Speculative Scenarios

EDITED BY ANNET DEKKER

or what will happen
to digital art in
the (near) future?

BALTAN
LABORATORIES

There is a growing understanding of the use of technological tools for dissemination or mediation in the museum, but artistic experiences that are facilitated by new technologies are less familiar. Whereas the artworks' presentation equipment becomes obsolete and software updates change settings and data feeds that are used in artworks, the language and theory relating to these works is still being formulated. To better produce, present and preserve digital works, an understanding of their history and the material is required to undertake any in-depth inquiry into the subject.

In an attempt to fill some gaps the authors in this publication discuss digital aesthetics, the notion of the archive and the function of social memory. These essays and interviews are punctuated by three future scenarios in which the authors speculate on the role and function of digital arts, artists and art organisations.

http://www.baltanlaboratories.org

Speculative Scenarios

or what will happen
to digital art in
the (near) future?

contributors

CHRISTIANE BERNDES
SARAH COOK
ANNET DEKKER
SANDRA FAUCONNIER
OLGA GORIUNOVA
JUSSI PARIKKA
CHRISTIANE PAUL
RICHARD RINEHART
EDWARD SHANKEN
JILL STERRETT
NINA WENHART
LAYNA WHITE

BALTAN
LABORATORIES

3

INTRO

SPECULATIVE SCENARIOS

or what will happen to digital art in the (near) future?

— ANNET DEKKER

Laura Mousavi, e-PERMANENT, Brighton (UK):

I would say that 'digital art' suggests using digital technology to make art, 'new media art' suggests using any new technology not necessarily digital, 'net art' is specific to art created for the space of the Internet. There is also art which perhaps is created in non digital mediums which interrogates the impact of the new technological age we are living in which could be categorised new media but is not using new media.

Tom Clark, Arcadia Missa, London (UK):

It feels that in the area we are working in, the distinction of art seems to problematise certain characteristics of contemporary art, so it seems counter-intuitive to try and name it or pin it down, beyond maybe introducing it as being within art.

Rózsa Farkas, Arcadia Missa, London (UK):

There are so many art shows that are curated about or write press releases with, binaries about 'on' and 'off' line – this may have been the dichotomic experience in early web days and for 'net artists', but now there is not that distinction. The Internet is part of our IRL daily lives.

Domenico Quaranta, Link, Brescia (IT)):

Contemporary art is the term I usually use to refer to the art I'm dealing with: an art that always responds to the Information Age, which is the specific form of contemporaneity I've been living in since I started a serious affair with art.

Curating digital artworks in physical spaces and online exhibitions is becoming more widespread, but such exhibitions mostly take place outside the world of traditional art. During the summer and autumn of 2012 several young curators were interviewed about their practice.[1] A common denominator among these curators is their experience with online curating and/or presenting online artworks in physical spaces. What stood out was how easily they moved between digital and physical realms in their practice, from exhibitions in old warehouses, family homes, small side-street galleries, to online spaces and commercial platforms. They use existing curatorial formats for their presentations, adapting them if necessary, or create new ones. This introduction starts with quotes from some of the curators who reacted to the question of how they would position their practice within existing categories like digital art, new media, net art, contemporary art. The quotes exemplify how they deal with divisions between various art worlds; by taking distance from them, accepting any art for what it is: art.

In the past five years, several Dutch organisations, among them the Netherlands Media Art Institute (now LIMA), Virtueel Platform (now part of The New Institute), Foundation for the Conservation of Contemporary Art (SBMK), and Digital Heritage Netherlands (DEN), were involved in a number of studies examining the topic of digital art preservation. One of the recurring outcomes of the expert meetings and workshops was the need for a knowledge exchange platform where information about digital arts aesthetics, history, presentation and preservation would come together. At the same time, Baltan Laboratories had moved its working space into the Van Abbemuseum. With its tradition and roots in digital art through facilitating new ideas and critical thinking around contemporary art and technological culture, Baltan's move was, among others, an experiment to see if the collaboration could develop into a space that would encourage an experimental and forward-thinking approach for digital arts and the contemporary art world.

After a number of informal discussions between Baltan's director at the time, Angela Plohman, and curators and staff of the Van Abbemuseum, and in line with the

1
The interviews with Lindsay Howard, Domenico Quaranta, Arcadia Missa, Temporary Stedelijk, Katja Novitskova and Laura Mousavi can be read here: *http://www.baltanlaboratories.org/borndigital/*.

previously mentioned research, it became clear that there was a lack of knowledge in the contemporary art world relating to 'digital art'. While there is a growing understanding of the use of technological tools for dissemination or mediation in the museum, artistic experiences that are facilitated by new technologies are less familiar. As an art discipline, the language is still new and the theory is still being formulated. The technical knowledge required to facilitate the production of this type of art or art research is not usually found in a museum. To better produce, present and preserve this type of work, an understanding of its history and the material is required to undertake any in-depth inquiry into the subject. Similarly, while media arts organisations and labs are recognised as spaces that facilitate new ideas and critical thinking around contemporary art and technological culture, there is often little knowledge of and experience with the economic and structural systems inherent to the contemporary art world.

The recent cultural policy decisions of the Dutch government are further evidence that digital art is not viewed as an integral strand in the field of contemporary art but rather as a distant cousin of design, architecture and craft; it is viewed as an applied art, part of the 'creative industries'. The full chain of research, development, presentation, discourse and theory relating to digital artworks is not fully developed and interdisciplinary dialogue is needed to move forward. Baltan Laboratories made a first step in this direction by organising a conference in collaboration with the Van Abbemuseum titled 'Collecting and Presenting Born-Digital Art. A matter of translation and (historical) knowledge', which included a two-day workshop and a special screening *Museums of the Future*.[2] Museum conservators, curators, gallery owners, artists, academics and producers came together to address aesthetics, art historical links, prejudices and technical challenges in an attempt to bridge the different art worlds.

The aim was to have a two-day working-conference. Instead of listening to plenary lectures, participants were divided into small groups, and following the form of structured group dialogues, they discussed and focused on several case studies. A team of two moderators, one with

2 For more information: *http://www.baltanlaboratories.org/borndigital/*.

a background in contemporary art and the other in digital art, led each group. The pre-conference talks started with several pre-assumptions to posit the different viewpoints:

> If the museum's job is not only to think about the past, but also to celebrate what is most vital and relevant now, then the Internet cannot be ignored as a valid location and focus for artistic practice.
>
> As the social history of art has taught us, art can only be understood in the wider context of the society that produces it. Digital art says a lot about contemporary society and how it is changing, as is evidenced when it is addressed in relation to established art histories.
>
> Many curators still find it difficult to distinguish artistic merit from technical innovation in digital art.

Due to the number of professionals around the table, the goals of the conference were set high and desirable outcomes were defined as follows:

— Suggest improvements: what are new models of knowledge and information exchange;
— Position statements around the state of contemporary art, research orientations and possible integration paths between different art worlds;
— Propose models for the 'Museums of the Future'.

As expected, the conference programme was intensive and although a number of the themes were examined in depth, it also revealed the challenges of bringing people from different backgrounds together. A new canon is not easily set up, especially around an artform that has very strong non-hierarchical structures. Creating lists of artists, artworks and exhibitions lead foremost to dispersion instead of coherence. Breaking traditions, thinking from scratch, and speculating about an insecure future is hard to do in four days. Nevertheless, many attempts were made to come up with alternative methods to (re)define history, aesthetics, preservation, documentation and presentation – some of

the comments, struggle and vibrancy abstracted from the reports of the different sessions can be read in this publication. Not surprisingly the more practise-oriented groups were the most successful in proposing next steps, but there was also general consensus about the following:

— Produce and make available more case studies and documentation processes for peers and other staff members in museums.

— Aim for an open approach where a case-by-case forum is available for conversations to happen about creative decisions and the conservation of a work. Currently there is a lot of information, but finding and accessing the specific information is often difficult.

— Create more awareness and visibility of non-institutional strategies, for example, communities of gamers, hackers, torrent sites, etc., which are all about sharing and collaborative efforts. Critically analysing such processes might lead to new and more sustainable solutions for presentation, writing histories and preservation.

— The vocabulary and assumptions about art are very layered, and the issue of convergence around digital repositories needs more attention, also including the often unheard individuals and people with small or private collections. Ideas about a 'speculative archive' where history can be traced through layered narratives would be an interesting model to pursue.

— If the museum is not only a place for objects, but also a place for ideas where relationships can be fostered, the focus needs to shift from 'the object' to people and their networks.

— Many museums are becoming more open, flexible, exploratory and unstable, but their heritage is still fixed in terms of presentation and collection. A shift towards a less traditional museum, where experimentation occurs within its walls, and risk-taking and prototyping (traditionally seen as activities of a media lab) are more common, will be necessary if the museum wants to become more inclusive.

«

People associate success with tidy systems, but sometimes it might be good to create some mess – loosen the tidy systems of roles and information a little.

»

Finally, in an attempt to better articulate and analyse digital art within a contemporary arts' discourse a suggestion was made to organise distributed exhibitions in which six digital artworks will be leading. Since there are many ways to exhibit a digital artwork, which all have an immediate impact on the meaning and experience of the work, based on the six digital artworks six curators should, at the same time and independently, curate an exhibition of these in their own space. The differences in conceptual framework, presentation, audience participation, reach, artist involvement and so on could be critically evaluated and possibly lead to new methods and a better understanding of the artform.

The conference provided a lot of food for thought and an array of questions were raised, but not all of them could be discussed in depth because of time constraints. In an attempt to fill some gaps the authors in this publication elaborate on some of the issues that kept returning in the four days of the conference. The essays and interviews are divided into three sections: aesthetics, future scenarios, and archival practices.

AESTHETICS

In the first section on aesthetics, Christiane Paul, adjunct curator of new media arts at the Whitney Museum of American Art and associate professor at the School of Media Studies, The New School in New York, explains during a Skype interview the notion of aesthetics and how it is dealt with differently in digital arts and contemporary art, while also discussing shifts that have taken place in digital, and especially Internet art. Olga Goriunova elaborates on the latter, pointing to new online aesthetic forms and the vitality of 'lurking on a forum or following a meme, creating a stream of videos, enacting planking and uploading an image of the act, living on a social networking site as a photograph, being edited, lingering on as an outdated design element, being looped in Coub and made available to 500 friends on Facebook'. In the process she touches upon the changes in curating. Curators are compelled by the production and extension of aesthetic forms, values and procedures, but at the same time they are in competition or conflict with capitalist, deterministic and entropic forces. It is in the

middle of such tensions that shifting epicentres and boundaries can be traced.

