that the work is an interface to. The general point is that this dimension of free software needs developing, just as much as the software itself, and that the potential of free software as a tool for critical involvement in software culture can be explored as much in terms of cultural significance as in terms of technical capabilities. The work thus translates the principles of free software from being a question of technical programming to being a question of cultural programming, and presents the translation with aesthetic means different from those usually employed by the free software movement (and the proprietary software industry for that matter).<sup>23</sup>

*X-Devian* is formally a transmedia installation consisting of two parts. In the first part, *X-Devian* is advertised like a piece of proprietary software through a promotional video, posters, graphic design and product display arranged much like a stand. In the second part, *X-Devian* is presented in a space that resembles a mix between a cave environment and a media lab containing hardware parts, manuals and licences, ‘code graffiti’ and tables with computers running *X-Devian*. The two parts represent different advertisement approaches to *X-Devian*, yet they are essentially interconnected, forming and functioning as one complex interface. The interconnection is manifested by the sentence “Access to Technology is a Human Right™” written on an adjoining wall so the audience, or rather the user, has to move from one part to another in order to read the entire sentence.<sup>24</sup> In software terminology, the interconnection can be conceived as an interconnection between the front-end and the back-end of the operating system, between free software as an

abstract representation and as concrete material. The point of the interconnection is to establish a set of mutual exchanges between these dimensions that generates a new, expanded vocabulary for involvement in software culture as a free culture.

The sentence itself, which also serves as the slogan of *Technologies to the People*, is essential in this regard. It constitutes a kind of horizon or backdrop that frames the general mode of perception for the user. As a statement that expresses an interest in more equal software cultures in which participation is not a question of financial abilities (or of technical expertise for that matter) but of human existence, the sentence associates *X-Devian* with the people who Rancière regards as “the principal subject of politics [...] the supplementary part in relation to any counting of parts of the population that makes it possible to identify ‘the part of those who have no-part’ with the whole of the community” (Rancière “Ten Theses on Politics” 5). In another statement, echoing Rancière, Andújar has declared that *Technologies To The People*

is aimed at people in the so-called Third World as well as the homeless, orphaned, unemployed, runaways, immigrants, alcoholics, drug addicts, people suffering from mental dysfunctions and all other categories of ‘undesirables’. *Technologies To The People* is for people denied access to the new information society and new technologies. *Technologies To The People* wants more people to be networked (n. pag.).

The sentence, in other words, connects *X-Devian* to processes of democratic development that challenge predominant power relations in contemporary software culture, for instance those constituted by the industry. It implies that the users of the operating system, rather than the operating system itself, represent the constitutive part of these processes. The perspective of the sentence, however, points beyond the actual project of giving access to technology to the undesirable people that Andújar mentions above. Instead, Andújar describes these people as figures for a multiplicity of different kinds of users allowing a diversified and non-conforming software culture to happen. *X-Devian* is a political tool that is defined by its users and their uses of it, by the politics of human agency.





Contrary to the superhuman scale of the technological progress that Windows Vista represented in the promotional video, the size of the hand signifies that *X-Devian* is a collective human project which exceeds the sum of its parts. Furthermore, the image signifies that when the users pick up a copy of the CD in the installation they become part of the image so to speak, and are involved in the continuous development of the ‘evolution,’ practically and intellectually.

### **Hacking “the world’s most advanced operating system”**

This part of the installation also features a promotional video, usually shown on a big flat screen hung on the wall. In the video, an enthusiastic ‘user’ talks with a group of other users about the operating system’s many “amazing new features [which are] built up around you to make your life even easier.” They are all informally gathered in front of a computer in a boutique setting with glass walls and a hectic level of activity signalling that *X-Devian* is for an open and dynamic creative environment in which the users are the focal point. However, the message of the video is not as simple and straightforward as that, because the video was originally made not for *X-Devian* but for the Panther version of Apple’s operating system Mac OS X launched in 2003.<sup>25</sup> Andújar has appropriated the video to *X-Devian* by replacing the screen dumps from Panther by screen dumps from various Linux distributions and exchanging the name and logo in the beginning and the end of the video.

