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contributions to the depths of the biological narrative



This collection of references and texts are being surveyed and edited with the intent of contributing to the collective depths of the biological narrative.

Swarm Forms: On Platforms and Creativity

By Olga Guriunova

Will the ‘hive mind’ of social networking replace classical forms of knowledge production? Comparing Web 2.0 and small-scale, self-run cultural platforms, Olga Goriunova maintains the possibility for originality in both contexts, while identifying how the same old commercial and institutional pressures still operate

The term ‘platform’ is so common today it makes people sick (though not as much as ‘Web 2.0’ does). It is thought to have originated with Tim O’Reilly and his article on Web 2.0 in which he describes ‘the web as platform’, not as a figure of speech but a description of concrete developments. [1] Back in 2002, when I started conceiving of my work on the software art repository Runme.org in terms of a platform on which to build an art trend, it was difficult to decide on which term to apply. ‘Platform’ only had a history of metaphorical usage, such as with the Dutch ‘Virtueel Platform’ which was established in 1998 as an expertise centre ‘stimulating innovation and supporting e-culture’.[2]

It seems that the web as ‘platform’ in O’Reilly’s terms bears a mainly technical meaning. A platform spans ‘all connected devices’, ‘delivering software as a continually-updated service’; ‘a platform for interacting with content’.[3] Even ‘the web and all its connected devices as one global platform’ implies the meaning of a platform as of a *server* (or servers) ‘delivering desktop-like applications over the web’.[4] Thus, a platform for Web 2.0 adepts serves applications to end-users through a web browser allowing interaction with content. Such a definition is useful and helps make a distinction for designers and programmers between Web 1.0 that supposedly was about static html-based web sites (with CGI or Perl on the back-end) and Web 2.0’s dynamic platforms generally built with ‘CSS for layout, XML for data, XHTML for markup, JavaScript and the DOM for behavior...’ on the front end and ‘PHP or (especially) Ruby on Rails’ on the back-end.[5]

However, this description does not adequately address the politics of the technical architectures and applications involved. O’Reilly and his followers try to do this by nodding towards the fostering of community, collaboration, the ‘architecture of participation’, ‘rich-user experiences’, and ‘collective intelligence’, but continuously fail to prove that such cultural phenomena were not present in the times of what they term Web 1.0. My criticism is not original; Slate.com has been calling Web 2.0 a technical upgrade, while the participatory or social aspects of Web 2.0 are ‘what the Web was supposed to be all along’, as Tim Berners-Lee puts it.[6]

‘Art platform’ was the term I came up with as a solution for what to call an online platform that enables the building of a cultural movement entirely through the use of its own mechanisms. It describes a web platform that solicits, induces and produces a cultural or artistic phenomenon. Examples of such platforms include Micromusic.net, an 8-bit music platform, Runme.org, a software art repository, and Udaff.com, a ‘mate lit’ platform (mate or mat lit is my term for a current literary

genre deploying obscene, colloquial, orthographic Russian discourse).[7] Two years ago, trying to provide a definition of an art platform, I wrote:

A platform differentiates itself from other websites by the relations of creative, social, instrumental, educational and historical character it establishes and is involved into. A platform is aimed at supporting and stimulating creative initiatives and work, and it provides a possibility for continuous exhibition of the artefacts, often accompanied by reactions to them, various discussions. Sometimes there is also a set of instruments for particular kind of creative work available. A platform often also puts efforts into translating digital creative processes into offline and more official cultural scenes, establishing connections between cultural movements of different times and orders. Most platforms organize (ir)regular 'real-life' gatherings such as festivals, concerts, workshops or those of a less formal nature.[8]

Most parts of this description can be applied today to blogging, photo-sharing and other platforms. However, the art platforms I refer to are all quite classical static web sites. And, on top of building 'communities', 'experiences' and 'collective knowledge', they build distinctive cultural products, whether regarded as digital folk, creative practices of everyday or artistic trends.