FUTURE SCENARIOS

In the second section speculation about the future of digital art occurs in two essays and one e-mail conversation. In his essay, art historian Edward Shanken asks what the world would be like if Roy Ascott's *La Plissure du Texte* (1983) sold at auction for $34.2 million instead of Gerhard Richter's *Abstraktes Bild* (1993). Based on a 'Facebook query' Shanken offers a glimpse of what such an (art)world would be like. Sarah Cook curator of and writer on contemporary art takes the perspective of an artist at some point in a near future. On close reading a world opens up that is imaginable, maybe even traceable, but its ambiguous character leaves the reader puzzled. Choosing the format of 'question of the day', Jill Sterrett, director of collections and conservation at San Francisco Museum of Modern Art; Layna White, head of collections information and access at San Francisco Museum of Modern Art; and Christiane Berndes, conservator collection Van Abbemuseum in Eindhoven, responded separately to questions send by e-mail. A conversation emerged that circled around the issues of risk taking, ownership and the idea of acquiring a network of relationships, trust, and the branching of organisational structures. Throughout, these issues were related to the openness of shaping, the elasticity of the museum, and the influence of financial business models.

ARCHIVE & MEMORY

In the third section three authors respond to and reflect on the notion of the archive. Best known for his research and writing on media archaeology, Jussi Parikka, reader in Media and Design at Winchester School of Art in Southampton, brings media archaeology into the future. By allowing for an expanded idea of memory, Parikka opts for an approach of reuse, remixing and sampling, and shows how such an approach can help conservators and artists when thinking about the preservation of digital artworks. Artist and media art historian Nina Wenhart problematises categorical functions in traditional archiving. She argues that speculation offers a way of working with approximation,

which emphasises the context dependency of knowledge and leads to an open-ended dynamic process that is closer to the nature of digital archiving. Drawing on themes from the forthcoming book *Re-Collection: Art, New Media, and Social Memory* (2014), Richard Rinehart, director and chief curator of the Samek Art Gallery at Bucknell University, responds to a series of questions while arguing that museums face a fork in the road. One side leads to storage, which attempts to keep an artefact as unchanged as possible, while the other leads to social memory, which is constantly rewritten, and hence transformative. Rinehart (in line with the co-author of the book, Jon Ippolito) proposes revisiting and redefining social memory.

THE CD-ROM CABINET

Throughout the publication the guardian of *The CD-ROM Cabinet*, Sandra Fauconnier, project leader of the online video channel ARTtube and an active Wikipedia volunteer, presents a selection of her current CD-ROM research. *The CD-ROM Cabinet* is an experimental initiative to document and preserve CD-ROM artworks from the 1990s. The practical research started during the *CD-ROM Hackathon* by Ben Fino-Radin, which preceded the 'Collecting and Presenting Born-Digital Art' conference. Sandra is currently exploring the Mediamatic archive in Amsterdam, an important producer and driving force behind this kind of work in the 1990s.

This publication continues some of the dialogues that happened during the conference and will hopefully stimulate further debate. However, none of this would be possible without the generous support of all the reporters, Nina van Doren, Sonia Kolasińska, Maya Livio, Alessandra Saviotti, Caylin Smith, Rachel Somers Miles and Karin de Wild, who took notes, videos, photos, and supported the moderators and organisers throughout the conference. Also thanks to the Mondriaan Fund for supporting the conference, and the Van Abbemuseum – in particular Christiane Berndes, Galit Eilat and Annie Fletcher – for their contributions in making it happen. Lastly, thanks to all the participants and contributors to the conference and this publication, whose visions, devotion and energy continue to explore new directions for the future.

12

aesthetics
(1)

Aesthetics

1.1 A CHANGING AESTHETICS, OR HOW TO DEFINE AND REFLECT ON DIGITAL AESTHETICS

An interview with Christiane Paul

— ANNET DEKKER

« New media doesn't necessarily support the 'single star' system of the traditional art world. Collaboration in art is not new, but it is important to remember that earlier collaborative artworks also faced difficulties in being accepted by the art world. »

1.2 LIGHT HEAVY WEIGHT CURATING

— OLGA GORIUNOVA

« The new discussion of virtual worlds is based on computational materialism. The stuff of which the world is made now includes Facebook buttons and requests accepting agreements of all kinds, as well as protocols and bots communicating with each other without curtseying to the ordinary human thing. »

> **The greatest stumbling block is that people are using digital tools but they don’t necessarily understand the language or aesthetics of the medium.**

1

see images on
pages 120 – 121

1.1

A CHANGING AESTHETICS, OR HOW TO DEFINE AND REFLECT ON DIGITAL AESTHETICS

An interview with Christiane Paul

— ANNET DEKKER

How would you define a digital aesthetic, and how does it relate to contemporary art?

There is no easy answer. Computability has introduced so many different aesthetic facets that I think it profoundly changes the notion of aesthetics for digital art and beyond. To outline some of the basics, computability entails the ability to break down images into discrete units; generative possibilities; the separation between the front- and back-end of the artwork, where the back-end could be a complex mathematical language and the front-end could be abstract visuals; and new forms of connectivity across continents and spaces, which are causing a redefinition of space and time. Theorists and philosophers like Bernard Stiegler have examined the latter in terms of economics and individuation, among other aspects. On the one hand, we have this instant connectivity that crosses spatial boundaries and leads to a flattening of space, and, on the other, we see an emphasis on the local community. In 1992 Benjamin R. Barber wrote a visionary article, 'Jihad vs McWorld', juxtaposing globalism and tribalism, the brand consumerism that created the Global Village, the jihad and tribal wars that all emerged at

the same time.[1] Such a comparison is not coincidental and signals the reconfiguration of space and time.

Another key aspect of computability revealed by participatory and interactive artworks is the consideration of response as a medium. Myron W. Krueger already wrote about this in the early 1970s; the response to a digital work differs very much from that to a painting.[2] You can of course argue that any artwork is 'interactive', in the sense that it involves a mental activity, but in the case of participatory digital work interactivity becomes a truism. Response here refers to an act through which the viewer, user, or participant changes the work. A connection can be made to some performance art or Happenings in which participants can also change the artwork. The frameworks in performance vary, but often there is a limit to what you can do. These limitations also exist in some digital artworks, or games, where you select elements from a preconfigured database that may branch in different directions. More open projects take you to the point where you can completely reconfigure the artwork. So response varies a lot. It is a highly complex system that deserves further analysis within the parameters of every artwork.

When you talk about changes in the notion of aesthetics, to what do you exactly refer?

While looking into aesthetics and notions of aesthetics related to the computer for the conference in December, I discovered that the Wikipedia entry on aesthetics, apart from building on Kantian and Hegelian theories, also has a section 'Aesthetics and information', which considers computer algorithms in relation to aesthetics.[3] Over the years, the notion that beauty is not the only criterion for assessing aesthetics has been gaining ground, and I think there now is an interesting shift to understanding computability and the generativity of code in terms of aesthetics. For the first time in the history of art we see a more profound disconnect between the back-end of a work and the materiality of its front-end. When moving close enough to a painting you can see brush strokes. Photography, film, and video introduced

1 *http://www.theatlantic.com/magazine/archive/1992/03/jihad-vs-mcworld/303882/*. The article was later adapted into a book with the same title (New York: Random House, Inc., 1995).

2 *http://thedigitalage.pbworks.com/w/page/22039083/Myron%20Krueger/*.

3 *http://en.wikipedia.org/wiki/Aesthetics/*.

an increasing gap between the negative or the filmstrip or tape and the images we look at, but in code and computer art you deal with a back-end of mathematics and algorithms that very often seems to have little to do with the visuals it produces on the front-end. This is an interesting challenge to explore in understanding a work's aesthetics. Of course this also applies to instruction-based art in general, for example, Sol LeWitt's work – on which some of Casey Reas' projects are explicitly building – and several Dada pieces, but most of these instruction-based works didn't produce visuals in the first place.[4] All these aspects together introduce a shift in aesthetics – to the point that computer art and code can be deeply aesthetic in a conceptual way.

4
Sol LeWitt (1928–2007) was linked to various movements, including Conceptual Art and Minimalism; for more information about Casey Reas, see *http://reas.com/*.

Would this shift also be one of the reasons why museums have difficulty accepting computer-based art, because they aren't always aware of the evolving relationship between the front- and the back-end?

Yes, I think this is a big challenge, not only for institutions but also the audience. Most people approach an artwork through the visuals at the front-end – which is one of the reasons why conceptual art faced opposition – and they don't understand, or even care about the back-end. Florian Cramer has written about how the poetics of construction tend to move behind the front-end and its perception.[5] At the same time there are huge differences when it comes to the levels of engagement that a digital work requires, and it's not always necessary to know much about the back-end, although it often is extremely valuable to understand it.

5
Florian Cramer (2002) Concepts, Notations, Software, Art, *http://www.netzliteratur.net/cramer/concepts_notations_software_art.html*.

Quite a few people have written about digital art; nevertheless, it seems that these texts sometimes get stuck in their own discourse. Do you think these texts should be translated into a contemporary art discourse, or would you rather see something in between, a new taxonomy, borrowing from both sides?

It's a difficult issue, and I don't have a solution. Although there is a huge need for translation between traditional art-historical discourses or discussions of aesthetics and new

media art, I'm not sure if there really is a gap in language or taxonomies. I think new media art has been approached from the same perspectives and criteria as traditional art. For example, Lev Manovich has analysed and talked about the 3D image in terms of traditional theories of perspective and constructing space within painting; in particular, he has applied constructivist techniques and the notion of montage to new media.[6] New media art looks at many of the same themes and issues that have been discussed in art for centuries; to name a few: the construction of identity, representation, abstraction, realism, etc. All these issues are discussed in digital media and other arts, and there definitely is a continuation of the dialogue. I don't think new media theorists or practitioners are particularly guilty of not creating bridges, but I see obstacles when it comes to having these considerations enter into contemporary art discourse. Claire Bishop's article titled 'The Digital Divide' in *Artforum* (September 2012) is a good example of this rift.[7] We are also facing the challenge that it becomes increasingly difficult to write about many older new media works, because they are vanishing. So it is important to document their history and, in order to do this, we need more momentum and funding, which in turns requires acceptance within the art world at large.

6
Lev Manovich (2003) New Media from Borges to HTML. In *The New Media Reader*, edited by Noah Wardrip-Fruin and Nick Montfort. Cambridge, MA: The MIT Press. *http://www.manovich.net/DOCS/manovich_new_media.doc*. Lev Manovich (1999) Avant-Garde as Software. In *Ostranenie*, edited by Stephen Kovats. Frankfurt and New York: Campus Verlag. *http://www.manovich.net/DOCS/avantgarde_as_software.doc*.

7
See also the discussion related to the print article on Artforum.com, Talkback, *http://artforum.com/talkback/id=70724*.