Andújar applies similar appropriation aesthetics on the website for *X-Devian*, which mirrors the entire design of the website for Panther but has a different content, for instance on the front page, where the text under the heading “Advancing the world’s most advanced operating system” is about *X-Devian* and the text itself is an appropriation of various texts about Devian and free software. Hence, he uses Apple’s aesthetics to promote *X-Devian*, an operating system that expresses an idea of what creative environments and “the world’s most advanced operating system” are that is antithetical to Mac OS X. His gesture functions as a hack, reflecting the *modus operandi* of free software programming, which uses already existing material for processes of development that transgress proprietary boundaries and explore material in multiple directions and contexts.

The hack consists in transforming the commercial aesthetics of Apple's advertising campaign into material for political aesthetics that challenges the product of Panther and the general notion of software as a product.<sup>26</sup>

The hack also includes the 'X' in *X-Devian*, which is an appropriation of the X in Mac OS X. However, it is an appropriation that converts the meaning of this X. Rather than signifying the new line of Apple's operating system, the X functions as a prefix that signifies the open-ended potentiality which characterises the development of free software. Andújar takes Apple at face value and utilises the letter's ambivalence to point beyond the identity of a closed system to a heterogeneous and indefinable network made up of the humans in the aforementioned statement. Hence, the X essentially signifies the inclusion of the users and the recognition of their open-ended potentiality.

Moreover, by appropriating Apple's advertisement rather than its product, Andújar extends free software's challenge of intellectual property and copyrights to concern not merely principles of programming but the vocabulary for involvement in software culture. By relating the freedoms listed in the free software definition to the context of actual programming *and* to the context of software culture in general, the appropriation makes the basic point that the potential of the freedoms can be fully explored, in its true radicality. It emphasises that the significance of software is as much a question of information *about* software, its representation outside the context of programming, as about software as information; and that it is important that free software also challenges proprietary software and hacks software culture on this level.

For instance, when Apple's advertisement talks about "advancing the world's most advanced operating system" that is "built up around you to make your life even easier" with reference to one specific product (a commercial brand and a proprietary software culture), it is claiming ownership of the use of a set of common concepts about software and thus fixing and reducing their meanings, notwithstanding that the claim is both legally and culturally unjustifiable.<sup>27</sup> A free software operating system can just as well be said to be the world's most advanced and to be built around the user,

which would alter the meaning in relation to the 'product', the user and software culture.

The appropriation of Apple's advertisement focuses attention on the importance of manifesting free software's opposition to proprietary software by distributing and developing the information about software beyond any form of ownership, just like the software itself. It accentuates that the difference between free software and proprietary software is also a question of difference in terms of forms of representation, of interfaces that configure different relations between the users, the software and software culture.



ILL. 5: Installation shot of X-Devian. *The New Technologies to the People System* (2003-) by Daniel Garcia Andújar (Aarhus Kunstbygning, May/June 2007). Photo by Jens Møller Sørensen.

### Material and information behind the image

The second part of the installation is characterised by a different form of interface. In it, Andújar applies a very different set of aesthetics than in the first part and than both Microsoft and Apple, and with this change of setting he signals a transition to another level of involvement with software culture.

The users enter this part of the installation by going around the wall, which displays the image of the hand holding the disk. Behind the wall they encounter a pile of various hardware parts. Stacked as they are (literally supporting the wall and figuratively supporting the image), the parts are not outdated and defunct trash – instead, they represent the material used for the development of *X-Devian*. Similar parts lie on a table included in this part of installation. Here, some of the parts are assembled into tools, thus indicating that the development also involves the continuous practical and intellectual reuse of material, whether it is physical or digital, computers or lines of code. As an advanced operating system *X-Devian* is not about the improvement of existing tools but about inventing new tools altogether and about involving the users in the process. Hence, the users are encouraged to make their own tools with the parts already available as well as considering the more general possibility of making their own tools outside the installation context.

