

Weaving the Web

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“Then another name came up as a simple way of representing global hypertext. This name was used in mathematics as one way to denote a collection of *nodes* and *links* in which any *node* can be linked to any other. The name reflected the distributed nature of the people and computers that the system could *link*... Friends at CERN gave me a hard time, saying it would never take off... Nonetheless, I decided to forge ahead. I would call my system the 'World Wide Web'.”

Tim Berners-Lee 1999 [1]

There are many associations between digital media and the world of textiles, dating right back to the advent of the computer and gradually firming up over time. Such links can be observed not only in terms of how computers work and the structure of binary code, but also in a series of metaphors, concepts and forms: the net, the web, weaving pixels, pattern, texture, etc. There is not enough space here for a full exploration of the history of this relationship, from the *analytical engine* (1837) invented by Charles Babbage (1791 – 1871), based on the workings of the Jacquard loom, to the first experiments in distributed networks carried out by Paul Baran, to the Internet conceived by Bob Kahn and Vinton Cerf and Tim Berners-Lee's World Wide Web. At the same time it is impossible to fully explore the cultural roots which spring from the mathematical patterns common to both information technology and textiles, and which over time have forged an inextricable pattern. This is because culture itself, not just the Internet, is rhizomatic by nature: once you reach a certain level of complexity it becomes impossible to trace the history of an engaging metaphor. New Media Art, which works with the social, political and cultural consequences of the media it utilises, is well aware of these links, and this awareness emerges both in its aesthetics, and in the operative techniques implemented. Just think of all the art works which explore the aesthetic consequences of a computer error, or glitch: a field which explores traditional, familiar interfaces, often giving rise to an abstract structure which in many cases resembles a woven cloth. Or take the time-honoured tradition of alternative browsers, which instead of visualising the data found on the net show its structure, relative position and the links which connect it to the rest of the network. One recent example of this is the project *Infome* (2002 – 2005; http://jevbratt.com/infome_imager/lite), where the American artist **Lisa Jevbratt** gathered a series of programmes (crawlers, in technical jargon), which browse a section of the web and offer up an abstract, non-conventional visualisation of the content, in a textile-like pattern. The project is based on the idea that the customary visualisation of a web page is merely a convention, and that the same data can be visualised by different interfaces in very different ways, depending on the key used to interpret it. Thus instead of focusing on the contents of the pages her programme analyses page length, date of creation, colours, structure, etc. and produces an image which offers an intuitive rendering of all this data.

In the installation version of the project users can print the results of their explorations: tangles of dots and coloured lines which, like many other data visualisation projects, end up with their own aesthetic value partially independent of the process which created them. This concept resembles the works of the past can still be enjoyed from an aesthetic point of view even if the key to interpret them has been lost.

In any case, all Net Art (namely art which comes into being on the web and for the web, and uses the web as its tool of choice, and also its main theme) is by definition a textile art, as it plays a part in enriching the fabric of cyberspace and creating networks, building and activating communities. In other words, net art is the art of weaving the web, which grants it an enormous potential, enabling it not only to comment on the media it utilises but also to contribute to its life, its creation and its history. *The Thing* (www.thing.net) which started life in New York in 1991 as a BBS (Bulletin Board System) created by the German sculptor Wolfgang Staehle and was transferred onto the Web in 1995, has contributed to the development of an extremely important alternative network. It offers artists and activists a discussion platform, but also an area for publication which has ensured the presence online of a series of initiatives which have shaped the history of web-based activism. Yet this complex structure started out as (and continues to be) a work of art, a “social sculpture”, in the words of Joseph Beuys. Another illuminating example of how Net Art has constructed the history of the web is *Name.Space* (<http://namespace.autono.net/>), a project launched in 1996 by the artist Paul Garrin as a protest against the monopoly of Network Solutions in assigning top level domains (.com, .org, etc.). His work of art took the form of a small company which contributed to the history of web by introducing domains such as .info and .museum.

These are only two, historic examples of how Net Art has contributed to weaving the web. In both cases the web appears not only as a technological innovation to be utilised, but above all as a social innovation, a new way of creating communities. On the Internet there are many projects which set out to use this network of people, giving rise to new communities which spring up around an object, a practice or a software programme. With *Quixote* (2004 – present; <http://www.quixote.it/>), the Turin artists **Gianni Corino** and **Lorenzo Verna** have created an object which blends tradition and technology, ancestral practices and new forms of communication. The Quixote is a wooden doll much like a traditional Sicilian doll, but with a GPS (Global Positioning System) transmitter in its backpack. Like the navigation systems installed in cars, this signals its position to a satellite. On certain occasions the *Quixote* is put into a social network and sets off on a journey to an unknown destination: the artists give it to a friend who keeps it for a few hours and then passes it on to another friend. On the site there is a map showing the movements of the doll, and the participants keep a travel journal (a blog) with entries and photographs sent in by mobile phone. The Internet is just one of the networks which feature in this complex operation, the aim of which is to highlight the human side of technology, its social potential, and its ability to create stories or reinstate legends and practices from the past. Like Don Quixote, the Quixote is an adventurer, and like him it has the ability to transform its surroundings simply by telling their story in real time. At the same time the puppet is a kind of talisman, half-Durlindana sword and half Tolkien's ring: a magical object (because technology is a form of magic) that draws its bearer into its story.