A response that is often heard and also surfaced during the discussions is that digital artists, although wanting to be included are at the same time cynical towards the museum as an organisation. Or, that digital artists are unwilling to make curatorial decisions such as naming the best digital artist or specifying important periods, events or people. Do you recognise this as well?

Yes and no. I don't think that artists using the digital medium are generally unwilling to write their own history in terms of outstanding events, works or people. They are definitely torn between a desire for integration into art world systems and a suspicion of these systems' structures, which do not accommodate their work. Some time ago I wrote about new media being a form of institutional critique in

and of itself.[8] There are few new media works that position themselves as institutional critique in the way Hans Haacke's projects did, for example.[9] But the nature of new media art runs counter to the infrastructure of museums in many ways: the medium itself and the decentralisation it entails; the fact that most digital art doesn't rely on the museum and gallery to be 'distributed' to the public; the question of authorship – very often digital works are created by collaborative teams, or artists create a framework and the artwork is then executed by the audience. I remember once listing all the programmers and collaborators involved in a project on the draft for the exhibition label, and during the editing the names were cut because, as the argument went, 'we just don't have that much space on a museum label to list them all'. New media doesn't necessarily support the 'single star' system of the traditional art world. Collaboration in art is not new, but it is important to remember that earlier collaborative artworks also faced difficulties in being accepted by the art world. New media art runs counter to museum infrastructures in so many ways, from the 'materiality' or rather 'immateriality' of the work and the question of what constitutes the art object, to open modes of creation and distribution systems that do not rely on the white cube. The structure and organisation of museums will need to change if they want to accommodate this art.

At the same time, if digital art has already built its infrastructures and audiences, why should it want to be in the museum? Where, or what, does it need the museum for?

The answer to this question relates more to the writing of art history than to art and artists' need for the museum. Indeed, digital art is doing fine; it is commissioned and increasingly accepted within society at large; many works, Scott Snibbe's apps, for example, are reaching a wider audience than they ever would if they had been exhibited solely in the museum system.[10] But if digital media is not considered in relation to more traditional art forms, we're constructing two different kinds of art history. What happens to art history if digital artworks cannot be seen

8
Christiane Paul (2006) New Media Art and Institutional Critique: Networks vs. Institutions. In *Institutional Critique and After: SoCCAS Symposium Vol. II*, edited by John C. Welchman. Zurich: JRP|Ringier Kunstverlag AG.

9
Hans Haacke's work is concerned with issues that are at the core of postmodern investigations – the nature of art as institution, the authorship of the artist, the social behaviour of the art world, the network of cultural policies such as the role and function of the museum, the critic, and the public, and many other sociological issues.

10
For more information about Scott Snibbe see *http://www.snibbe.com/*.

alongside paintings or sculptures, even though the works deal with the same societal issues or conditions? Many artworks across media are in close dialogue with each other, yet we're not able to see them together, and we're not writing an art history that fully integrates all art forms. So, are we writing two different histories for the future? Quite a few artists are asking why they aren't accepted in the traditional art world. This question is not only about fame and exposure, but also about being in dialogue with peers within the museum space. This dialogue now seems to be happening outside that space. Artists are in contact with each other, but again you don't see these exchanges in the museum world itself. What I'm worried about is the writing of two different art histories, a real rift within the art world.

Nevertheless, there are already different art worlds, for example experimental film, theatre, animation…

Absolutely, there are certain art forms that move on parallel tracks, but there usually is some crossover: some museums collect experimental films, for example. These may not be the most extensive collections but at least they do build them. So I see more inclusiveness on that front and more of an effort. Performance art has also been notoriously difficult to collect and integrate, but it is experiencing a huge resurgence of interest, which I attribute to the performativity of digital culture. Museums do make an effort to give these art forms a space, but this does not necessarily apply to digital art.

How do you link the resurgence of performance art to digital art?

I think that many of the art practices we've seen highlighted in recent years reflect on our digital culture. They are often labelled as relational aesthetics, for example the discursive performance art of Tino Seghal or Rirkrit Tiravanija's soup kitchens.[11] All these works exist within a space of participation and performativity that, in my opinion, is a reflection on the culture in which we live. Artists engaging in these more traditional practices are also reflecting on the conditions of a digital society, which have been created

11
Tino Seghal calls his works 'constructed situations', which involve one or more people carrying out instructions given by the artist. Rirkrit Tiravanija's installations often take the form of stages or rooms for sharing meals, cooking, reading or playing music; architecture or structures for living and socialising are a core element in his work.

through connectivity and the participatory nature of digital technologies. But again, the art world seems to be less resistant to showcasing non-digital works.

In the last few years, many artists started using commercial platforms as part of their artwork, almost every year a 'new art genre' is announced, from surfart, to new aesthetics, to 'Tumblr Art'. Although, I think it is problematic to speak about art in direct connection to a brand name, another question that comes up is how these artworks should be understood and recognised, and their effects classified in the constantly expanding and evolving technological landscape that is primarily geared towards commercial interests?

This is a complex question. Tumblr is an interesting platform in terms of the aesthetics it creates, especially regarding issues of spatiality and temporality. It is no coincidence that so many people use it for doing collage and montage, because Tumblr is a great montage tool. But it results in a flattened landscape, ultimately a meta landscape, because even though you can potentially click through to unveil the origin of the different layers, not everyone is going to do that, because the layers aren't immediately visible. So Tumblr collapses a landscape into a new form of spatiality that at times seems to neglect temporality. It's great that artists are using commercial platforms and interesting projects have been created within them, but it is also highly problematic. I would say that there is a switch of dependencies, a switch from a dependency on traditional art institutions, to commercial platforms that are surrounded by a lot of hype.

I agree that Tumblr is not an art form or a medium. Art forms or media are not defined by a technical platform or product per se; if they were, it would be occurring for the first time ever in the history of art. I also don't think there is any tool in the world that intrinsically promotes creativity. Some tools might be better suited for creative endeavours than others, but there is a lot more to creativity than just creating a platform and a tool. In a way, I see the notion of 'Tumblr art' as the art world equivalent of the term 'Twitter

revolution', which also was heavily criticised for defining revolution within a corporate social media platform rather than as a movement of people who used technology for political, social, and cultural expression. I think it's a corporate dream to frame Tumblr as an art form, but it simply isn't – it's a form of Internet art that uses a specific platform.

The fact that social media platforms are used as an environment for creating art doesn't mean that these platforms escape artists' critical engagement. In the Web 1.0 era there may have been a clearer distinction between corporate environments and artistic practice, but many artists today critically engage with the Web 2.0 landscape. The new generation isn't any more or less radical or critical than it's predecessors, but I haven't seen much of that work on Tumblr. *Echo Parade* (2011) by Brad Troemel and Jonathan Vingiano is an example of a work that messes with the platform a bit, questioning notions of reblogging and popularity.[12] I would like to see more of that on Tumblr, but I think that critical attitudes and experiments are and will always happen. There will always be smart young hackers who rip platforms like Tumblr apart.

Another problem raised by these platforms relates to technical dependencies. Some early artworks created in HTML have aged quite gracefully; they may look dated and some formatting may not work, there may be issues with tags, but in many cases, the Web pages overall still look pretty good. While dated in their aesthetics, they are surviving. Who knows if Tumblr will still be around in five years; if not, what will happen to the artworks? Unless people find a way of archiving them, they will all be lost. Tumblr has a non-exclusive license to projects created within it and owns all the redistribution rights, etc. The license actually is pretty similar to the one that the Whitney has for projects created for its artport site.[13] But will Tumblr step up and take on the responsibility of preserving the artworks on their platform, as a museum would do? That question in and of itself creates massive dependencies: what is going to happen to all that work?

12
Echo Parade was a bot that scanned and posted content on Tumblr according to statistically defined popularity. More information about Brad Troemel *http://bradtroemel.com/* and Jonathan Vingiano *http://jonathanvingiano.com/*.

13
http://artport.whitney.org.

Are commercial parties interested in preservation issues, and if so, do you think that they could become potential partners for museums in that sense?

I'm not so sure if the corporate world will step up here. Museums are preserving art, and I think they are the most likely candidates to take on the job. I don't want to diminish what museums are doing in the area of digital preservation. There already are many initiatives and consortia developing preservation strategies, for example, *Matters in Media Art*, and the Variable Media Network.[14] Museums are definitely engaging in the process, but there are no large-scale efforts to, for example, really preserve early net art. It will continue to slowly vanish if it isn't collected and supported, and except for efforts by organisations such as Rhizome, I don't see any significant initiatives, certainly not from corporations.[15] Perversely, Google would be a likely candidate because they are trying to position their Google Art Project as a kind of documentation tool for art in a larger preservation process.[16] So who knows! Perhaps Google will step up to this task, but the idea of relying on Google as the hope for the future makes me uncomfortable.

14
Matters in Media Art (2003–15) is a collaborative project between the New Art Trust (NAT) and its partner museums, the Museum of Modern Art (MoMA), the San Francisco Museum of Modern Art (SFMOMA) and Tate. It is designed to help those who collect and keep time-based artworks. For more information: *http://www.tate.org.uk/about/projects/matters-media-art*. Variable Media Network is a diverse network of organisations that aims to develop tools, methods and standards that are needed to rescue creative culture from obsolescence and oblivion. For more information: *http://www.variablemedia.net/*.

15
Rhizome is an independent organisation based in New York dedicated to the creation, presentation, preservation, and critique of emerging artistic practices that engage technology. For more information: *http://rhizome.org/*.

16
For more information: *http://www.googleartproject.com/*.

1.2

LIGHT HEAVY WEIGHT CURATING

— OLGA GORIUNOVA

see images on pages 120 – 121

The virtual of the 1980s and early 1990s ceased to exist. The immersive caves of Ars Electronica, augmented reality of Karlsruhe, drug-like trips into the virtual worlds of early 3D films and the cyborg personae of the early World Wide Web gave way to the degustation of the materiality of the computational medium. It is an accounting for vibrancy, the 'thingly power' and 'recalcitrance of materials' that is now dominant in a new-materialist ontology.[1] Not only does such materialism grant agency to non-human things, endowing them, following Spinoza, with a capacity for affective interference,[2] but humans are necessarily becoming things themselves, acting in an assemblage with things of various power, kind and sort. Such material entanglements can also be almost entirely computational.

The new discussion of virtual worlds is based on computational materialism. The stuff of which the world is made now includes Facebook buttons and requests to accept agreements of all kinds as well as protocols and bots communicating with each other without curtseying to the ordinary human thing. No longer is the virtual the dream, psycho-space, escape, or merely a thought; thoughts and creative ideas are now bulky furniture to handle. The heaviness of the material turn is inscribed into the computational: hyperstimulation, corporate control, an overflow of mass-produced material, big data, massive scale, and software undercoating, in which the users are illiterate but creative (or not, or both). The new heaviness might feel light, overpowering, and panic inducing. The novel lightness is about staying afloat or, rather, remaining operational at whatever depth is required.