The functionalities of the tools on the table are uncertain – or rather they encourage investigation, reflection and speculation on the part of the user. Instead of serving familiar and straightforward utilitarian purposes, the tools facilitate the imaginations of the users and their imagination of uses. This evokes Kay's belief in the imagination as a primary source for the development of computer literacy and of a computer culture developed by human creativity (Kay "A Personal Computer for Children of All Ages"). Computers are not primarily problem-solving instruments in the conventional sense of tools, but devices for the experimental creation of possibilities. As such they reverse the logic of the (software) tool from being a question of accommodating existing and defined needs in the context of a set of given conditions to being a question of generating new ideas of needs and contexts. Ideas informed by principles of

art and play, rather than by scientific reason and market considerations.

The emphasis on this imaginary dimension of software culture is also evident from the ‘code graffiti’ that Andújar has written in white chalk on the black painted walls surrounding the table. This graffiti consists of lines of instructions distributed in a rather disorderly fashion over the walls. It does not amount to actual programs, but configures codes beyond questions of exact meaning and the compliance to rules as a performative and poetic expression.<sup>28</sup> Thus it encourages the user to ‘read’ it with the logic of the imagination and in terms of its abstract aesthetic qualities. The fact that the code is written in chalk also implies that it is neither definite nor permanent. Rather, like the parts on the table and a piece of free software, it constitutes the material for continuous development by erasure, overwriting or addition, for instance by the users.

By writing the code on a wall Andújar not only ‘liberates’ it from the inside of the computer and makes it accessible to and integrated in the world in which the users live and set marks. He also connects it to the existential activity of interacting with the world and through that activity claiming a presence in the world. And with the association to graffiti he implies that it is a kind of activity that challenges the rules of the dominant system, akin to the way in which free software challenges intellectual property law. The point is not the illegal aspect of the activity but the exploration of the forms of activity that are defined not by cultural order but by the intensity of human agency.

The notion of *X-Devian* as a tool is further emphasised by a large number of different free software licences and manuals that hang on the wall next to the graffiti. Printed on regular paper and attached clip-boards, the texts are displayed like tools in a tool shed which users can pick up and use, converting their technical meaning into cultural significance. In line with Richard Stallman’s perception of “The Free Software Definition” as a philosophy, the installation challenges the users to read beyond the literal and specific content and conceive, interpret and apply them in relation to a broader context of software culture.

Like the graffiti, the licences and manuals configure the users as active and autonomous readers who, rather than just being offered the chance to pick up a finished product from the shelves, are given access to information about X-Devian and the software culture of which it is part. That access is also the point of a number of specially designed mobile tables where the users can sit down and spend time exploring X-Devian and burn a copy of the operating system to take home. In addition, the computers give access to (copy) an extensive database of documentary information in the form of texts, programs and video files about free software.

Besides, the installation through the various information and materials foregrounds that X-Devian is essentially a networked phenomenon and not a closed entity. It exhibits the reality behind the image or rather the reality of the image, as a reality where processes of critical involvement and not the production of objects of ownership characterise the development of software culture.



**ILL. 6:** Installation shot of X-Devian. *The New Technologies to the People System* (2003-) by Daniel Garcia Andújar (Aarhus Kunstbygning, May/June 2007). Photo by Jens Møller Sørensen.



### **Working collectively towards software literacy**

Andújar also hosts workshops about free software in the second part of the installation, thus making explicit its function as an informal, non-institutional learning site. The fact that these workshops constitute an integral part of the installation signifies that the development of the users' software literacy is an essential part of the technological revolution that the installation announces.<sup>29</sup> The software literacy that the installation and the workshop offer the users is, however, more than a question of learning how to use the operating system according to a manual, although that is important. It is a software literacy that also includes learning to imaginatively and critically explore the operating system in the context of software culture. In fact, the source of this software literacy is learning to practically and intellectually establish exchanges between these two levels of involvement with the operating system.