An art platform appears as a reaction to the development of a particular cultural creative practice it focuses on. It is quickly built by a few enthusiasts. A platform is administered, and all incoming projects moderated by, a small group of people (usually 1-5). It has an open database with a user-friendly interface anyone can download from/upload to. It accumulates a number of creative products that in turn attract new users and new products. Building a database of works, a platform chooses a particular mechanism of reward and distinction, be it voting or featuring, and contributes to the discourse and context of the practice it works within. Working with the 'grey' zones of cultural production, with grass-root practices, such platforms can create significant artistic and cultural phenomena, and transfer the practice onto a different cultural level.

If we look at the interface, art platforms can be clearly differentiated from blogs. Art platforms are single interface platforms, and blogs or tagging platforms are multiple interface platforms. Single interface platforms have a single entrance, a point of concentration, of maximum understanding of the resource. Such an interface may include a list of categories, whether a straightforward taxonomic database interface, as in the case of Runme.org, or of the latest texts, as with Udaff.com. If you visit a multiple interface platform there is no home page or main entrance. In the blogosphere, you navigate through personal blogs, through photographs and cross-references, by means of user names, friends, comments and links. Although banal, this distinction reveals a further, more fundamental one: single interface platforms are devoted to a single 'theme', a shared aesthetic, creative, even political horizon.

If on multiple interface platforms there are tools that help maintain the 'healthy' functioning of the system (for instance, 'abuse teams' in the case of blogs), with single interface platforms there is a need for moderators who are responsible for the development of the interface, which in fact means control over the content development of the entire system.

Such centralisation renders moderation very crucial, and is far from being 'automated curation'. [9] It is a taste-based, individualised decision-making process developed over time. Precise moderation, especially at the beginning, and the considered construction of a system is necessary to the survival of the platform and success of the trend. Moderation, together with users' input, helps develop the cultural movement and its discourse.

Multiple interface platforms users visit selected pages. With singular interface platforms, the user, interested in the trend the platform is devoted to, can explore almost the entire database. Contributing to such a platform, the user enters and co-creates a content rich context. With such platforms it is possible to develop an artistic movement, to add some missing elements to a creative activity, giving it a theoretical, social or political dimension.

However, I would like to add that in terms of how and what they (can) potentially produce, art platforms and other platforms are not so different and can complement each other. This possibility exists against a general climate of mistrust on the part of researchers and intellectuals over the quality of the knowledge produced on platforms. There is a continuous outcry on the part of some theorists and developers, claiming that the horizontalisation of knowledge and power celebrated by projects such as Wikipedia is dangerous. Jaron Lanier talks of the dangers of online collectivism and the belief in the wisdom of the collective. Larry Sanger criticises not specifically the celebration of amateurism but attacks on professionalism and expertise. Jürgen Habermas claims the use of the internet weakens the position of the traditional intellectual and undermines the achievements of the public sphere.[10]

However, the institution and construction of knowledge on Wikipedia, for instance, is really no different to the construction of offline encyclopedias. According to Wikipedia etiquette, as Fernanda Vegas and Martin Wattenberg mention in their study, before posting to an article it is desirable to discuss the prepared text on an article's 'talk page' with others, including 'permanent editors' of the article.[11] Trust for a certain author is built on the 'reputation' she develops over her history of participation in Wikipedia, and most authors possess individual personae known to others. The history of changes of an article presents a quite detailed and documented 'history of argument' and disagreement over a subject fighting its way through. The roles of institutions participating in the invention and construction of knowledge offline, such as scientific magazines with their peer-reviews or publishing houses with their publications and conferences, are seriously transformed but to a large degree reproduced online.

Wikipedia is a unique example, however. It should not serve as the face of Web 2.0 or some new generation of 'dangers'. Nor should it be mixed with tagging, blogging or mapping platforms which are much more oriented toward individual than collective production.

The central claim here is that, contra the critics of social network-based knowledge, the creativity of users across all kinds of platforms, from digital folklore, creative and liberating practices of everyday life, subcultural expressivity, and graphorrhea to artistic production, is capable of producing 'original' results, especially if certain human-technical decisions help channel the process.