1
Jane Bennett (2010) *Vibrant Matter: The Political Ecology of Things*. Durham: Duke University Press.

2
Ibid.

Curators and museums working with the new computational materiality are compelled to remain lightly operational, responding to the creation of new aesthetic value, whether by artists or those beyond-artists (who do not wish to function according to a category of an artist that is imagined and experienced as existing). Sakrowski, the author of *Curatingyoutube* (2007–present),[3] maintains that a novel vocabulary, syntax and semantics are developed on the Web, and need to be understood and matched by a commensurate curating system composed of devices. Such language-based metaphors should not lure us into the realm of representation; the devices need to be as much reflective of 'formal language elements' as of 'procedural entities'[4] or, rather, performances.[5] An aesthetic form, a sensuous Web page element, attention, action, response, bodily pursuit or software function, separate or aggregated together, all form the inventory of computational living matter.

Computational living matter is a multiplicity that has a vitality of its own, similar to a writer who is often weakened in the face of text dragging forward, unfolding to its own logic – lurking on a forum or following a meme, creating a stream of videos, enacting planking and uploading the image of the act, living on a social networking site as a photograph, being edited, lingering on as an outdated design element, being looped in Coub and made available to five hundred 'friends' on Facebook, plays out in attentive and recursive relation to the thick computational matter filling all around.

Computational matter is profoundly aesthetic, social and luxurious.[6] This luxury, absolute excessiveness of culture, of aesthetic germination, expands spaces, out of which multiple creative acts sprout for no reason at all. The lightness of such excess means such spaces can be one-off channels or currents anywhere, as part of large video or gaming platforms, an impulse running through social networks. This lightness takes a heavy toll: the aesthetic work brought to life by such germinations cannot be brushed aside, but the vocabulary and devices for making sense of it are yet to be developed. The volume and dynamism of excessive aesthetic wildness is heavy for any curator, even the one whose body and actions are assembled together with many heavy computational machines and networks.

3 *http://www.curatingyoutube.net/*.

4 Robert Sakrowski (2010) Curating Youtube Box [CYB]. *ISEA 2010 Ruhr, Proceedings of the 16th International Symposium on Electronic Art*. Dortmund: Druckverlag Kettler GmbH, pp. 65–66.

5 I have started to develop the concept of the performative in: Olga Goriunova (2012) New Media Idiocy. *Convergence: The International Journal of Research into New Media Technologies. Online First*. Full text: *http://www.academia.edu/2125726/New_media_idiocy/*.

6 Roger Caillois (1935) Mimicry and Legendary Psychasthenia. *Minatoure*, 7. Online version: *http://www.generation-online.org/p/fpcaillois.htm*.

Andrei Bolotov, an eighteenth-century Russian botanist, agronomical and pomological scientist, whose labour was dedicated to introducing tomatoes and potatoes to Russia, produced dozens of unpublished volumes and was typically regarded as a sufferer of logorrhea.[7] With many of his voluminous writings remaining unpublished, one of his oeuvres, a 30-volume 'Notes' entitled *The Life and Adventures of Andrei Bolotov, Described by Himself for the Future Generations* did eventually see the light of the day at the very end of the nineteenth century and slowly acquired the status of a core text full of rich historical details of the eighteenth-century way of life.

Today, no-one suffering logorrhea faces the dark oblivion of the table drawer in which the manuscript is tucked away: blogorrhea perpetuated by 'Rasputins of prose'[8] is a vital creative excess forging and making use of the new conditions, in which the absurd and unneeded, the undescribed, that which has no immediate value but propels itself, through humans, computers, networks, languages, images, is welcome. It can be called desire, cognitive capacity, creative urge, vitality, linguistic competence.[9] The welcome it receives is not even always capitalist, but it is computational and computationally socio-cultural.

Rémi Gaillard's excessive football talent is Bolotov's 30 volumes of notes 300 years later, in the YouTube era. Gaillard is an 'Internet legend', a French prankster and 'football trickster'. While a light luxury of excessive and absolutely useless football skills is exhibited in his first projects at his pre-YouTube website *http://nimportequi.com* in 1999, by today he could well be studied not only for his comedic pranks but for the performative richness of his sketches, which are not unlike work by The Yes Men, the Reclaim the Streets movement and culture jamming traditions.

Individual and collective effort, or the vicissitudes of the condition that might be called creatorrhea couples with network specificity and plays out globally through very careful entanglement of the aesthetic, performative, linguistic, visual and computational. The devices and vocabularies of the Web Sakrowski mentions are sensed out, fine-tuned and put into play for the production of aesthetic work, a genre or current. Gaillard is the early YouTuber, who performs

7
There is a term 'graphoman' in Russian (графоман) to indicate a person who has no talent but a potency, will and ambition to write, thus producing valueless and abundant writing. There seems to be no established and immediately obvious equivalent in English. Lars Iyer uses 'logorrhea' to refer to a condition similar but not identical to the one described above in: Lars Iyer (2013) *Exodus*. Hoboken, NJ: Melville House Publishing.

8
Iyer (2013:68).

9
Gilles Deleuze and Félix Guattari (1987) *A Thousand Plateaus*. Minneapolis: University of Minnesota Press. Paolo Virno (2004) *The Grammar of the Multitude: For an Analysis of Contemporary Forms of Life*. New York: Semiotext(e). Nigel Thrift (2005) *Knowing Capitalism*. New York/London: Sage.

and develops his personae in response to the platform as well as the techno-societal culture of the early Web with some geekiness, adoration of early computer games,[10] and a bit of idiocy.[11]

As of 2013 the media archaeological article on Gaillard on the KnowYourMeme platform is not fully completed, as he is too much of a pre-Web 2.0 phenomenon. However, the post-Web 2.0 (post)artwork is both lighter and heavier. For instance, memes, as I argued elsewhere,[12] were produced as a genre by repetitive forms of habituation of images on 4chan. 4chan is an image-board that until recently had no archiving function – a condition of excess that the bump list artwork foresaw.[13] Posting images on /b/ board (not /a/ the animation board) unfolded over time as an exercise in luring the technical and the human into editing, reposting and spreading them.[14] Thus, the genre of the meme was born from the architectonics of the participatory life of 4chan. The vocabulary, devices, and procedures of techno-human networks formed within 4chan and between 4chan and other networks can also be seen as a new curatorial biomechanics.

Confronted lightly and omnipresently with the new aesthetic values ceaselessly churned out by the operations of computational matter, the curator's or art institution's work is heavy. A curator's devices, gestures, procedures and understanding become bio-computational; the call is ambitious: there is a possibility to partake in the organisations of aesthetic life, where both the organisation and aesthetic life is of computational matter. The vastness of life of such matter and the precision of human-technical compositions involved in the production of specific cultural and aesthetic work is at the heart of the lightness/heaviness dilemma. Today, the emergence and further unfolding of aesthetic value is open to intervention and meaning-making in a manner that is unforeseen. Parties of different kinds and orders partake in producing, elbowing each other and dipping into such openness. Here, artists and curators are actors amongst many others, whose aims may be far less generous or conducive to future imaginative openings and the excitement of living.

A lot is rightfully said about the sterilising welcome such creative emergence receives from various kinds of

10 See Gaillard's prank *Pac Man* (2009) in which he and his colleagues dress as this early computer game's characters. See: *http://www.youtube.com/watch?v=pIrvpn3k9A4/*.

11 Olga Goriunova (2012) New Media Idiocy. *Convergence: The International Journal of Research into New Media Technologies. Online First.* Full text: *http://www.academia.edu/2125726/New_media_idiocy/*.

12 Olga Goriunova (2013) The force of digital aesthetics: on memes, hacking, and individuation. *Zeitschrift für Medienwissenschaft*, 8 'Medienästhetik,' 1; also forthcoming in English in *The Nordic Journal of Aesthetics*, and online: *http://www.academia.edu/3065938/The_force_of_digital_aesthetics_on_memes_hacking_and_individuation/*.

13 Johan Brucker-Cohen *Bump-List* (2003). *http://www.coin-operated.com/coinop29/2010/05/13/bumplist-an-email-community-for-the-determined-2003/*.

14 /b/ is the home of Anonymous, it is where people go to discuss random topics on 4chan. /a/ is 4chan's image-board dedicated to the discussion of Japanese anime and manga.

capitalist forces.[15] The new capitalist forms – ludic and cognitive capitalism – appropriate desiring production in its infancy, a half-virtual state, capture and capitalise upon the living drives of matter turned computational, where the condition of its being computational is among the leading changes that enable such appropriation. But such a condition, simultaneously and multiplicitously, also enables excessive creative emergence to outpour, to find outlets, to entrench and reshape things. The role of art and aesthetics, and artists and curators here is to imagine outside and before the appropriation, to find the most perverse and vivid examples of it, and/or to train themselves to see aesthetic differentiation within the muddy swathe of cultural stuff. Even when ever-effervescent emergence becomes key to the advance of the chilling capitalist march, attuned to change and reliant on the imaginativeness of its new subjects, there are temporary zones[16] of varying consistency, forms of behaviour and networks assembling together that dynamically and flickeringly propel forms of living or tiny pixels of computational matter to mutate in ways that offer possibilities of, and ways of thinking and making, a different present or a future.

Curators are compelled to attend to the production and extension of aesthetic forms, values and procedures by understanding, building and making use of human-technical devices or computational procedures, in which they (should) find themselves if not in direct competition then still in ontological conflict of differentiation with other forces, among those that are capitalist, deterministic and entropic, in order to carry out their work. Dynamic and plastic, such tensions exhibit shifting epicentres and boundaries. When memes were initially being produced as an aesthetic form, they were not only not quite based on social-networks and not quite capitalist, but also outside art, and often gory, sexist and violent. Natively digitally born, the computational welcome they received was specific and rather secluded. Another outcome of 4chan, Anonymous, could be considered the most visible political statement of the last five years and one that forged its own emergent welcome. Other aesthetic forms acquire a different history: both gif art[17] and Coubs are among recent examples.

29

15 Tiziana Terranova (2004) *Network Culture: Politics for the Information Age*. London: Pluto Press.

16 Hakim Bey (1985, 1991, 2003) *T.A.Z. Temporary Autonomous Zone, Ontologic Anarchy, Poetic Terrorism*. Brooklyn (NY): Autonomedia. *http://hermetic.com/bey/taz_cont.html*.

17 See for example: *Animated GIFs: The Birth of a Medium | Off Book | PBS*; *http://www.youtube.com/watch?v=vuxKb5mxM8g*.