With their massive and complex accumulation of material and information, the installation and workshop counter a predominant trend within software culture to understand software literacy as a question of developing the users' intuitive and rational faculties in the use of software. They address the users' capabilities to reflect, analyse and speculate as the primary faculties for the use of operating systems, thus rendering software literacy as essentially a question of critical involvement.

Furthermore, through their inclusive structure the installation and workshops emphasise the collective character of free software as both a technical and cultural phenomenon, as well as emphasising that a significant aspect of the specific form of software literacy that free software represents involves learning to 'do-it-together' – a notion that Andújar has used to point out a difference from the more common 'do-it-yourself' notion.<sup>30</sup> While do-it-together (like do-it-yourself) is engaged with autonomous production as a vehicle for social change, it also marks a development of this project through new, dynamic networks of collaboration and sharing. *X-Devian* presents the user with both intellectual and practical dimensions of do-it-together.<sup>31</sup> With its database of information on the computers and in the exhibition space, it gives the users access to the culture of collectively generating knowledge; and with the workshops it

engages the users in the activity of working together on a common project. Hence, the installation, like the software, functions as a collective tool as well as a tool for collectivities of users, a tool for collective user agency in relation to the involvement in (free) software culture.

### **There is more than one word for it**

The focus on the interface aesthetics of the promotional video for Windows Vista and *X-Devian* manifests and addresses the difference between proprietary and free software beyond the legal and technical definition. It demonstrates that the difference is not simply a matter of changing the operating system and then continuing to use the software as usual, but that there is also a challenge involved in developing a different vocabulary, different words as well as ways of talking, which eventually is also a development of a different software literacy – thereby changing the conditions and perspectives of the involvement of users in software culture.

Moreover, the example of *X-Devian* underlines that art represents a relevant and powerful medium for this development because of the experimental and critical use of “images, signs and statements” that it engages the users in.<sup>32</sup> Other prominent contemporary artworks where free software (discourses and practice) constitutes an explicit part also testify to this fact, for instance *Rastasoft* (2003-) by Jaromil, *Carnivore* (2001-) by Radical Software Group, and *life\_sharing* (2000-2003) by 0100101110101101.ORG. Artworks such as the *Net.Art Generator* (1999-) by Cornelia Sollfrank, *BURN* (2001) by Kingdom of Piracy and *Nine(9)* (2003) by Mongrel, which incorporates the freedom principles of free software in a more abstract sense, are also pertinent to this context.

Like most of these works, *X-Devian* reverses a common guiding principle for interface aesthetics in the context of software design, according to which a ‘complex’ interface is a problem because it prevents the user from using the tool to get the job done. The interface aesthetics of the installation are complex; but within the context of the legacy of conceptual art that the artwork is associated with, complexity in aesthetics represents a possibility for a more profound and extensive user involvement. In a discussion of the creative and communicative aspects of what he calls “interface culture”, Steven

Johnson has suggested that “user-hostility” figuratively speaking might be a future guiding principle for what he calls “the digital avant-garde”, which “would bring about an intriguing reversal in the basic rules of interface design” (226).<sup>33</sup> The interface aesthetics of *X-Devian* are not exactly hostile towards its users, yet they do counter many of the same mainstream tendencies that Johnson refers to by requiring and stimulating the users to apply a reflective perception, not only in relation to the installation but to software culture in general (ibid. 224-39).

In this sense, *X-Devian* is in accordance with Rancière’s definition of artistic practices as “ways of doing and making” that intervene in the general distribution of doing and making as well as in the relationships they maintain to modes of being and forms of “visibility” (Rancière, *The Politics of Aesthetics* 13). *X-Devian* intervenes in the proprietary software industry’s distribution of the sensible and initiates a redistribution of the sensible. This redistribution designates other modes of being, perceiving and acting that produce political subjectivities who are not defined by and challenge the given order of mainstream software culture.

Of course, this redistribution of the sensible is essentially a (science) fiction; but as Rancière points out, “the real must be fictionalised in order to be thought.” (Rancière, *The Politics of Aesthetics* 38). So the political point of *X-Devian* is not to use the documentary material on free software to construct a narrative, but to make it intelligible as a critical potential for free software users, uses and cultures that cannot be conceived in the current situation. A potential, in other words, for software futures where there is more than one word for it.