For instance, with art platforms, the technical bottlenecks of moderating, featuring, voting and making comments that channel the collective effort help create an artistic or cultural phenomenon. An art platform works as an art institution – it allows for the bias of the curator or editor; it allows for the storage and exhibition of works, as do museums or libraries with journals; it allows for contextualising, as do publications or conferences; it allows for feedback and peer review, as do magazines. An art platform produces histories, identities, knowledge and social clusters, exactly in the manner of those interrelations constituting power which Foucault grasped. It represents a quite centred power model that is seemingly not characteristic of platforms considered to be Web 2.0 services.

In order to create a focus, all platforms apply similar mechanisms rooted in the offline histories of power and institutions, however. For instance, when a community devoted to certain topics is formed on a blogging platform, a moderator turns up, a set of rules arises, and often after a while postings are re-filtered and organised in a database with a straightforward taxonomic interface. Such filters, human and technical, help re-create the figure of the professional or even intellectual, with individual

judgement, taste and insight. It is a figure that re-vitalises the zombie of the traditional intellectual specialist, making it more 'autonomous' but also more vulnerable.

Bourdieu describes the intellectual as an historical product formed by a struggle between the forces of economics and politics, a struggle for autonomy.[12] The authority of intellectuals derives from their specific position in the relatively autonomous world of art or science and their adherence to values such as disinterestedness, ethical purity and expertise. Bourdieu calls for the preservation of the intellectual's autonomy currently endangered by corporate sponsorship of universities, and their direct subordination to business and political imperatives. Answering Lanier's criticism of Wikipedia, its co-founder, Larry Sanger, counters:

Slashdotters would not simply stand for a system in which some hand-selected group of editors choose or promote posts; but if the result is decided by an impersonal algorithm, then it's okay. It isn't that the Slashdotters have a rational belief that the cream will rise to the top, under the system; people use the system just because it seems fairer or more equal to them.[13]

While traditional bastions of knowledge/power suffer a crisis of authority arising from their loss of autonomy, many internet users, believing they are able to own their means of production, circulation and consecration, become the new intellectuals fighting for a 'fairer' space or principle, re-establishing autonomy through technical or human-technical decisions. They are in fact led by the very same imperatives Bourdieu describes.

Working on a platform is an economically vulnerable position. Such labour is usually performed by 'freaks' for free or for micro-money obtained for purposes loosely associated with their work on the platform. Nevertheless, a moderator or developer is well aware of their economic precariousness. The work of the ordinary user, by contrast, is not ordinarily understood as labour per se. It does, however, belong to the category of 'immaterial labour' as described by Italian marxists such as Maurizio Lazzarato, Paolo Virno, Tiziana Terranova and others. Such cultural production provides new types of products and relations which alter the process of surplus value extraction; it drives innovation, trains in precariousness, locates social desires.

The means of cultural production, in this case platforms, necessarily belong to the capitalist class and are either bought by companies or – today – built by them from scratch. These companies not only want to control the technical means, but the data as well. However, platforms' licences and terms of use vary drastically. Some, like Tagzania, use a Creative Commons licence, but most platforms stipulate shared copyright with the content's author.

Tim O'Reilly, an originator of the idea of the 'user ownership of data' (an oft repeated but rather unclear statement), claims:

Much as the rise of proprietary software has led to the Free Software movement, we expect the rise of proprietary databases to result in a Free Data movement within the next decade.[14]

However, there are several issues worth raising concerning the user's data and its ownership. First, data is not that important to platform owners. What is important is the presence of users and the continuous use of the platform's facilities. For instance, one cannot easily gather all the postings to a personal blog along with their commentaries and transfer that data to another platform. The data is intertwined in the platform and, until she loses interest, the user will be back to work on the relevant platform she has already devoted time to. Secondly, a person willing to make an open or free data platform will (and did) eventually find out that traffic volumes are too high for an individual to sustain and will eventually sell it. This complex set of interdependencies defines the current picture.