30

aesthetics
(1)

Animated gifs are a formal element of net art aesthetics, developed in the 1990s as part of the artistic exploration of the material of the Web. A rather simple device, animated gifs were used to bring movement to the Web, which was yet without video, and to re-imagine the visual and communicative language of the new era. A return to the animated gif is undoubtedly more complex than exploitation: it builds on the sentimentalism of retro as well as working on a production of a new type of time – the extended present.[18] However, the computational material history of the new gif art is radically different to that of memes and Anonymous, as it is inclusive of art strategies and histories, as well as of playing the networks. Coub – a platform for making 10-second loops with instant publication on social networking sites – is another such example. A computational and curatorial device of such a type could be imagined as the one opening artistic vocabulary to the people by building on one of the most powerful gestures of the music of the last century. Coub is also a commercial service, in which the mass production of artists is so tightly linked to capitalisation on subjectivation that what is curated here becomes unclear. Is this a curation of a specific new type, a curation of subjectivity outside art? A biomechanical curating of creative matter? Disciplining or acquiring the vocabulary of a visual language on a mass scale?[19] The interminglement of variously and at times contrarily aimed vectors along which the forces advancing the computational matter urge it ahead adds another dimension to the light and heavy problematic that curators and art theorists are presented with. The light action of easy discounting is unavailable here, but the heavy problems of quantification, capitalisation and management of subjectivity remain unsolved.

The varying light and heavy movement between scales and orders of the unfolding present require commensurate operationality from all the actors involved. Operationality, on the behalf of curators, implies creating a series of operations, conceptual and practical, that account for regularities and patterns in computational matter and yet remain dynamic. The devices and vocabulary particular museums, curators and other art actors develop in response to the requirements of such new conditions vary too.

18
Olga Goriunova (2014) Buffering Avant-garde: On Time, Software and Fun. In *Fun and Software: Exploring Pleasure, Paradox and Pain in Computing*, edited by Olga Goriunova. London: Bloomsbury.

19
Bernard Stiegler argues that as print technologies democratised reading and writing practices, visual technologies will give people power over the visual language and indeed develop visual literacy. See: Bernard Stiegler (2007) The Discrete Image. In *Echographies of Television*, edited by Jacques Derrida and Bernard Stiegler. Cambridge: Polity Press.

Curatingyoutube attempts to deal with excess and orchestrate it into rhythms and patterns so that a certain media ecological sensitivity can be established. Such orchestration is all the more interesting as it relies on computational devices (the mechanics of the grid) that respond to the computational systems productive of heavy luxuriant excess (YouTube itself and all the networks that feed into it) and is attuned to the specificity of a particular platform, matter and medium. The work of individual artists may have affinities to such a project, varying perhaps in the types of attention to the material entertained and the degree of completeness/openness left to the viewer. Oliver Laric's *50 50* (2007)[20] is one such example: what differentiates it from *Curatingyoutube* is its relative formal coherence and completeness. An interplay between setting different types of multi-vocal and univocal interrelations is what differentiates these two projects.

20 http://oliverlaric.com/5050.htm.

If we consider curating to be the aggregation of data for different purposes, platforms like Scoop can be seen as radically extending curating, possibly beyond its feasible extensibility. The computational meta-curating capacities of Scoop here not only match the curatorial allowances of tags, folksonomies and likes, but also extend back to the curatorial language of a hyperlink. However, the computational curatorialist devices become human-technical curators when work is put into affective care, imaginative thinking and engagement with the interplay between heaviness and lightness, at all the points of conjunction listed here.

The Russian film director and actress Renata Litvinova once said in an interview that nothing has a meaning of its own and it is only what you assign and creatively produce as a meaning, in entanglement with various forces, that becomes one, with all its force and inevitability. Her acute sensitivity to the condition of today can be extended to curating and the future of art and memory institutions too: when there are no clear boundaries, routines and institutional practices to produce forms of art, subjects and knowledge such as the ones we are used to knowing, it is what we, as part of computational matter, strive for, produce and sense out, that becomes.

Future Scenarios

THE $34.2 MILLION QUESTION

2.1

Writing Histories or Staging Alternative Futures

— EDWARD SHANKEN

« In a world that values distributed authorship, would legislation be more generous to artists, increasing the percentage and removing the cap? »

WE'RE NOT HOBBYISTS OR DABBLERS ANYMORE

2.2

— SARAH COOK

« Private collectors – mostly bankers and tech-barons – had commissioned and scooped up most of the interesting new art. (...) Who would have remembered their works if it wasn't for the anecdotes about their ways of working. »

MUSEUM REFRESH

2.3

An e-mail conversation over several days: Jill Sterrett, Layna White and Christiane Berndes

— ANNET DEKKER

« Since the collapse of the financial system and the development of an entirely new idea of ownership, the museum is not the only institution that takes care of conservation. Digital artworks are part of the public domain and shared within several networks. »

“What will you lose or gain if you become part of a larger history?”

2

2.1

THE $34.2 MILLION QUESTION

Writing Histories or Staging Alternative Futures

— EDWARD SHANKEN

‘What would the world be like if Roy Ascott’s La Plissure du Texte, 1983 (or your favorite work of net.art or proto-net.art) sold at auction for $34.2 million instead of an abstract painting by Gerhard Richter? In what sort of world (and artworld) would that be possible?’

I posed this question on Facebook on 10 May 2013[1] to expand on a related provocation that curator Annie Fletcher and I initiated at the working conference, ‘Collecting and Presenting Born-Digital Art’, organised by Baltan Laboratories in collaboration with the Van Abbemuseum (14–15 December 2012).[2] A considerable discussion string emerged on Facebook, generating twice the word-count allotted to this article. For those familiar with *La Plissure*, it may be apparent that Ascott’s work has not only influenced my thinking about art but has also impacted my scholarly method. *La Plissure du Texte* [The Pleating of the Text] is an early example of ‘telematic art’ (art that uses computer networking as a medium). Eleven locations around the world, each representing a character (magician, princess, beast, etc.), participated in the ‘distributed authorship’ of a ‘planetary fairytale’ by collectively creating and sharing texts and ASCII-based images that comprised the unfolding narrative, a sort of electronic cadavre exquis. Riffing on Roland Barthes’

1
The complete discussion can be found at *https://www.facebook.com/notes/edward-a-shanken/what-would-the-world-be-like-if-a-work-of-netart-sold-at-auction-for-342-million/576700859027714* and on nettime-l *http://www.nettime.org/Lists-Archives/nettime-l-1305/msg00031.html*.

2
Had I asked the question a few days later, the number would have been $37 million, the sum paid for Richter’s painting *Cathedral Square, Milan* (1968) at Sotheby’s on 14 May 2013.

Le Plaisir du Texte (1973), Ascott's *La Plissure du Texte* similarly emphasised the 'generative idea' of 'perpetual interweaving', but in a way that more profoundly contested conventional subject-object and author-reader relationships because the work was not the product of a single author but was pleated together through distributed authorship. There was no finished work, no final outcome, no object as such; rather, the work consisted of the process of distributed authorship, which provided a working model for experiencing emerging forms of telematically-enhanced, collective consciousness. Similarly, utilising social media as a forum to pose and debate ideas might be considered a form of telematic art criticism. What follows attempts to convey a collectively pleated web of ideas while also commenting and elaborating on them.

The first response came from Caroline Seck Langill, who wrote, 'And all that money would be distributed, like the artwork'. This short, sharp prod shrewdly suggests an alternative economic model based on 'distributed authorship', whereby royalties from the resale of a telematic artwork would be shared among the project's geographically disparate commanded participants.

Under *Droit de suite* (right to follow), enacted in France in 1920, 3% of the resale value of an artwork is paid to the artist or heirs. Similar laws were adopted by the European Union, which has a sliding scale from .25% to 4%, with a maximum royalty of €12,500. For a work like *La Plissure*, which implicitly problematises conventional notions of authorship, one can imagine that a percentage of the $34.2 million sale would be distributed among the work's several authors, the seller, and the auction house. But should Ascott get a larger cut than the other participants, given his role in creating the underlying context and organising the project? Moreover, in a world that values distributed authorship so highly, would legislation be more generous to artists, increasing the percentage and removing the cap? Later in the discussion, artist Randall Packer proposed a form of distributed purchase, 'How about a 34.2 million dollar Kickstarter campaign for La Plissure du Texte?'

Jennifer Kanary responded with a particularly imaginative approach reminiscent of Ascott's emphases on creative play, collaboration, and symbolic narratives:

> It would be a world in which people would be much more aware of the importance of play; just imagine 'playtime' at work, crawling around, turning over your desk, pretending it is a spaceship in which your colleagues begin a journey! A moment to delve into the inner narratives of the symbolic. It would be a world in which creativity was valued more than it is feared.

Indeed, since the early 1960s Ascott has propounded Thomas Mann's notion of art as play 'in deep seriousness' and his practice, theory and pedagogy have advocated the crucial importance of creative play, not just in art but in society in general. Building on his work on Joan Littlewood's *Fun Palace* (1964) project,[3] Ascott's concept of a 'cybernetic art matrix', outlined in 'Behaviourist Art and the Cybernetic Vision',[4] established an elaborate framework to nurture various forms of creativity and play that would replace workday drudgery with activities designed to generate symbolic meaning.

Philip Galanter took a more sober, if not contrarian stance, calling attention to the rarity of such high-stakes sales and championing Richter: 'I'm not sure it would mean a darn thing. Art sales in the tens of millions are so far out on the thin tail of the bell curve that they say very little about the mean.... [Richter] is a great artist, and it's not his fault the wealthy have decided to use his work as the coin of the realm'. Noting that there is 'an inherent relationship between Richter and Ascott' in as much as 'the better art today always bears conceptual features', Matthias Kampmann concurred that 'A society in which [La Plissure] would gain millions isn't much different to our[s]'. In my reply, paraphrased below, I summoned Joseph Kosuth's essay 'Art After Philosophy' (1969) to argue why Ascott is a more important artist than Richter and why the market's recognition of this would be meaningful.

3 Joan Littlewood conceived the *Fun Palace* in collaboration with architect Cedric Price. For more information: *http://www.audacity.org/SM-26-11-07-01.htm* and Joan Littlewood (1964) A Laboratory of Fun. *The New Scientist*, 14 May, pp. 432–33.

4 Roy Ascott (2002, original 1966–67) Behaviourist Art and the Cybernetic Vision. In *Multimedia. From Wagner to Virtual Reality*, edited by Randall Packer and Ken Jordan. New York/London: W.W. Norton & Company, pp. 104–20.

For *La Plissure* to have an exchange value of $30+ million would demand a complete retooling of not only the commercial art world but a major overhaul of cultural values. Richter exemplifies the secondary market's infatuation with retrograde forms of practice that are out of touch with aesthetic developments (to say nothing of techno-cultural developments) since the 1960s. Over four decades ago Kosuth wrote that:

> Being an artist now means to question the nature of art. If one is questioning the nature of painting, one cannot be questioning the nature of art. If an artist accepts painting (or sculpture) he is accepting the tradition that goes with it. That's because the word art is general and the word painting is specific. Painting is a kind of art. If you make paintings you are already accepting (not questioning) the nature of art.