## Notes

1. The title of the artwork is *X-Devian*, whereas the name of the operating system is X-Devian. The New Technologies to the People System. For the sake of clarity, the former is written in italics. Officially, Technologies to the People is an entity in itself, as well as functioning as a conceptual framework for Daniel García Andújar’s artistic practice. Technologies to the People has sponsored several of Andújar’s projects and even awarded him a prize, while Andújar has represented and spoken on behalf of Technologies to the People in a number of contexts. To attempt a categorical distinction between the company and the artist is pointless, just as the ambiguity regarding their interrelation is a point worth consideration.
2. Recognising the complexity and multiple meanings of the notion of the interface,

not just within software studies, the basic definition applied here is that the interface is an entity that establishes a communicative relation between two more or less separate entities, “making one sensible to the other” (Johnson 14) and allowing various degrees and forms of interaction. Hence, it does not simply give one entity control over the other, but actually mediates an exchange between the two entities. Or to use computer terminology, the interface does not simply give the user the power to control software, it also models the use of such software. The character and balance between these two dimensions of controls define the functionality of the interface, both in a literal and figurative sense. For a wide introduction to the field of interface theory in relation to computers see Laurel, and for a general introduction to “the science of the interface” see Diebner, Druckrey and Weibel. For a specific discussion of the interface in relation to software, see Cramer and Fuller.

3. In Donald A. Norman’s words, which the Microsoft marketing team probably paid close attention to, “a conceptual model is a story. It doesn’t have to discuss the actual mechanisms of the operation. But it does have to pull the actions together into a coherent whole that allows the user to feel in control, to feel there is a reason for the way things are structured, to feel that, when necessary, it’s possible to invent special variations to get out of trouble and, in general, feel mastery over the device” (Norman 181).
4. In a brief discussion of abstract paintings Rancière does, however, compare their flatness to “the flatness of an interface” (Rancière, *The Politics of Aesthetics* 16); and in another context he discusses “The Surface of Design.” (Rancière, *The Future of the Image*). In both cases the concepts are used in a general, transmedia sense. Starting with the book *Disagreement. Politics and Philosophy*, Rancière has developed this notion of aesthetics as a distribution of the sensible in a number of texts on a variety of topics, such as art, literature, design and politics.
5. The commercial was directed by movie-director Ridley Scott and alludes to George Orwell’s novel *Nineteen Eighty-Four* (1949). It cuts between images of a hypnotised herd of people being led by a televised “Big Brother” on a big screen and an athlete who is running away from the police. The commercial ends with the athlete throwing a sledgehammer at the screen, which causes it to explode. In the mist of the explosion the following text appears and is read by a voice-over: “On January 24<sup>th</sup>, Apple Computer will introduce Macintosh. And you’ll see why 1984 won’t be like ‘1984’”. Indirectly, this explosion conceptualises and anticipates the idea of the computer as a phenomenon that transgresses the (television) screen, transgresses technology, and through the new type of interface gives access to a new experience of life; an idea that is essential to the advertisement for Windows Vista. To watch the commercial see <http://www.youtube.com/watch?v=OYecfV3ubP8>, and for a detailed account of the history of the commercial see Linzmayer.
6. In the fiscal year 2007, Microsoft spent \$300 million on Windows Vista-related advertisements, and a year later raised its advertising budget to \$470 million compared to Apple’s \$486 million (it was \$338 million two years earlier) (Notte; Blakely).
7. The song is titled “Wow is now!” and the singer is Sinidhi Chauhan. To listen to the song go to <http://www.microsoft.com/india/Wow/>. The reason for choosing an Indian singer is unknown and perhaps not relevant, but considering that most of *Windows Vista* is probably programmed in India, the choice becomes a weird reflection of the new global software industry.
8. The commercial had several versions, all made from the same pool of filmic sequences but differently mixed. Thus, although the commercials differ formally, the basic concept is the same. An interesting reference here is Ted Nelson’s call for an interface inspired by film. Although he is arguing in terms of the computer interface (screen, keyboard, mouse etc.), it seems obvious to extend his argument