As Tiziana Terranova puts it:

... this mode also signals the emergence of new machines of control and subjectification which reimpose hierarchical relations at the service of social reproduction and the production of surplus value. These are moments which turn qualitative, intensive differences into quantitative relations of exchange and equivalence; which enclose the open and dissipative potential of cultural production into differential hierarchies; which accumulate the rewards or work carried out by larger social assemblages...[15]

However, Wikipedia managed to choose a different economic model for itself. The vicious circle described above can only be challenged if platforms are considered public spaces, analogous to those of a city. This said, other problems linked to public space and coupled with the issues relating to the nature of networks will inevitably arise.

The situation is different with art platforms. If platforms are increasingly corporately owned, art platforms tend to be run by enthusiasts. The developer of a platform can sell it, the moderator of an art platform can't. An art platform's moderator is the one who registered the domain name, collaborated on or supervised the technical development of the resource, invested, along with other moderators, significant amounts of time into 'raising' a platform, deciding on almost every single aspect of its development. The moderator(s) and the users together create a cultural entity which is coherent, specific and, importantly, small-scale. Its subject is avant-garde and marginal.

Without moderation and the trust of its users, the art platform turns into a dead archive. This is the core principle by which it is distinguished from other platforms that largely run 'by themselves', demanding maintenance from the owner in a way comparable to the maintenance of a bicycle. In conclusion, it is rather unlikely that art platforms in their current shape will become economically appealing to companies.

The term 'Web 2.0' was created as a business slogan, a logo, so it came as little surprise to hear that O'Reilly had applied for a patent on Web 2.0 as a service mark in 2003. The patent was pending the whole time O'Reilly was promoting it as a generic term. Despite the term's poverty, its success subsumes all the attempts to talk about social software, a participatory web, collective creation and other, different and pre-existing models.

Like Meccano, many buildings can be constructed from the same constitutive elements, and different purposes and principles inform different platforms. If we understand them in this way, platforms cannot in general be stigmatised as loci of the unoriginal 'hive mind', and there is no need for a term like Web 2.0.

[1] Tim O'Reilly, 'What Is Web 2.0. Design Patterns and Business Models for the Next Generation of Software', 2005 <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>

[2] Virteel Platform, 'About', see: <http://www.virtueelplatform.nl/set-223-en.html>

[3] Andrew Orłowski, 'Web 2.0: It's ... like your brain on LSD!', http://www.theregister.co.uk/2005/10/21/web_two_point_nought_poll/;
Richard MacManus & Joshua Porter, 'Web 2.0 for Designers', http://www.digital-web.com/articles/web_2_for_designers/

[4] Dion Hinchcliffe, 'The State of Web 2.0', http://web2.wsj2.com/the_state_of_web_20.htm; Paul Graham, 'Web 2.0', <http://www.paulgraham.com/web20.html#f1n>

[5] Jeffrey Zeldman, 'Web 3.0', <http://www.alistapart.com/articles/web3point0>

[6] Paul Boutin, 'Web 2.0 Doesn't Live Up to its Name', <http://www.slate.com/id/2138951/>; Nate Anderson, 'Tim Berners-Lee on Web 2.0: "Nobody Knows What it Means"', <http://arstechnica.com/news.ars/post/20060901-7650.html>

[7] For a more detailed analysis of mate lit, see Olga Goriunova, "'Male literature" of Udaff.com and Other Networked Artistic Practices of the Cultural Resistance', in *Control + Shift. Public and Private Usages of the Russian Internet*, eds. Henrike Schmidt, Katy Teubener, Natalja Konradova, Norderstedt: Books on Demand, 2006.

[8] Olga Goriunova & Alexei Shulgin, 'From Art on Networks to Art on Platforms', in *Data Browser*, volume 3: Curating Immateriality: On the Work of the Curator in the Age of Network Systems, ed. Joasia Krysa, New York: Autonomedia, 2006.

[9] The term 'automated curating' appears to originate from Eva Grubinger's project *C@C – Computer-Aided Curating* (1993-1995). For an account of the project, see Eva Grubinger, 'C@C, Computer-Aided Curating (1993-1995) Revisited', in Joasia Krysa, op. cit.