By this logic, Richter might be a great painter, but he is not a great artist. This rationale further suggests that *La Plissure* is a superior work of art than any painting since 1969, when Kosuth called the bluff and the jig was over. 'So a quote over four decades old is authoritative for art today?' Galanter challenged back. He further criticised Kosuth's position, which he characterised as 'end-of-art thinking where the only legitimate art is art about art'. Jaromil responded that only time will tell and noted that art investments are a double-edged sword:

> Investments aren't good just because they move market value today. Actually, they might be epic fails as well – and that's what is happening all over – as we speak – to several big capitals. So that is pretty consequent with the times we are living isn't it? 'nuff said, lemme order that copy of PdT now to get it signed by Roy...

These comments set me thinking about the difference between use value, exchange value, aesthetic values embedded in art history, and the value that works of art have not just in capital markets but in ever-changing markets of

ideas. In terms of art's use value, defined as the cultural capital accrued by a collector today, a Richter painting has a great deal to offer. The financial appreciation of Richter's work over time ($34.2 million is 30 times the purchase price that the previous owner, musician Eric Clapton, paid for it in 2001) also suggests that it has great investment value, hence the high price tag, i.e., its exchange value. An artwork is not like a standard commodity in the sense that it has potentially significant value in terms of its contribution to the history of art and to the larger history of ideas (histories that are perpetually reconstructed and retold from various, ever-changing future perspectives). This observation is indebted to Kosuth's claim that 'Art "lives" through influencing other art… artists from the past are "brought alive" again… because some aspect of their work becomes "usable" by living artists'. Let's call that its posterity value. The history of Western art from *contrapposto* to conceptual art celebrates innovation and embraces work that challenges the status quo. I would argue that a Richter painting has little posterity value, compared to Ascott's *La Plissure*. The order of magnitude of Ascott's innovation is incomparably greater than Richter's. Although the contemporary art market – and the discourses beholden to it – do not acknowledge this differential now, one can imagine a future in which Ascott will be generally recognised as having made a more valuable contribution to the history of art and visual culture than Richter.

The disparity between use value and posterity value, and between posterity value and exchange value, is the core of the issue. Over time, as posterity value is established and renegotiated from various present perspectives, it becomes closely aligned with exchange value. Jaromil's point is insightful here, because I think $34.2 million for a Richter is destined to be an 'epic fail' when the correction between posterity value and exchange value takes place – not because the art market is overvalued as such, but because from the perspective of the future, it will be seen to have valued the wrong things.

Oliver Grau agreed that 'the art of Richter is not commenting at all on our time' and that Ascott has continually 'tried to understand our time and reflect on it with new

aesthetic languages and new timely theories'. Grau claimed that the challenge today is 'to allow the multifarious potential of media art… into new (post-museum) institutions, which are able to exhibit, collect and preserve the art in the media of our time'. Recalling the histories of how photography, and film entered museum collections, he argued that 'the same effort – and perhaps much more – needs to be done for all the digital art forms of our time. It is a great anachronism: Our complete society is digital… but the [art] market remains stubbornly yoked to the last century'.

Galanter conceded that 'in a (proposed) world where people throw money to those who carry the banner for abstract ideas, rather than a (current) world where people throw money to purchase property, I suspect many things would be quite different. In fact the resulting changes in the art world would be a small part of it'. Kanary pointed out that 'there is an intricate relation between what is valued in art and what is valued in society'. An artist functions like 'a canary in a coal mine, as a… nomad of meaning'. She continued, 'the "bubble" of Koons and the "bubble" of Hirst both reflect … the metaphor of "gas" that forces its way to the surface of a… coalmine shaft – the hiccups of society'. So the question is, 'how would the world be different if that breath smelled like Ascott instead of Richter?'

Annet Dekker argued that when prices become hyper-inflated, art becomes inaccessible and the art world becomes invisible except in news headlines, so if 'the tables were turned, it would likely not make a difference'. Cautioning that in the proposed scenario, 'net.art would have fallen victim to the capitalist bubble', Sandra Fauconnier asked, 'Is that something to strive for?' Packer argued that 'the (art)world would be a better place if neither work were worth much at all in terms of monetary value. Art is so overvalued as a commodity that it corrupts everything and everyone in its path'. Artist Lynn Hershman countered that 'art can never be overvalued'. Also responding to Packer, Kanary expressed concern about what Ascott's work would be about today if he had made a fortune early in his career. Regarding Ascott's renowned Ph.D. art research program, she asked, 'What would be the nature of the Planetary Collegium?' Several respondents noted the obvious fact

that a collector can carry the Richter home. It is, as Florian Kramer observed, 'an object that can be conveniently traded as a commodity and, on top of that, a unique object and an autograph'. 'What would they be carrying home with La Plissure?' asked Michael Hohl. These various comments led me to reflect on what I was driving at with my question and to articulate it more precisely.

I wrote that my aim is to place in tension two different sets of values: those of the art market and those of telematic art. To this end, my question proposes a scenario in which a work of art that does not satisfy traditional market conventions (e.g., as Florian Kramer notes, ease of exchange, signature, etc.) rises to the top of the heap in terms of exchange value. Referencing Julian Stallabrass's *Art Incorporated* (2004) and Ben Lewis's film *The Great Contemporary Art Bubble* (2009), Matthias Kampmann's post rightly pointed out that the art market 'guzzles' whatever it likes. Stallabrass would argue that any art world in which an artwork – be it an abstract painting or a telematic network – attains values in the tens of millions of dollars reifies neo-liberal ideology and its inherent commodity (and luxury) fetishism. With this in mind, Langill's suggestion that 'the money would be distributed like the artwork' should be taken seriously.

And why not? There are economies in which the creation and hording/multiplying of wealth for its own sake is not valued as highly as sharing, gifting, and ritual expending. Over half a century ago, Yves Klein's *Zones of Immaterial Pictorial Sensitivity* (1959) brilliantly challenged market and aesthetic conventions by juxtaposing capitalist models of exchange with the incalculable value of a paradoxical work of art. The 'authentic immaterial value' of the invisible work of art could be acquired only through an exchange of gold (half of which was thrown into the Seine by the artist), for which the collector attained a receipt of ownership, which had to be burned to achieve full immaterialisation.

Returning to ease of exchange, signature, and so on, these are not neutral qualities or formal characteristics. Rather, they embody deeply held ideological commitments, just as the basic conventions of Ascott's telematic art

embody deeply held ideological commitments. So what are the implications if these worlds collide and the market ends up valuing most highly (and putting its money where its mouth is) a work that challenges its traditional values? If, as Langill intimates, the market were to embrace Ascott's *La Plissure* and its ideology of distributed authorship, it would be logically consistent for art world actors to express those commitments by distributing the economic wealth generated by the sale of the work. Indeed, what could generate more cultural capital in a gift economy than making a gift of the appreciation in value of an artwork that was a harbinger of participatory culture?

But let's say the art market embraces Ascott, while retaining its capitalistic imperatives. Althusser might argue that any critical value of telematic art would be evacuated once it becomes interpellated by the hegemonic ideology of neo-liberalism that is reified by the market. At the same time, by gaining the sort of public recognition that comes with great market success, Ascott would command a much larger stage (to say nothing of financial resources and cultural/political power) from which to infect neo-liberalism with ideas that undermine its economic modus operandi.

Since this article is, in many ways, a collaborative effort, I shall entrust the final words to Kanary. With 'a head full of flu' she wrote a passionate, personal meditation that further teased out a moral conflict inherent in my thought experiment. Moreover, her comment manifests a remarkable selflessness that one might hope would characterise the art world, and society at large, if *La Plissure* were the most highly valued work of contemporary art.

> The paradox, I realise, is perhaps connected to the amounts mentioned – if Roy's work would be valued for its true social and spiritual nature, then never would such amounts be given in the first place (not that I begrudge Roy such wealth), but when there is so much suffering in the world, spiritual decency would not accept and condone such obscene differences. My fear is that the collector who bought Ascott instead of Richter would not value Ascott's art as such; most likely what would be valued is a

store-bought 'aura' of spirituality that they believed might 'rub off' on them.

For my art, I value… sharing more than anything – as it makes me feel the true value of insight that my person can give to the world. If I can just have sufficient finances to do what I need to do, in a way that gives more than it takes – that would be a system more befitting (in my imagination). Art, for me, at all times finds its value in how it lets us see, experience, feel, understand differently – it helps to keep things in motion.

Is the art world ready to abandon the idea of the unique or singular artwork?

2.2

WE'RE NOT HOBBYISTS OR DABBLERS ANYMORE

— SARAH COOK

see images on pages 122 – 127

Kyla flicked on the light in her studio, noticing the grime under her fingernails from re-potting her seedlings into the garden that morning. I wonder if there'll be hot water today or if the neighbour's renovations have interrupted the supply again, she thought, as she closed the door, crossed to the sink and reached for the scrubbing brush. She was expecting a visitor that afternoon and didn't want to look like she'd spent all morning scrabbling in the dirt. The visitor was not a curator but an art historian. Increasingly commonplace these days, these kinds of anecdotal-research, interview-led visits. Sighing at the thought of being recorded – again – without knowing exactly who for, she rubbed her cold hands dry, and flicked the switch on the kettle to make a cup of tea. What was different was that the art historian was bringing a 'Preservator' with him. Kyla had been named in an academic research grant aimed at documenting the tools used in current art practice. The proposal had seemed innocuous enough, she thought as she picked up her cup and settled into her armchair. The problem was with the research methodology – which she'd just found out about. It ignored the work's content and didn't address the question of art history, and how that related

to the potential repositories of the work such as private art collections or museums. Yet, it seemed to be the only kind of funding you could get these days. Private collectors – mostly bankers and tech-barons – had commissioned and scooped up most of the interesting new art, like her friend Lawrence, and his astonishing live-data sun visualisation zeppelin. Crassly expensive but sublime to travel in. And to think that MoMA was trying to collect an old 747… How retro! In any case, as this particular research grant's 'anticipated impact' stated, there was now a gap in the knowledge that needed addressing urgently – who used which tools, and, more importantly, which tools didn't they use, and why. She knew the subtext and that it had been funded because artists were 'people of concern' again. In this so-called 'big society' of personalised self-sufficiency, they were potentially useful, as their activities were valuable to market researchers from the corporate sector. Not in some romantic sense of artists being ahead of industry – those days were gone. But in the spirit of refining niche product development.

