In his essay Presenting the Unpresentable: The Sublime, the French philosopher Jean-François Lyotard observes that Capitalism, the Techno-Sciences and the Pictorial Avant-Garde of the twentieth century share an 'affinity to infinity'. All three point towards a sensibility that is constitutive for the experience of the modern world.

Lyotard is well known for having coined the term 'postmodern' for a certain diagnosis of the social conditions of the advanced capitalist societies. His work fascinates because of the intersection it creates between contemporary aesthetics, the avant-garde (especially in the visual arts), and their relationship to the seemingly separate areas of the technosciences and advanced capitalism.

Paradoxically, however, the position he takes vis-à-vis the new technologies, and especially the process of digitalisation, is stifling for a debate about a critical engagement with these technologies. His position denies the possibility of critical artistic and cultural activity in the realm of digital mediation, exactly at a point where his reading of the avant-garde could play a tremendously productive role: in a further exploration of this affinity to infinity that not only informs the avant-garde, the techno sciences and advanced capitalism, but that can also be recognised in the rise of what sociologist Manuel Castells has called the network society.

Lyotard's exploration starts with the assertion of the 'impossibility' of painting. So this is where I will start to consider his argument.

Infinity

For Lyotard painting's impossibility results from the arrival of photography, which makes painting economically unsustainable, whilst photography itself, and the act of image making falls prone to the infinity of the capitalist production/consumption cycle.
He writes: "Something 'too beautiful' is inherent in the perfectly programmed beauty of the photograph: an infinity; not the indeterminacy of feeling, but the infinite ability of science, of technology, of capital to realise. The ability of machines to function is, by principle, subject to obsolescence, because the accomplishments of the most esteemed capitalists demand the perpetual reformulation of merchandise and the creation of new markets. The hardness of industrial beauty contains the infinity of techno-scientific and economic reasons.

The destruction of experience that this implies is not simply due to the introduction of that which is "well-conceived" into the field of aesthetics. Science, technology, and capital, in spite of their matter-of-fact approach, are also modes of making concrete the infinity of ideas. Knowing all, being capable of all, having all, are their horizons - and horizons extend to infinity. The ready-made in the technosciences presents itself as a potential for infinite production, and so does the photograph.

The pictorial avant-garde responded to painting's "impossibility" by engaging in research centred around the question, "What is painting?" One after another previous assumptions about the painter's practice were put on trial and debated. Tonality, linear perspective, the rendering of values, the frame, the format, the supports, surface, medium, instrument, place of exhibition, and many other presuppositions were questioned plastically by the various avant-gardes." [1]

The great transformation in the act of image making that the avant-gardes introduce according to Lyotard is not so much their insistence on constant transformation of the visual field. These transformations perform a highly specific function, they all point towards the fact that any convention of image making not only presents a specific possibility of giving order to the visual field, but that it simultaneously conceals the infinity of possible alternative modes of ordering that visual field. This infinity of alternate visual modes is necessarily absent from the image as it remains unrepresentable. It is, however, referred to indirectly by the denial of a definite visual order of things.

And Lyotard asserts: "The avant-garde painter feels an overriding responsibility to the fulfilment of the imperative implied by the question, 'What is painting?'. Essentially what is at stake is the demonstration of the invisible in the visual." [2]

Entering the realm of the negative sign...

The avant-garde painters engaged in a negative dialectic of the image - a continuous invention of visual modes that challenge and negate previous propositions of what an appropriate image looks like. This process of the negation of dominant artistic conventions can be illustrated with some classic examples of avant-garde interventions:

- Cubism; breaking up the unified perspective.

In the cubist painting the object represented is shown from different viewing angles simultaneously, thus alluding consciously to the artificial constraints of the two-dimensional surface of the canvas, and acknowledging the fact that the eye
only perceives when it is in constant motion. The cubists understood that therefore visual perception always rests on the combination of a multitude of images received from different viewing angles, even when the eye is firmly fixed on a certain object. With their multidimensional perspective the cubists denied the validity of linear perspective (as it is programmed in the photographic machine), as the ‘correct’ representation of the world in visual terms.

- Simultaneity; breaking the unity of time.

The beautiful image of Giacomo Balla “Dynamism of a dog on the line” of 1912 perfectly illustrates the point. Rather than showing only one moment frozen in time, the image represents a series of moments in one image - the paws of the dog moving swiftly as he tries to keep track with the elegant lady walking the dog. Frantisek Kupka had started introducing this principle of simultaneity to painting, inspired by the chronophotography of Etienne Jules Marey. And of course Duchamp’s famous "Nude descending a staircase" further imprinted this visual principle upon the public consciousness. Here the arbitrary nature of the frozen image, as opposed to the constant flux of life processes, is acknowledged and revealed. We know from historical sources that the experiments with photographing animal motion revealed that their traditional representation in 'realist' painting and sculpture was but a convention.