Another demonstration of how web technologies can bring some traditions of the past into the modern era is *Screening Circle* (2006, <http://artcontext.org/act/05/screeningCircle/>) by the American artist **Andy Deck**, commissioned by the Tate Online and Whitney Artport. The project draws on the tradition of the “quilting circle”, the members of which worked separately on pieces of a quilt which were then sewn together. This was very popular in 19th century America, where it provided a new way of socialising, making women in isolated rural areas feel part of a wider community, united by a shared activity, a historic form of networking that has been renewed by the web, making it possible for people separated by time and space to work together on the same design.

Screening Circle is a project with an interface of disarming simplicity. The design recalls both the quilts themselves, being based on a square template and bright colours, and the look, familiar to many Internet users, of the first computers and above all the first video games, with their simple colour palettes and characteristic 8 pixel squares. By clicking on the images in the frame you open designs which can be worked on in real time. The changes are saved in the project archives and maintained until another user opens the same image and changes it again. In other words the project is based on shared tastes and cultural stereotypes to stimulate a global form of creativity, and is open to anyone who fancies working on a distributed work of art.

As we can see, the concept of weaving emerges in these works not only as a metaphor, but also as a basic technique, an inherited tradition. The most emblematic case of this rediscovery is probably that of the American artist **Cat Mazza**, whose project *MicroRevolt* (2004 – present) invites participants to get involved in activism through knitting. Her protest targets the huge multinational clothing companies which systematically exploit the sweatshops of the southern hemisphere. This craft project combats the giants of industry and is another example of a blend of tradition and innovation: the project site provides a programme (*knitPro*) which enables users to convert any image into a knitting pattern. The artist then invites the users to share the results of their work in an online diary, giving rise to a very lively community.

An artist and activist who grew up with digital media, Cat Mazza was taught to knit by her grandmother. In her hands a symbol of female segregation has become a means of liberation and protest. This process, which is not new in the field of traditionally “female” crafts, and has actually been used by many women artists, Rosemarie Trockel first and foremost – has been given an original slant thanks to the analogy between knitting and digital images: knitting, like information, wants to be free. [2]

Another extension of *knitPro*, the *Knitoscope* (2006), is a software programme which converts a digital video into a “knitted” animation. The name of the programme comes from another obsolete piece of technology – Edison's kinoscope, one of the forerunners of film, and is a self-contained game in appearance only: in actual fact it shows how the crafts and aesthetics of the past can be revived to talk about the present, and how such a simple, popular practice can act as a vehicle for a powerful cultural message. Cat Mazza used the *Knitoscope* to create *Knitoscope Testimonies* (2006, <http://turbulence.org/works/microRevolt/>), a series of videos featuring various people who work to combat

the textile industry's sweatshops.

While all these projects are inextricably bound up with the web, the analogies between digital media and the textile world also emerge in other fields of work and research. This is the case, for example, of much generative art, a field of creative software research which constructs programmes able to use a limited set of commands and a number of defined "behaviours" to develop an autonomous entity. Generative techniques are used in architecture, music, design and the visual arts with particular attention for the aesthetic outcomes rather than the conceptual or cultural consequences of the operation of the software. In this case it is the type of process which is activated which justifies the "textile-like" nature of the result. The Milan artist **Alessandro Capozzo** (<http://www.abstract-codex.net/>) is one of the most interesting exponents of this type of research, and his project *Relations* (2004) is in many ways emblematic of the field. This work is an application in which various "creatures", or rather their abstract structures, move around in a three-dimensional space, giving rise, as the artist puts it, to an "ephemeral network of relations".

The organic world, with its flowing, natural movements, often features in his work, as revealed by the frequent use of algorithms which mimic the behaviour of animals and plants.

In *Exuvia* (2006), created in collaboration with **Katia Noppes**, the focus shifts from movement to life itself, specifically that of a dragonfly larva. *Exuvia* is a sculpture which superimposes an "analogic" exoskeleton (a sort of shroud made of resins and semi-transparent synthetic materials, which traces two dragonfly wings onto an LCD screen, ending on the ground with the model of a computer keyboard) onto a digital soul, a generative software programme which leaves ephemeral traces on the screen. The work plays out the miracle of the chrysalis, overlaying the digital and material and forging relations between the two spheres, a phenomenon which plays an increasing role in the modern world.

[1] Tim Berners Lee, *Weaving the Web : The Original Design and Ultimate Destiny of the World Wide Web by its Inventor*, 1999. The italics are mine.

[2] "Information wants to be free" is the first commandment of the Free Software movement.

Translated from Italian by Anna Carruthers.

BRIEF BIOGRAPHY

Domenico Quaranta (Brescia, 1978 - www.domenicoquaranta.net/) is a curator and art critic with a particular interest in new media. He has edited the magazine "Cluster" and regularly works with "Exibart", "Arte e Critica" and "Digimag". He has published articles, reviews and interviews in "Corriere della Sera", "Flash Art", "Boiler", "Noemalab", "A minima", "Titolo", "Maska", "Around Photography" and "Drome". He wrote *NET ART 1994-1998. La vicenda di Ada'web* (Vita e Pensiero 2004) and has curated various shows, including *Connessioni leggendarie. Net.art 1995 - 2005* (Milano, Mediateca di Santa Teresa, 20 October - 10 November 2005). He holds a course in Net Art at the Brera Accademia.