You had to take these visits in context, she reminded herself. You are the product of their speculative manufacturing, not your art, remember? Governments, at local and national levels, had given up on public sector support for museums, and in turn museums had excused themselves from supporting any new form of art – why compete with the community festivals and telecoms-funded extravaganzas? Focus on what you've got. Preferably the stuff by dead artists. Reproduce it endlessly. Art is accessible everywhere now anyway. Academics – even museum-affiliated ones in some cases – had turned to studying the creators of the works instead, and how they made what they made and what they might be interested in making if they had the products to enable its manifestation. As that was where the money was. Well, the small pots of it.

God, she was tired of the endless 'sector mapping' exercises she'd been subject to since she'd moved to the UK. She hoped this wasn't another one of those. She wondered if she was always included in these grant proposals because she has a centrally located studio and the social skills to sustain an informed conversation with an historian. The light flickered and she reached for the controls and switched the supply from live to her solar-powered reserve. Best not let the computer crash at this stage of the render.

What annoyed her most was not that these so-called art historical studies were actually just market research, but that she hadn't realised back then that she'd missed the chance to get her work collected and historicised – to focus attention on the ideas in the work rather than on her processes and where she got her kit. Still, if her work had been absorbed into a museum collection, there wasn't any guarantee that it wouldn't have been sold off

by now to the digital equivalent of the scrap metal dealers who melted down all those Henry Moore sculptures. In her case her work would have been sent to India to recycle the rare earth minerals in the hardware running the piece – and a 'simulacrum' repurposed for ongoing derivative display in its place. Clever of Joanna and Mike to do that part themselves before they sold their artwork in emulated identikit format. They only traded in simulacrums now. Or rather their dealer did. Kept their original work for themselves – self-archiving against some future where unique code accrued value again. As if that day might come. Who needed to be in a museum collection anyway? Historians didn't bother studying them much anymore, at least not since politicians decided they could rewrite art history too, and began changing what 'public' collections meant in the first place. Curators had lost their independent authority in this new landscape; museums had little choice but to be spectacular funhouses, halls of mirrors, endlessly duplicating in as many media as possible the stuff they already had. She looked at her limited edition *Meowbified Picasso Museum* self-portrait mousemat. Case in point. User-generated-content reprocessed by algorithm. Art exhibitions on demand, configured to your taste when you walked through the door, no separation between the show and the gift shop, or between original and reproduction. No, the researchers were still an artist's best hope of having their work properly considered. Let's hope this particular art historian was actually interested in the creative output and not just in creating market-useful statistics as part of his taxpayer-funded,government day job. Kyla threw the tea bag in the wormery, dribbled some milk from the glass bottle into the cup, and turned back to the screen.

It had started just after she moved to the UK when the then Prime Minister of Canada, Stephen Harper, had renamed the Museum of Civilisation as the Museum of Canadian History, and begun that history not with the creative cultural treasures and practices of the interlinked tribes of the Inuit, but with the heroic invading British, waging war on the colonies south of the 49th parallel. He always liked to start with a key personality when telling a story as it made him sound more important and well connected and he'd insisted the curators there do the same. He had also reduced the number of staff at the National Gallery by getting rid of the librarians and archivists, those who knew the actual meaning of the stuff in the storerooms and ensured its accessibility. But then his Orwellian measures had become personal. Her mother, back home in Canada and working as a contract genealogist at the National Archives, had resigned in a storm of controversy because she refused to sign a new 'duty of loyalty' agreement which prevented her from – in her own time and outside of working hours – participating in any conferences about archival practices. She was made

a pariah for speaking out, for arguing that talking with colleagues in other fields about best practices was not a high-risk activity, no matter what the code of conduct implied. Risk to whom exactly? That had been a difficult few weeks – endless hours on Facetime, day and night, helping her mother decide whether to find a new job there or move to the UK as well. Trouble was, now government bureaucrats the world over were looking to Canada – because of its strong economy – and realising that to keep the population from voting you out, you had to feed them a populist, easily digestible history, a national myth, verifiable online (and not disputable by access to the original documents which might tell another tale). From what she gathered from her mother it seemed like archives everywhere were changing their access protocols and priorities to tell new stories, the sanctioned ones. Kyla knew first-hand how these ideological changes had bled into the art world and changed the kind of art being made.

It was certainly digital all right – all image, easily manipulated. Not the kind of art she made really, though it might look like it on the surface. She worked very hard to make that surface multi-layered, to maintain narrative coherence but to be smartly programmed so you couldn't explore the hidden levels of the landscape without a particular kind of HCI-navigation, a kind of muscle-memory form of panning and clicking. That was probably why people were drawn to her work, it was nostalgically familiar in its responsiveness; its interaction was social, part of a larger physically sited event. She'd discovered that museums might show non-interactive high-res detailed images of the tar sands, but only if those images made them look like otherworldly sublime landscapes in the style of Ed Burtynsky rather than what they actually were – images of the industrial rape of the land and its resources by Chinese conglomerates that we produced with sponsored technology. Ahh, creative practice in line with national objectives. So unchallenging. So safe. You could still use bits of recognisable reality in your work. Just remember, they're not interested in the content, only its delivery.

She turned her attention from the screen on the table to her hand-held, and clicked around looking for shots of protestors she could rasterise into vague images of bodies in motion. It was getting harder to find those photos now that the events where they were taken were becoming so infrequent. Good thing she had that hard-drive dump of image files from John, the photojournalist she'd briefly dated. She thought back to the Occupy movement in New York, London and Berlin – which only lasted in New York because it was hit by a hurricane. And of the student strikers with their casseroles in Montreal, sweltering in the summer heat. Not just the protests but also the environment they took place in, that had been real. Unbelievable creativity and truly distributed authorship. It had felt like so

much more than a meme. She took another sip of her tea and glanced at the progress-bar on the file: five minutes left. Good, it would be finished before the art historian and the Preservator arrived. She felt a pang of nostalgia as she looked through the images. The more recent protest movements just hadn't taken hold in the same way, not since the technology to control the weather was so locally distributed and accurately targeted now: the intelligent weather algorithms combined with the unexpected Internet blackouts was continuing to stifle most of the networked initiatives she secretly followed online.

She couldn't help but smirk as she remembered the awkward debate between a guest-speaker and a student at the conference hosted by the 'Hikers/Artists' research group at the University of the Northeast when the student pointed out that Idle No More campaigners had walked many hundreds of kilometres in freezing winter conditions and they hadn't called it performance art. The speaker didn't get it, and no surprise really, given how misunderstood that historic event had become (the news had reported the Prime Minister greeting leased panda bears at the airport rather than the thousands gathered on Capitol Hill). Targeted weather control had become widespread soon after that, but the speaker, like most people, didn't know that because of that event First Nations communities had refused to use it when offered the chance (or even acknowledge its use against them) just as they had refused to participate in the federal economy by not signing up to the agreements their government had tried to impose on them.

Real networked practice had gone underground, that's for sure. And she didn't just mean her lower-floor skylight-lit studio, where paradoxically she could more freely upload her work to the Internet grid below the street rather than have to highly encrypt its content for upload to the surveilled grid above it. 'Upload down, download up', as the saying went. To her mind, the good work, the critical work, didn't garner the attention of the historians. Which reminded her, she had better hide the illegal routers before they arrived, and get out the dummy ones with the corporate logos on them – cheap pieces of sponsored crap, no good for really making work.

How short sighted these art historians had become: only researching and preserving the tools and the effects of their use on both the creator's and the audience's thirst for different products, and ignoring the meaningful exchanges that were made with them. To endlessly log anecdotal reports, interviews and recordings of round-table discussions in archives without archivists or librarians to transcribe, catalogue, cross-reference, or make them accessible. Everyone was so reliant on the Google search engine that research amounted to little more than personalised ranked responses, with users of these systems only ever seeing what they like. Still, you had

to be careful what you said in these interviews, lest they think you aren't using the proper tools, or paying the right fees and dues… or worse still, making work that wasn't explicitly designed to profit the product makers. How many more researchers was she going to have to meet? All of them out to map the sector she worked in. It was getting seriously creepy. At least artists could get something useful from the Preservators. Given that they weren't as concerned with rewriting history as they were about the use of the new products, you could ask them loads of technical questions about copies, documentation practices, and how to make the work stable – or 'more simulatable' in their parlance – and outlast these lousy global corporate governments.

Remember that rash of work with drones, such as Suzanne's project, in which she imagined different types of drones and their everyday use outside war zones? And Isabella's film of model drones dogfighting in the rotunda of the Library of Congress? But then in a true moment of life imitating art, the American news media reported a Republican senator's drone-debate filibuster: he'd missed the point a bit, even if he went on for thirteen hours. Something bigger had started. Joe had been out on his bike mapping Area 51 to see if it could be repurposed for sustainable energy generation, being followed, at his invitation, by a surveillance drone, as a kind of performance-to-camera. Then Helen went that extra step and extracted a drone design from a military-funded virtual world and constructed it in the real world and started a business hiring it out to the highest bidder. If it hadn't been for the technical malfunction at the event in Korea, when it went rogue autopilot, then none of these artists' works might have been noticed. Helen was the first of them to have her work investigated further, and was accused of using proprietary drawing software without permission from its corporate makers and moreover of not making a profit from its use as agreed in the contract of sale. Was that ever missing the point! Poor Peter had been obliged to speak on behalf of the prosecution at the trial. And to think his early work was so beautiful and complex, seemingly critical of the military-industrial complex. It was the first sign of how indebted he'd become to his funders, his work now the wallpaper on their office walls. Talk about 'duty of loyalty' as artist-in-residence. In the end, Helen lost her court case, and all her stuff, and dropped off the radar. The radar of the art scene at least. At least she'd fought it, thought Kyla, remembering her month of noodles because of her contribution to the campaign fund. Not so with dear young Aaron, gone too soon, the open access databases set up in his memory now privatised again.

Those early bits of digital art don't seem significant in their digitalness after all. It's never really been about the tools the artists used, or

wanted to use. Good work categorised as new media or digital always exceeded that categorisation in its intention or interaction. Oh yeah, there was also the case of that artist's border-crossing guidebook. When it fell into government hands, the question of where he'd got his database seemed to concern the authorities the most. They couldn't believe he'd built it himself. Not sure what happened to him… up a tree somewhere perhaps, where the weather is nice and there's a river to swim in. And we thought the nadir was when Richard and Cathryn, and Amanda and Gary were put on the global sex-offenders register for outsourcing the labour of making their art based on pornographic websites to Mechanical Turks. They weren't even offered the possibility of destroying the work to stay off the register. It was ridiculous if you thought about it – their works had become technically obsolete and irretrievable so quickly anyway. It wasn't as though they actually were sex-offenders whose stable unchanging works had to be removed from public collections and destroyed. Who would have remembered their works if it wasn't for these anecdotes about their ways of working?