- Abstraction; breaking away from figuration.

This case is all too obvious, looking back from a contemporary point of view. With the acceptance of abstraction, painting shed its last ties to an illusionist mode of representation. Rather than representing a specific outside reality beyond the painting itself, it could now become an inverted symbol for the infinity of the visual and the infinity of ideas.

In the end the process of negation of dominant visual languages even abolished the image itself. Emblematically, in the case of the black square of Malevich. Here the image has become a non-image: Devoid of shape, colour, texture or representation the painting had become a negative sign; an inverted sign for the absence of the image. But this absence did not point towards the impossibility of image production as such. Rather it had become a negative sign for the unrepresentable infinity of possible modes of visual invention, or what Lyotard describes as "the infinity of plastic invention".

Thus Lyotard concludes that the avant-garde painters introduced painting into the field opened by the aesthetic of the sublime. In the Kantian formula an "Un-Form", something that cannot be synthesised into a unique form in space and time, as (by no coincidence), the concept of infinity.

**The immaterials/Les Immatériaux**

In 1985 Lyotard was responsible, together with Thierry Chaput director of the Centre de Creation Industrielle for the concept and realisation of a ground breaking exhibit called Les Immatériaux - roughly translated as The Immaterials. What Les Immatériaux tried to do was to highlight and intensify a sensibility about the
things in our immediate surroundings that are changing because of the fact of the new materials and new conceptions of reality that derive from technoscientific enquiry.

In the press-release for Les Immateriels of January 8, 1985 he states:

"Why 'Immaterials'? Research and development in the techno-sciences, art and technology, yes even in politics, give the impression that reality, whatever it may be, becomes increasingly intangible, that it can never be controlled directly - they give the impression of a complexity of things. (...) The devices themselves are also becoming more complex. One step was set as their artificial brains started to work with digital data; with data that have no analogy to their origin. It is as if a filter has been placed between us and the things, a screen of numbers. (...) A colour, a sound, a substance, a pain, or a star return to us as digits in schemes of utmost precision. With the encoding and decoding-systems we learn that there are realities that are in a new way intangible. The good old matter itself comes to us in the end as something which has been dissolved and reconstructed into complex formulas. Reality consists of elements, organised by structural rules (matrixes) in no longer human measures of space and time."

Technoscientific enquiry thus testifies to the infinite malleability of the concept of reality. Reality according to Lyotard first of all consists of the messages that we receive about it. But these messages increasingly are mediated by ever more complex machines. Digitalisation introduces a final level of abstraction into this process, by imposing a finite scheme of encoding that translates all messages into one abstract universal code, the digital code; a code without an analogy to its origin.

"The model of Language replaces the model of matter", Lyotard asserts, and with it the concept of reality becomes as malleable as language itself.

Critical Arts in the Age of Total Media Incorporation

The capitalist commodification of everything includes the domain of beauty, and even that of those monstrous negative non-entities that used to be the exclusive terrain of the avant-garde. Long since have these negative modes of representation been identified as marketing tools to provide access to fringe and niche markets. They have become a capacity of distinction and a possibility for identification for those market segments that the aesthetics of beauty tends to exclude. Aesthetics, both in its positive forms as well as its negative manifestations, thus has become part of the infinite quest for new markets that is ingrained in the very heart of the capitalist logic.

For Lyotard digitalisation marks the final incorporation of experience in a finite scheme of coding - the digital matrix. With it experience is trapped in the system of technoscientific logic and its infinite quest to transform the concept of reality. Within technoscientific logic, the world is translated into a problem as coding, as Donna Haraway puts it, and made entirely subject to the functional demands of scientific enquiry and the advanced forms of informational capitalism. Within the system of digital mediation escape from this defining logic is no longer possible, incorporation is complete.
Against this view I would like to propose a completely opposite analysis of digital mediation. The system of digital mediation, and in particular the sphere of networked digital communication, presents itself as a highly productive domain for critical strategies and artistic intervention. Interestingly, it is the legacy of the avant-gardes of the last century that provides an enormously useful set of conceptual tools and references to develop a critical engagement with the conditions of digital mediation. The context these avantgarde strategies are played out in is, however, radically transformed. It takes these strategies far beyond the sanctified realm of the arts.