[10] Jaron Lanier, 'Digital Maoism: The Hazards of the New Online Collectivism', 2006, http://www.edge.org/3rd_culture/lanier06/lanier06_index.html; Larry Sanger, 'Why Wikipedia Must Jettison Its Anti-Elitism', 2004, <http://www.kuro5hin.org/story/2004/12/30/142458/25>; Jürgen Habermas, 'Towards a United States of Europe', 2006, <http://www.signandsight.com/features/676.html>

[11] Fernanda Vegas, Martin Wattenberg, Kushal Dave, 'Studying Cooperation and Conflict between Authors with *history flow* Visualisations', 2004, http://alumni.media.mit.edu/~fviegas/papers/history_flow.pdf

[12] Pierre Bourdieu, *The Rules of Art*, Cambridge: Polity Press, 2005

[13] Larry Sanger, 'On "Digital Maoism: The Hazards of the New Online Collectivism" By Jaron Lanier', http://www.edge.org/discourse/digital_maoism.html

[14] See Dion Hinchcliffe, op. cit., and Tim O'Reilly, op. cit.

[15] Tiziana Terranova, 'Of Sense and Sensibility: Immaterial Labor in Open Systems', in Joasia Krysa, op. cit.

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Faustian Bargains and Pineapple Shampoo

By Merijn Oudenampsen and Jakob Proyer

Since the early days of the net, the electronic pastoral has lent itself to all sorts of dubious agendas pushed by science, the military and even libertarian tendencies. In the most recent configuration of this new media - new nature clash Merijn Oudenampsen and Jakob Proyer visited the Natural Habitat exhibition at Montevideo Amsterdam and find amidst the pixelated wilderness a difficult to swallow cocktail of Faustian bargains, hyper-modernism, and pineapple shampoo

Montevideo has dedicated this show to artists researching the changing paradigms, borders and ongoing crossovers between art, science, technology and nature. It is a show that places itself at the blurred boundaries of a 'new nature' which have emerged from technological advancements complementing, reshaping and imitating the natural. Montevideo's press material states that the works have been selected solely to transfer 'positive ideas for a new nature' by focussing on the way 'nature and technology complement each other'. Having experienced the exhibition, one might ask why more critical works referring to scientific and technological advancements were ignored in the curatorial selection process. Is it the case that contemporary artists neglect widespread discussion on topics such as genetic modification or environmental degradation? The work of groups like the Critical Art Ensemble would suggest otherwise. Is it then instead that we are just badly in need of some good news?

Geomania by Steina Vasulka

Image: Steina Vasulka, *Geomania*, 1987

On a big video screen in one of the exhibition rooms, two tiny bots appear in an autumn golden woodland surrounding. A smooth voice reminiscent of a Discovery Channel wildlife documentary narrates the action taking place. The bots seem to be playing for some time, checking each other out and happily darting around; the commentator describes dryly an ongoing mating ritual. Finally, the male bot lures the female under a particularly big leaf and fornication ensues; electric blue fills the screen as sparks spring from bot to bot. These scenes are part of a series of video shorts related to the project *Next Nature*, comprising of the blog and a design publication by Koert van Mensvoort and Mieke Gerritzen. The message they intend to communicate about our understanding of nature and what is natural is elaborated further by a quote on one of the walls of the exhibition room:

There may even come a moment that our connection with an industrially manufactured coke bottle may be richer and more mythical than our relation with a genetically analysed and manipulated white rabbit in the woods.