to commercials. Because, as will be evident in the following, his idea that a filmic interface will make the user forget he/she is using a computer is exactly the point that Windows is aiming at with this series of 'filmic' commercials. (Nelson, quoted in Laurel 235-43). A current version of Nelson's line of thought is Lev Manovich, who in the context of what he calls "cultural interfaces," i.e. interfaces to "culture encoded in digital form," has argued that "cinematic ways of seeing the world, of structuring time, of narrating a story, of linking one experience to the next, have become the basic means by which computer users access and interact with all cultural data" (Manovich, *The Language of New Media* 78-9).

9. The version of the commercial described here is no longer available online. To view a different version of the commercial, including sequences of a rocket launch and the fall of the Berlin Wall, go to <http://www.youtube.com/watch?v=f7ZVKG8rRfA&feature=related>.
10. At least in terms of intention. Hence, in the introduction to the licence terms for Windows Vista, Microsoft writes that: "By using the software, you accept these terms. If you do not accept them, do not use the software. Instead, return it to the retailer for a refund or credit". However, as activities of both common and expert users show, the operating system can be used in ways and for purposes that transgress what Microsoft "allows." For instance, it can be used to illegally download files over BitTorrent networks, and its security can be hacked. For an easily accessible guide to how to hack Windows Vista, see Sinchak.
11. To get an overview of the criticism, see [http://en.wikipedia.org/wiki/Criticism\\_of\\_Windows\\_Vista](http://en.wikipedia.org/wiki/Criticism_of_Windows_Vista).
12. The commercial's emphasis on experience associates it with a current trend within the field of interface design to develop interfaces based on an understanding of user experience, of human behaviour, feelings, needs and wishes rather than principles of usability. Moreover, it associates it with the expanding field of ubiquitous computing, where software is no longer limited to the desktop but integrated into everyday objects and activities to the point where users do not notice it, allowing them a simpler, more intuitive interaction with the technology, software or hardware. In this context, launching a critique of the usefulness and market obsolescence of the Graphical User Interface, Donald Norman has introduced the notion "of the invisible computer" that "blends so seamlessly with the task to be done that it disappears from consciousness" – the technology is "hidden away out of sight" (Norman 69-88). For an introduction to the principles of ubiquitous computing see Weiser, and for a discussion of their cultural implications see Greenfield.
13. The theme song of the advertising campaign is called "Wow is now!", and an animated sequence from another television commercial proclaims "Instant Wow".
14. Kant himself mentions mountain peaks as one example of a phenomenon that generates sublime experiences, and it is common for art historical writings to interpret Friedrich's painting as a depiction of such an experience. Kant develops the notion of the sublime in *Observations on the Feeling of the Beautiful and Sublime* and *Critique of Judgment* in relation to a romantic preoccupation with the eternal and the infinite. In his post-modern re-interpretation of the concept in the text "The Sublime and The Avant-Garde", Jean-Francois Lyotard connects the sublime to the experience of "the instant" as an "unpresentable" event; and without giving the advertising agency responsible for the Windows Vista commercial undeserved philosophical and artistic credit, the description of the experience of the operating system as well as the title of the theme song "The Wow is Now" cleverly plays with references to this post-modern sublime.
15. The full title of the film is *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb*. The love for the bomb concerns its technical perfection as described by

Dr. Strangelove. Dr. Strangelove's fascination reflects Robert Oppenheimer's defence statement at his security clearance hearings in 1954: "When you see something that is technically sweet, you go ahead and do it and argue about what to do about it only after you've had your technical success. That is the way it was with the atomic bomb." The statement is quoted in Richard Sennett's recent discussion of craftsmanship as "an enduring, basic human impulse, the desire to do a job well for its own sake," a discussion that includes free software.