The Negative Screen

The screen of global media presents itself as a seamless surface; be connected wherever you go, see whatever happens anywhere, and all this in real-time. It is the dreamed image of global mediation. The industrial model of broadcast media, television and radio, in the age of digital media is diversified to fine-tune the media offerings to ever more precise market segmentations. The clean and seamless surface is the mythological image of the networked media age. In the ideology of its protagonists it should remain unchallenged, inviolable. The mechanisms directing this permanent electronic enactment of the world remain well out of sight, deliberately hidden beneath the illusionary surface of the screen.

The absolute horror of the media professional is the interrupted broadcast. In the TV format it is sometimes witnessed in an ultimately brief interval as a traumatic black screen - the moment when the signal drops away, when the spectacle suddenly turns into a black square, ironically reminiscent of Malevich's sign of the infinite. In radio the despair of silence is even greater than the absence of the image on TV. Horror Vacui is replaced here by an electronic form of Horror Silentiae. The silence of the faded radio signal and the blackness of the imploded TV screen do not merely mark the absence of a signal. The horror implied is the immanent destruction of the illusion of the seamless media surface, which requires the continuous suggestion of immediacy and connection that gives the viewer the reassuring impression of the transparency of the media screen.

It is the moment when this flow is interrupted, when the code is broken, or when the sound has collapsed and the screen has extinguished, that the possibility for an alternative message, a new code is created. This is the space of negation: The void created by the rupture is the open field in which a new synthesis of unique forms in space and time becomes possible. The emergence of the new code out of the void of the Horror Silentiae reconfirms the connection of the media subject to the world. It is in this moment of delight over the conquered threat of the end of existence/connection that the avantgardes can come into play and transform the meaning of the media codes.

The strategies, the conceptual tools, the tactics of intervention in the new digital hypersphere are highly familiar. They draw on the legacy and experience of the avant-garde movements. Indeed many of the interventions that have been most successful in engaging the new conditions of digital mediation have been artistic interventions. But something has dramatically changed; the object these
interventions engage is no longer the aesthetic framework of contemporary art, not the holy concept of the author, nor the artist genius, or the canonised conventions of artistic creation. What is challenged is the seamless surface of the networked media spectacle itself, and its illusion of stability. The negative dialectics of the digital avant-garde no longer challenge the notions of art, but those of the by nature symbolical digital realm it operates in, and its inherent instability.

The Aesthetics of Impropriety

The pure and simple disruption of media signals is an obvious strategy of challenging the dominant media codes, but it is not a very interesting one. The disruption of the appropriate flow of media signals is only the entry-point for an alternative discourse, nothing more.

The transference of the classical avant-garde's negative dialectics of the image to the networked media screen has been executed most paradigmatically by the artists duo jodi.org [3]. In their now famous web site they have been creating incomprehensible, yet highly poetic and evocative visual and sometimes auditory processes that seem to reverse the hierarchy of the professional media screen.

All sense of connection is lost, intelligibility is gone. Instead of conventional presentation of printed page type lay-outs with a mediocre amalgamation of pseudo-moving imagery, supported by lengthy invisible sets of code, at jodi.org the screen is in constant flux and sometimes sudden stasis. There is no clear relationship between action of the viewer and response by the system. Sometimes the page halts, but we don't understand why, then again the screen suddenly changes but we are left clueless why this happened, and why at this particular moment. Continuously the screen is strewn with codes that can sometimes be recognised as fragments of disjunct html coding, sometimes as meaningless ascii garbage and sometimes just sheer incomprehensible and meaningless codes.

The artists often received the question, "what is this all about?", to which there is no answer. The imagery and processes the viewer witnesses upon entering the site are deliberately 'inappropriate'. Their ambiguous and incomprehensible nature refers to the virtually inexhaustible array of possible modes of representation in the digital hypersphere. Jodi.org often seeks out the mistakes in the software. A careful analysis of new mainstream software products reveals where the bugs are, and these mistakes, that may cause delay, flickering screens, erratic movement or infinite repeat-loops, are immediately transformed into aesthetic material. These 'mistakes' then become not the disruption of a code, but the essence of the new code that jodi.org replaces the conventional ones for. In short what Jodi.org creates is a set of negative signs that point towards the infinity of alternative codes of writing and reading networked media.

The impressive Wrong-Browser project [4] makes this point even clearer. Here we are presented with a set of browsers that read html code and process them as abstract datastructures, represented in a highly colourful aesthetic language which is programmed in the browser-software. The browser becomes a subjective machine for aesthetic processing, the outcomes of which are defined by the contestational logic of its program codes.
A Case of Mistaken Identity...