The comparison between a coke bottle and a rabbit is borrowed from *The End of Nature*, (1989) by New York writer Bill McKibben, who describes a thought train set in motion by his chance encounter with a huge white rabbit in the woods. What if the rabbit were genetically modified? Would it be any more natural than a mere coke bottle? While McKibben's philosophising about a future with genetically modified rabbits was deeply cynical – he simply abhors the loss of a spontaneous natural surrounding and is equally negative about the rise of a technological management of nature – Mensvoort and Gerritzen harbour no such negative feelings for a new nature. In the essay, *Exploring Next Nature*, [http://www.nextnature.net/research/?page_id=244] Mensvoort describes a city girl out on a walk with her father. The girl, who happens to wash her hair with pineapple shampoo, exclaims while walking through the forests: 'Daddy, the woods smell of shampoo!'. Mensvoort soberly

concludes that ‘such a young girl would surely perform better at discriminating corporate logo’s than tree or bird species.’

According to the *Next Nature* project, arguably the discursive backbone of the exhibition, ‘notions of nature and culture seem to be trading places’. The natural environment is being incrementally controlled by man made technologies and thus becomes a cultural category. Products of culture, on the other hand, have become so complex and prolific that they ‘tend to outgrow us and become autonomous’. According to the project’s authors, the term ‘next nature’ serves to identify our new hybrid natural surrounding.

Tak

Image: Merijn Bolink, *Untitled (Tak)*

Of course the positive appraisal of the endless possibilities of a new nature might have some relation to the changing position of the designer in this new habitat, (both Mensvoort and Gerritzen are employed at the design department of the Sandberg Institute). When Mensvoort describes a biotope of corporate logo’s as a city girl’s proper natural surrounding, then what is the designer, but a god-like creature that suddenly produces ‘nature’? Design in this new natural habitat is not just limited to corporate logo’s. With the advent of genomics and biotechnology, ‘we can become our own gods’, we read in one of the articles on *Next Nature*’s website. Although there are also works that should be appreciated on a more aesthetic level, this provocative hyper modernism is a dominant presence in the exhibition. Due to the absence of more critical contributions, it pretty much defines the atmosphere.

Entering the scenic canal house where the Montevideo is housed, the first view of the exhibition is taken up by a strange branch hanging opposite the entrance with a very fitting title: *Tak* (Dutch for ‘branch’). At first view it seems to be a pretty normal *tak*, but then one’s eye is attracted to a part of the branch that actually has more in common with a Mondriaan painting. Bolink manipulated the growth process of the branch by grafting one side consecutively at right angles, and letting the natural growth process take place on the other side. The remarkable outcome is a little tree with a few branches, growing organically into all directions, with the exception of the grafted one that keeps changing its direction of growth every few centimetres by an angle of 90 degrees.

Camera Lucida by Evelina Domnitch and Dmitry Gelfand

Image: *Camera Lucida* by Evelina Domnitch and Dmitry Gelfand

The largest part of the exhibit is comprised of digital reproductions, imitations or alterations of nature, with the exception of *Reeds* by Simon Heijden and *Camera Lucida* by Evelina Domnitch and Dmitry Gelfand. *Reeds* is a neat, complicated interactive design installation; it is an assemblage of flexible plastic reeds, with LED lighting on top and a small speaker system hidden somewhere in the corners of the room. The reeds react to passers-by and apparently also to the movement of the wind outside of the building. Fluctuating lights and the wind whispering out of the unseen speakers create a weird and uncanny feeling of the techno-pastoral. The work is part of an effort by the artist to recreate a sense of nature’s rhythms in our secluded indoor work living and living spaces. *Camera Lucida* is more of a public chemistry experiment. Sound waves are visualised through a bowl filled with a special mixture of fluid and gaseous substances. The phenomenon is officially called sonoluminescence, first observed in the 1930’s and according to the artists still quite unknown to the general public.