16. For an introduction to the notion of the 'technological sublime' see Nye or Tabbi.

17. So when the commercial includes a sequence from the anti-authoritarian 1960s it is with 'footage' of a large-scale rock concert, a countercultural event which became the epitome of a new culture industry that today is a close and supportive partner of the software industry in the context of the experience economy. There is no sequence of the more than 50,000 participants in the Pentagon Peace demonstration in Washington DC or for that matter of Jimi Hendrix playing "Wild Thing" and putting his guitar on fire at Monterey pop festival. And, in a sequence with the fall of the Berlin Wall, it is a family who sees the event on television, not the people participating in the actual hammering on the wall, who have a wow experience.

18. Kay has continued and expanded his interest in computer literacy through his current participation in the One Laptop Per Child project and its XO laptop, which attempts to realise many of the basic ideas informing *The Dynabook* and *Smalltalk* in the context of contemporary global technology politics as outlined by the project's founder Nicholas Negroponte in his book *Being Digital*. Despite its democratic and educational mission and the million computers distributed since its initiation in 2005, the logistics, technology and politics of the project have been met with critique and a recurrent objection is that the project focuses too one-sidedly on a general technical

solution at the cost of considering the specificities of the cultural contexts in which the laptops will be used – thus technologically 'colonising' these contexts through a standardising product. The debate reflects an aspect of computer literacy that Kay is not articulate about, namely that computer literacy involves negotiation between the question of learning to use a computer as a technical entity and of using it in specific cultural contexts (Felsenstein).

19. The tendency stems from the conception of the computer as a medium rather than a tool, which Alan Kay, influenced by Marshall McLuhan's theories, introduced in association with his development of the personal desktop computer (Kay, "User Interface: A Personal View" 191-208). This conceptual distinction is reiterated and developed further by Brenda Laurel, who (influenced by theories and practices of drama, virtual reality and games) conceives "computers as theatre" (Laurel 126), thus pointing to the (multisensory) experience quality of human-computer interaction. However, Kay makes a significant distinction between the computer and the software running on it: While the computer is a medium, the software running on the computer still constitutes a tool. (Kay and Goldberg). The notion of software (and not the computer) as a tool is both contested and complex, spanning utilitarian, cognitive and communicative definitions. But it also remains rather underdeveloped and represents a challenge and opportunity for the emergent field of 'software studies' defined by Lev Manovich as the investigation of "the role of software in forming contemporary culture, and cultural, social, and economic forces that are shaping development of software itself", to proceed beyond the context of "media studies" as well as "new media studies." (Manovich, "Introduction: Software Studies for Beginners" 5)

The point here is not to discuss these different definitions, but to oppose the notion of software as a tool to the notion of software as an experience. Moreover,



the present text conceives this opposition as an expression of a general opposition between software as an experience of a cultural environment and software as a tool to work on, manipulate and transform a cultural environment, which furthermore corresponds to an opposition between a notion of the cultural environment as a given phenomenon and a notion of the cultural environment as a phenomenon and an event created by the user (Kay; Brand; Rheingold; Hawk, Rieder and Oviedo).