The US-based art collective (r)TMark employed quite a different strategy, but one that reveals the vulnerability of the web based representational systems more dramatically. In 1999 during the anti-WTO/G8 protests in Seattle (r)TMark produced a website which has since become well known in net.art and net-culture circles. The site www.gatt.org was named after the General Agreement on Tariffs and Trade, one of the early global trade liberalisation treaties that many of the protestors on the street were contesting.

At first glance the gatt.org site looked very much like the official website of the World Trade Organisation (http://www.wto.org). No surprise since (r)TMark had simply copied the entire layout, graphics and pictures from the original WTO site for its own, including the welcoming word of the WTO director Mike Moore and his picture. The text is however entirely reversed. Where the original WTO site sings the benefits of trade liberalisation and global free trade, the gatt.org site laments the destruction of democratic politics and the lack of social and environmental responsibility that informs the trade liberalisation negotiations. The section with policy documents of the WTO site is meanwhile replaced with counter documents of many of the social and ecological movements and groups protesting at the time in the streets of Seattle.

This would have probably gone more or less unnoticed, had the WTO not attempted to intervene in the publication of the gatt.org website. Infuriated by this case of, in the WTO's view, illegitimate appropriation of their corporate image, they issued a warning on their site warning the public about a fake and misleading website purporting to be the official website of the World Trade Organisation. The site 'compromised transparency' of the WTO and its efforts to make policy documents publicly available via their website.

Of course the warning was quickly adopted in the gatt.org site, now claiming the WTO site to be illegitimate. This continued in a cat and mouse game that resulted in the WTO issuing an official press release denouncing the attack on the 'organisation's transparency' by a fringe art group. With this press release the site hack became world news and attracted millions of visitors to the gatt.org website.

Strangely, the story did not end there. After the attention for the struggle about the appropriated site died down, and the WTO decided to change the entire layout of its website, the gatt.org seemed to lead a quite life as an archived document of a curious artistic intervention in networked global politics. However, after some time the (r)TMark collective started receiving e-mails from visitors to the gatt.org site that indicated that these visitors were still under the impression of visiting the WTO site, despite the notably different content of the messages on the site. These e-mails included invitations to high-level international trade conferences as official representatives of the World Trade Organisation.

(r)TMark adopted an alternate guise ('The Yesmen') to respond to these friendly invitations, and accepted a limited number of invitations by actually going to these
conferences to lecture, posing as an official representative of the World Trade Organisation. One of the most hilarious of these site-specific performances is the lecture given at an international textile producers conference in Tampere, Finland. The action is extensively documented on the "theyesmen.org" site [5]. In this lecture one of the artists first gives a totally implausible account of free-trade, and then reveals a golden suit that supposedly provides the manager of the future with bodily feedback about productivity in the sweatshops they are controlling. Immediate contact with the work-floor is provided by a gigantic inflatable phallus fitted with a videoscreen that has a wireless connection to the sweatshop in real-time - be connected wherever you go!

Seamlessly this performance crosses over from the imaginary (the gatt.org web site) to the real (the textile trade conference in Tampere), and back to the imaginary (rTMark's sarcastic staged lecture/performance). Amazingly the lecture remained totally unchallenged by conference participants, testifying to the strong belief they put in the fact that they were presented with an actual representative of the WTO. This expectation was built on the initial belief of the organisers in the representational system of the web site they visited, its WTO iconography, its tone of voice and familiar narratives for trade liberalisation, even if, as in the gatt.org site, the message carried by these narratives was entirely reversed. Beyond this mistaken identity and its hilarious results, the action reveals the seamless transition between the real and the imaginary within the networked media spectacles.

To act; the geste...

The sphere of international economics and politics has become inseparably linked with the new constellations of broadcast and networked media. The principal challenge of the network society is the complete fusion of media, digital technology, economics and politics. The logic of the digital network now informs all dominant aspects of society. This fact on the one hand marks the end of the virtual, a sphere that has become completely intertwined with the *real* world. At the same time, however, every significant social interaction can only become meaningful by virtue of how it is mapped in the digital domain.

Beyond representation, the space of digital networks has become the backbone of economic interaction, enabling the immediacy of financial and economic flows across the geographical and territorial divides. The connections between the networked structures and the physical domains they hook up with each other, have become so diversified and interdependent that it is no longer useful to distinguish the physical geography as 'real', from the networked constellations as 'virtual'. In fact the very opposition of the real and the virtual has become misleading. Geography and technological, social and economic networks together create one system that becomes increasingly integrated and sophisticated. But this system is highly problematic because it excludes more than it allows.