sonoluminescence

Image: Sonoluminescence from high intensity ultrasonic horn

At the core of the exhibition, which is also more properly 'media art', all the works the common characteristic of the use of computer technology to digitally rework nature. This may be in a relatively direct way, such as Steina Vasulka's *Geomania*, 1987, where video scenes of Iceland's rough ecologies are continuously mixed and electronically altered to produce psychedelic effects that a VJ wouldn't be unhappy with. Most of the works, however, use quite complicated programming to achieve their desired effects. The artists have tried to simulate natural reproduction mechanisms or have created their own. *Vanda, Life Support Systems* by Mateusz Herczka even tries to create a possibility of 'life after death' by facilitating the translation of a living Vanda orchid into information. Mateusz attempts to create a 'virtual organism', or, according to the text, a 'virtual personality', by making detailed measurements of the plant's voltage changes. He is inspired by specialised companies that offer 'longevity services' to clients through the rather rudimentary process of digitally storing as much of the client's information as possible for future reference by younger generations. Of course, the personality of an orchid - let alone the virtual one visualised on a screen - is a thing more difficult to relate to than the average grandfather. But the ambitions of the artist stretch beyond mapping the personalities of vegetation: 'The next milestone is a scan of the [human] brain to directly create a virtual personality, which exists in the virtual domain - i.e. uploading a personality. The *Life Support Systems* project attempts to achieve this milestone, starting with an organism which has both an inspirational beauty, as well as behavioural simplicity.'

Vanda, Life Support Systems by Mateusz Herczka

Image: *Vanda, Life Support Systems* by Mateusz Herczka

Other works at the exhibition dig even deeper into the virtual after life, and focus on the possibility of creating artificial digital life through programming. Works by Boredom Research, *Ornamental Bug Garden*, 2005, and *Biomes*, 2005, show how interaction between a few digital creatures, each with a set of simple rules, can develop into unending variety. Marloes de Valk and Aymeric Mansoux's *Metabiosis*, 2006, researches how the insertion of programmed data packages into a computer network can create an on-line ecosystem that is self-reproductive. In organising principle, these works are very alike. In different ways, they all use computer code to create a digital imitation of nature's organising principles, from gravity to genetic reproduction. *Life Species II*, 1999, by Christa Sommerer and Laurent Mignonneau is described as 'an interactive artificial live environment'. It's the result of earlier interactive web projects, *Life Species I*, 1997, and *Verbarium*, 1999. On these websites (currently offline), internet users were able to send messages which were instantly translated into visual forms on screen. A custom designed editor would analyse the message's syntax and sequencing and recode those into visuals. The sequel, *Life Species II*, is accessed by visitors of the exhibition using a keyboard to enter words into the program. Each message entered produces a specific insect-like flying creature on screen with those words ingrained in it's code, or 'genes'. The form and movements of the creature change depending on the complexity of the message. As a test, we tried feeding 'n qriotfdkiyutre 86454' into the program, but the resulting creature still moved more fluidly and skilfully than our pronunciation would have. After thus having created several happily hovering insects, you get to feed them by typing text characters into mid air. Each creature can only consume the letters that are part of it's code, for example the creature 'love' would be restricted to a diet of 'l', 'o', 'v' and 'e' whereas 'qriotfdkiyutre 86454' is endowed with a more omnivorous diet. The creatures will compete over text characters that are shared in their diet, those out of food will starve and perish. On the positive side, however, when a creature has eaten a sufficient amount it will mate with another creature and procreate. It's offspring will then carry the combined genetic code of the parent creatures. If any visitor would take the necessary time to keep feeding the creatures, the program would probably develop in it's own unforeseen ways, a characteristic it shares with the other mentioned works. The artists mention inspiration from Chomsky's linguistics and especially the translation by the human brain of language into visual sensations. Sommer and Mignonneau's work makes one think of discursive struggles on the internet, but it could equally be taken as an unintended, but very apt and

brutal metaphor for academic life.

Life Species II

Image: Christa Sommerer and Laurent Mignonneau, *Life Species II*

Most of these works are subtle explorations of what happens when self-reproducing systems that are characteristic of the 'spontaneous nature', whose loss McKibben is mourning over, are transplanted into the digital domain. Of course compared to the real thing, in complexity these models are still very limited. Still, each of these works involves an amount of research and technical skill that transgresses the normal boundaries of artistic craftsmanship. The exhibition could therefore also be seen as an example of the current trend of artists to engage in crossovers with science and technology. At a seminar held during the exhibit, one of the speakers was Robert Zwijnenberg from the *Arts & Genomics Centre* at the University of Amsterdam. He depicts these new developments as a return to the renaissance role of the artist as a Leonardo da Vinci-like inventor, skilfully combining science and arts. However, when we assume one of the primary functions of art in its new 'renaissance' is to address the social implications and moral dilemma's relating to new scientific developments such as genomics- as Zwijnenberg states himself – we find the *Natural Habitat* exhibition especially wanting.