20. For an introduction to these tendencies within the fields of free software and software art, see <http://www.fsf.org> and <http://runme.org>.
21. *X-Devian* has been shown in different formats and including different elements since Andújar first exhibited the work in 2004. The point of departure here is the installation of the work at Aarhus Kunstbygning in 2007. For a more elaborate text on *X-Devian*, see Lillemose "Hacking the Interfaces of Access Culture and Envisioning the Literacy of the Post-Capitalistic Future".
22. Ubuntu runs on the Debian kernel, which explains the name, which also indicates a 'performative' reference to the fact that in Spanish (Andújar's first language) 'v' is pronounced as 'b'. Another indirect reference is to deviance, which suggests that *X-Devian* is a deviant or hacked version of not only Debian but also of Mac OS X, where the 'X' is appropriated from. It is important for Andújar to emphasise that *X-Devian* contains actual software. Thus, take-away copies of the software are offered in the installation, both in pre-packaged form and from the online computers included in the installation. Furthermore, the software is included in the accompanying catalogue.
23. In the context of free software, advertising like the Windows Vista commercial is very rare, and ironically, the only comparable example on the YouTube platform is a commercial for Dell. Here, the expanded notion of the interface is characterised by a rather different set of aesthetics. GNU and Linux have their signature mascots, who occasionally appear in entertaining, albeit rather geeky settings, and the Ubuntu brands itself as a socially conscious and responsible distribution, for instance through a substantial merchandise line. The predominant trend, however, is that the aesthetics are text based and limited to the websites of the various distributions and organisations. One explanation of this difference is of course financial necessity, but a more significant explanation is that it is an expression of a cultural identity and opposition to proprietary software. "The freedom to run, copy, distribute, study, change and improve the software" (Stallman) that constitutes the core principle, the philosophy and information politics, of free software is about lines of code written in (ASCII) text. Text is the 'material' with which programmers formally work when they develop free software and manifest their particular form of involvement in software culture.
24. "Access to Technology is a Human Right" is the overall slogan for *Technologies to the People*. It was introduced in the mid-90s when the company ran a pioneering business on the internet with a series of projects that with style-conscious irony and political attitudes thematised the Internet's potential democratisation (and parallel hyper-commercialisation) of technological culture, e.g. a campaign for the product *iSAM™*, a portable credit card machine for beggars. See <http://www.irational.org/ttpp/primera.html>.
25. To watch the Apple commercial see <http://www.youtube.com/watch?v=LUCMK5apZhQ>.
26. In fact, these playful manifestations of cultural opposition are a reference to Andújar's work in general. Especially his web-based works from the mid to late 90s play with the signs and codes of the medium of the Internet, where information is virtual and can be reproduced/copied and manipulated infinitely. See Lillemose, "Hacking the Interfaces of Access Culture and Envisioning the Literacy of the Post-Capitalistic Future".

27. The fact that Apple and most other proprietary software companies nevertheless invest a lot in this claim is emphasised by the work *Language (Property) Remember, language is not free™* (1997), in which Andújar charts the TM-registration by these companies and Technologies To The People of the sentences that made up their slogans as if they were a line of program code.
28. Connections between performance, poetry and code are a recurrent theme in software art and have (for instance) been explored by the band Slub (Dave Griffiths, Alex McLean and Adrian Ward) and Graham Harwood. Connections between code and graffiti are less frequent, but have been explored by Heath Bunting and others.
29. In fact, workshops, along with teaching and event organising, constitute an integral part of Andújar's entire work.
30. For an introduction to the theories and practices of the do-it-yourself approach to software, see Broeckman and Jaschko.
31. For an elaborate discussion of the former with specific reference to software and in relation to Karl Marx's concept of the General Intellect, see Fuller *Softness; interrogability; general intellect; art methodologies in software*; and for a rich account and critical theory of the collective practices of free software see Kelty. The engagement of both these dimensions of do-it-together is a general concern in Andújar's work, of which *Postcapital. Archive 1989-2001* (2006-) is the most recent and extensive example.
32. Brenda Laurel also mentions art as a vital source "that can be brought to bear on the design of human-computer activity" (Laurel xvii-xxi) However, with Aristotle's *Poetics* and theatre as her point of reference, she refers to a generalised concept of art and the 'artistic' within the context of representational aesthetics (Laurel 31), and does not consider the legacy of art as critical involvement in culture, which is outlined by the conceptual art of 1960s and 1970s. Rather than taking art for granted as a value in itself, conceptual art questions "our prejudices, asking us to renounce our inhibitions, and if they are re-evaluating the nature of art, they are also asking that we reassess what we have always taken for granted as our accepted and culturally conditioned aesthetic response to art." (McShine)
33. Drawing on both early computer theory and material from popular culture, Johnson applies the notion of interface culture to technological culture at large involving all sorts of new media. And while his interface-art comparison is underdeveloped and his concept of art is rather simple, his suggestion is nevertheless relevant for the still embryonic discussion of interface aesthetics beyond the context of the computer.

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