The new sphere of networked media and communications is intrinsically vulnerable to the type of interventions described above. This double sided nature of the net is puzzling in many respects. On the one hand digital networks appear as the ultimate control apparatus, but simultaneously they remain a refuge for
alternative views, a space without final closure, always only partially under control, and in permanent transformation. The authority of the system is challenged when the seamless surface of the media-interface and its illusion of transparency are broken and reconstructed in a multitude of alternative agenda's, indeed an infinity of alternative micro- and macro-political agenda's.

Saskia Sassen once pointed out, and quite rightfully so, that the Internet is constituted by the practices employed in it. But the nature of interventions in this space of networks transcends the limits of conventional representational systems. There is a specific form of performativity here, where the symbolic interventions on the level of social discourse become paradoxically real. Rather than 'representing' reality, the intervention is an act, a geste, that 'creates' an alternative reality in the immediacy of its digital mediation.

**Real-Virtuality**

The conditions that create this specific form of performativity are what sociologist Manuel Castells has described as the "Culture of Real Virtuality", in his famous book *The Rise of the Network Society* [6]. Castells asks the question what is "(...) a communication system that, in contrast to earlier historical experience, generates real virtuality?"

"It is a system in which reality itself (that is people's material/symbolic existence) is entirely captured, fully immersed in a virtual image setting, in the world of make believe, in which appearances are not just on the screen through which experience is communicated, but they become the experience. All messages of all kinds become enclosed in the medium, because the medium has become so comprehensive, so diversified, so malleable, that it absorbs in the same multimedia text the whole of human experience, past, present, and future, as in the unique point of the Universe that Jorge Luis Borges called Aleph." [7]

Castells goes on to show that the culture of real virtuality is not a condition that is entirely specific to the system of networked media and communications. The specific superimposition of the real and the imaginary onto each other and within one and the same multimedia text, is something that already began to form within the television age, but it is heightened and intensified with the emergence of new and ever more diversified networked and wireless communication media.

Castells himself takes his prime example from American television; a strange blending of fiction and reality that happened during the election campaign for the US presidency in 1992. At the time George Bush snr. and vice-president Dan Quayle were competing with the Clinton/Gore team.

In a televised election speech Dan Quayle started to attack the fictional persona Murphy Brown, the main character of a popular TV series by the same name. The main character was played by the actress Candice Bergen. Murphy Brown was a typical independent woman, living in one of the major cities of the US, unmarried and well in control of her life. She (MB) decides at some point that she wants to have a child, but without a father, and she decides to arrange the necessary steps to have that child. And it is exactly at this point that Quayle intervenes and
attacks her for a lack of, in his view, moral standards, and for exhibiting a behaviour that is not conducive to proper family values.

What is really strange about his intervention is that it was not aimed at the script writers and director of the series, nor at the actress Candice Bergen. Instead he chose to point his criticism directly at the fictional character Murphy Brown, acknowledging the importance of this character as a role model for real-life social arrangements. The creators of the series responded intelligently by letting the fictional character Murphy Brown, in the fictional setting of the TV series, watch and comment the 'real-life' speech of vice president Dan Quayle.

Out of this curious dialogue between a real and imaginary person, a heady political discussion evolved about "a woman's right to choose" that had a significant impact on the course of the election campaign. Ultimately the Quayle/Bush snr. team lost, for a host of reasons, but the important point is of course the blending of the real and the imaginary in a crucial social and political process. The criticism of the real vice president Quayle became part of the fictional narrative of the series and the narrative of the series became part of the real presidential campaign. This was only possible because both operated in the same 'multimedia text'.

Castells explains that this condition is truly inescapable, because these messages can only achieve communicability by being mapped in this new sphere of interconnected media and communication networks. But once part of this system of electronic and digital mediation they become vulnerable to the inherent inconsistencies of this system.

Castells writes:

"What characterizes the new system of communication, based in the digitized, networked integration of multiple communication modes, is its inclusiveness and comprehensiveness of all cultural expressions. Because of its existence, all kinds of messages in the new type of society work in a binary mode: presence/absence in the multimedia communication system. Only presence in this integrated system permits communicability and socialization of the message. All other messages are reduced to individual imagination or to increasingly marginalized face-to-face subcultures."[8]

To act in the culture of real-virtuality means to act both symbolically and real at the same time, because both levels of social reality coincide within the same 'multimedia text'. In this paradoxlcal environment dominant discourses of social, political and economic power can be challenged at the level of the representational systems they employ. The classical avant-gardes provide a repository of ideas, tactics and strategies that are now played out in a radically enlarged context; no longer the context of art itself, but that of the network society.

The negation of a dominant mode of speech, implies the infinity of possible modes of speaking.

Notes
2) ibid.
3) http://www.jodi.org
4) http://www.wrongbrowser.com
5) http://theyesmen.org/finland/
7) Castells, '96, p. 373.

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