The picture *Natural Habitat* paints of genetic reproduction is deceptively simple and clean. It almost makes one forget that the Human Genome project failed in unravelling the secrets of human genetics and that scientists have far from understood cellular reproduction in general. Back in their laboratories, scientists are now researching the essential role of what was sidelined before as 'trash DNA', and have to admit that it was all somewhat more complicated than their models predicted. It is the same technological optimism that has led to ongoing problems with genetically engineered crops, even though a plant's genetic makeup is more simple, genomics has never left the let's-see-what-happens-when-we-release-this-one-in-the-wild phase. Artists' engagement with science in this case falls short of understanding some of the power dynamics involved, whereby the backyard of peripheral economies has been the unhappy laboratory of western life sciences companies. The hyper-modernist exaltation of technology that some of the exhibition displays should furthermore be tempered by the ongoing environmental problems that the world's digital communication infrastructure help create (see Soenke Zehle's review of *High Tech Trash* [<http://www.metamute.org/en/Environmentalism-for-Net-2.0>]). The idea that nature and technology have become an inseparable entity, as stated in the introduction text of the catalogue for *Natural Habitat*, is not entirely unproblematic. Certainly the semantic merger of technology and the natural environment, in terms such as media ecology, digital biotope or on-line ecosystem has proven to be less damaging than its real life variants.

That said, what we are left with is a clear cut opposition between the nostalgic longing of McKibben, evoking the image of nature as a paradise lost, and the almost futurist embrace of technology of the *Next Nature* project: 'we can become our own gods'. It is this same opposition that Marshall Berman talks about in his classic on modernity *All That Is Solid Melts Into Air*:

Whereas 'nineteenth-century thinkers were simultaneously enthusiasts and enemies of modern life, wrestling inexhaustibly with its ambiguities and contradictions; their self ironies were a primary source of their creative power', their 'successors have lurched far more toward rigid polarities and flat totalizations. Modernity is either embraced with a blind and uncritical enthusiasm, or else condemned with a neo-Olympian remoteness and contempt. [...] Open visions of modern life have been supplanted by closed ones.' (Berman 1989 p24)

Berman goes on to depict Goethe's *Faust* as one of the archetypal modern stories, a tale of man's attempt at escaping from oppressive traditional bounds and creating the world anew. In the second part of the play, Faust transforms himself into a developer, 'isn't it about time for mankind to assert itself against nature's tyrannical arrogance?', he asks. With the help of his sidekick Mephisto, he sets out on an ambitious construction plan, which in the end can only be fulfilled by exacting a heavy toil of human sacrifice. This picture of development as a Faustian bargain is, according to Berman, what distinguishes earlier ways of thinking about modernity from the present polarities. The author's approach is that only through the critical engagement with modernity and technology can we hope to use some of their capacities for the attainment of a socially and environmentally just society. While Berman tries to recapture the critical spirit of modernity through Goethe's *Faust*, the *Communist Manifesto* and the literary talents of Baudelaire, Joyce and Dostoyevsky, we would love to find some of this critical modernism in the here and now.

The Natural Habitat exhibition, Montevideo, Netherlands Media Art Institute, Amsterdam 04 November 2006 - 20 December 2006, <http://www.montevideo.nl/>

You can still find descriptions of the work online at:
http://www.montevideo.nl/en/agenda/detail_agenda.php?id=173&archie

The well maintained and resourceful weblog of Next Nature:
<http://www.nextnature.net>

For a more critical take in the art-meets-science format, see the website of the Critical Art Ensemble:
<http://www.critical-art.net/>

Berman, M. (1989) *All That Is Solid Melts Into Air. The Experience Of Modernity*. New York, Verso.