The knock on the door interrupted her thoughts. Here we go…

POST-SCRIPT

We need artists with miners' hats, the helmets with probing lights mounted on them, to comb the clogged networks for signs of copious curiosity and playfulness. (Baseline inventiveness.) Where are those flaunting ignorance for a chance to celebrate what they don't know? Risky takers of chance. Lovely eccentrics. People who make our head hurt just being themselves. I think things have changed more than we think they have over the past fifty or sixty years. The kids are playing in seclusion with intelligent artifacts and far too many people are humanizing cats and watching dogs speaking in affected voices in the English language on their Apple telephones.

Tom Sherman'Subject: Curating the Network as Artwork', 25 February 2013
e-mail to CRUMB discussion list
new-media-curating@jiscmail.ac.uk.

ACKNOWLEDGMENTS

Thank you to those who read a draft of this, my first attempt at fiction-writing, and offered their expertise in dystopic future-casting, most particularly the expert Jeff Crouse, the wise Tom Sherman, the generous Beryl Graham, the interested Andy Slater, the keen Suzy O'Hara, and the connected Nora O'Murchu. Thank you also to the artists whose inspiring work has allowed me to think about possible futures for new media arts practices: Joseph DeLappe, Heath Bunting, Stephanie Rothenberg, Jon Winet, Rafael Lozano-Hemmer, Trevor Paglen, Addie Wagenknecht, Isabella Streffen, Thomson & Craighead, HeHe, Kelly Richardson, Marina Zurkow, and many others.

What responsibilities does an artist have after an artwork is sold?

2.3

MUSEUM REFRESH

An e-mail conversation over several days: Jill Sterrett, Layna White and Christiane Berndes

— ANNET DEKKER

see images on pages 128 – 134

The evening programme *Museums of the Future* was held at Plaza Futura during the 'Collecting and Presenting Born-Digital Art' conference. Several presenters probed the following questions: what happens if we move beyond marketing strategists' one-liners about museums of the future becoming more social, open, co-produced, personalised and augmented in addition to its physical presence? If this is inevitable, how will it affect the institute, the infrastructure of museums, and moreover the content that is produced? In addition to the screening of Neil Cummings' and Marysia Lewandowska's film *Museum Futures: Distributed* (2008),[1] Christiane Paul, Sarah Cook and Layna White presented their visions of the museum of the future. Continuing in the spirit of this evening and the concept of their working group, an e-mail conversation between Christiane Berndes, Jill Sterrett and Layna White that was led by Annet Dekker developed into a semi-fictional future.

1
Museum Futures: Distributed by Neil Cummings and Marysia Lewandowska was commissioned by Moderna Museet in Stockholm for their Jubilee in 2008. The film depicts a machinima record of the centenary interview with Moderna Museet's executive Ayan Lindquist in June 2058.

DAY ONE
Taking risks

AD **(Annet Dekker): How has the museum dealt with the 'tension' between an organisation that is in the service of the contemporary art scene, being fluid, ephemeral, collaborative, networked, situated in the public domain, using free software, and taking part in emergent p2p mesh cultures, and the museum's imperative to conserve for eternity?**

CB (Christiane Berndes): This tension appeared to be a fictional one. Since the collapse of the financial system and the development of an entirely new idea of ownership, the museum is not the only institution that takes care of conservation. Digital artworks are part of the public domain and shared within several networks. They contribute to the conservation, interpretation and use of the artworks. The museum has become a platform that coordinates and supports these activities, and supports the groups that want to take responsibility for this.

LW (Layna White): Recently I spent time again with *Agent Ruby*, Lynn Hershman Leeson's online project (created 1999–2002, *http://agentruby.sfmoma.org*). Ruby and I exchanged questions and answers while the work was presented on a public device in a museum space, with our dialogue projected in real time for all in the vicinity to see. With others waiting to have a word with Ruby, I thought about my own words and experience in this public situation, and I thought about how to end the exchange.

But where is the end with a work like *Agent Ruby*? What aspects of a work (for example, its existence, history, characteristics, workings…) are we hoping to carry forward into the middle distance, or even well into the future?

The shape of that 'what about a work' question is elastic in museums today. There's an openness to shaping what can, or should be, or is part of the work. With works like *Agent Ruby*, the outline of what we have and could carry into the future might be endless, given the potential open-endedness of exchanges, and possibilities such as capturing responses, experiences and understandings of the work over time.

JS (Jill Sterrett): Are museums monuments to past accomplishments or champions of the present day? Contemporary art museums grapple with this conceptual tension. Madeleine Grynsztejn described the museum as a soulful place, 'a space where we draw upon the raw materials of images, objects and ideas to think about the ways in which we can and do construct selves and negotiate ways of being in the world'.[2] Hans-Ulrich Obrist has observed that classical exhibition history emphasized order and stability where we now we find fluctuations and unpredictability. Relating to this state of conditionality acknowledges a kind of messiness to systems of human knowledge.

Annet asked specifically how museums have dealt with this tension and Layna brought up Lynn Hershman Leeson's, *Agent Ruby*. After this work was commissioned it was managed outside the confines of the collection for several years. Doing this, either by accident or on purpose, gave the piece a certain freedom that was a good thing and that might also point us in a promising direction. Not only did it weather technical failure and reboot, but the openness Layna refers to was allowed to take shape.

I like Christiane's reference to the financial system because I think it may be at the heart of the matter. Can we envision contemporary art 'start-ups' that pioneer new media and ways of looking at the world, and is there a way to defer the full preservation imperative until a later date? If so, what does the transition team look like?

2 Madeleine Grnynsztejn (2007) *Take Your Time: Olafur Eliasson*. San Francisco: SFMOMA, p. 13.

DAY TWO
Ownership, or acquiring a network of relationships

AD **This is a perfect shift to my next inquiry. Perhaps unsurprisingly, interactivity has turned into response, visitors into co-workers, and ownership into 'org nets'.[3] As you also hint at, the audience has shown itself to be a possible seedbed of radical discovery and thinking differently, which has changed the museum's key functions (presenting, collecting, preserving, documenting, and research). Could you perhaps elaborate a little on this change, and more importantly, relating to Jill's question, how it affected the museum's internal organisation?**

LW Latitude comes to mind when considering museum functions and the people involved with them. Latitude makes wide spaces for the people and activities that power functions like collecting, contextualised by the local scene or situation (such as place, scale, audience, programme, collection). Activities such as documentation, interpretation and experience, for example, flow from any quarter and can comingle or relate to any function.

Has this always been the way of museums? Closed/open and internal/external are too harshly drawn divisions to describe the nuances of how museums have and do operate. Museums have long been about relationships – with ideas, people, art, places, practices. What's changed is the pronounced latitude around which relationships are developed, valued, shared, and understood.

JS With a digital artwork, you don't worry as much about 'using it up' through too much display or many of the other environmental hazards that apply to a more traditional artwork. To keep a digital work of art you have to 'use it' and this supports the interactions, relationships and even radical discoveries that

3
Org nets are groupings of people who are unconventional safe-guards or caretakers who find each other in common purposes by building strong ties among dispersed people. For more information see for example: Geert Lovink and Ned Rossiter (2005) Dawn of the Organised Networks, *The Fibreculture Journal*. Issue 5. *http://five.fibreculturejournal.org/fcj-029-dawn-of-the-organised-networks/*.

allow us to understand and reflect on its content and context simultaneously. This art has initiated a profound rethinking of some of the museum's fundamental manoeuvres. Previously private activities like research and preservation are inextricably linked to the public act of display and if these borders between private and public activities have already been perforated then why not merge them further? Can we envision display spaces as laboratories for open-ended exploration, something akin to a classroom, an archive or a theatre (as Graham Larkin wondered in *Artforum* in 2008)?[4] There's a generosity of spirit in this mode of display that impacts every aspect of an organisation. Refreshing the organisational business model in response to this possibility may be where this change can be activated.

4
Graham Larkin (2008) Things Fall Apart. Graham Larkin on 'The Object in Transition'. *Artforum*. April 2008, pp. 153–55.

DAY THREE
Trust

AD **Before moving on to this hybridisation of public and private, I'd like to take a step back. Recently you (re)presented *Flight Case Archive* (2003–11) by Hannah Hurtzig and her Mobile Academy; as you explained, this work consists of various elements, some interactive, some stable objects, and some files that are in unstable online databases. The installation can be presented – and preserved – according to the intentions of the curator and conservator. I remember you said that you didn't contractually define the installation with the artist, a situation that was very interesting because it raises the notion of trust between the artist and the organisation. You also experienced a similar situation with Lynn Hershmann's work, which Layna just described as an openness of shaping, or the elasticity of a museum. I wonder if you could talk about this notion of trust, how has it worked in museal practise and for the artist? In what way has such an 'elastic' or unstable situation affected the work?**

LW

A visiting researcher recently described museums to me as being curious places, a passing reference to sixteenth- and seventeenth-century Cabinets of Curiosity. Being curious, though, might aptly describe an attribute of the type of trust intended here. How are trusted relationships between museums, artists, and their works shaped?

Trust can depend on a number of things, including time, awareness, and curiosity. This is curiosity along the lines of, for example, how a piece like *Agent Ruby* works, or worked, or might work. It's curiosity about how, where, when, and why people engage with *Agent Ruby*. This is about taking an inquisitive approach, and being less declarative. It's in keeping with Jill's earlier envisioning of display spaces as laboratories for open-ended exploration. In terms of how trust informs museum practice (if not the artist's practice), the curiosity and exploration that shapes trust is distributed and linked across people and time, not the least of which is because things change. Staff move in and out of positions. New and different information becomes available. Ideas develop.

JS

This business of objects is about people. For contemporary art museums, the artist is more than merely present and accounted for; the artist is at the centre of our purpose. A couple of years ago, I spoke about the importance of open-endedness in a large-scale installation from 1996 by Barry McGee: 325 drawings and found photographs in found frames. It has been installed four times since it was first created. Before hanging the drawings, Barry paints and even manipulates the walls giving each installation a new and distinct look. In the last seventeen years, it's fair to say that the greatest danger the museum faced was imposing some sort of false lockdown on the work, thwarting the open-endedness, obstructing creative possibilities that have transformed our story of the work and the artist. Open-endedness is an instinct that can be at odds with the distillations of meaning that come from scholarly research. At its heart, open-endedness relies on trusted relationships as the *modus operandi*. Great possibilities emerge when we see ourselves as bearing witness to an era of art production, engaging and re-engaging with the artist and our public over time.

DAY 4
From global to local

AD **We've already touched on some important points that affect the way artworks are produced, exhibited, preserved and distributed. To remain with the last point, from a museum's perspective, already in the 1990s the Guggenheim Foundation started rapidly expanding its collection, setting up 'Guggenheim clones' in other countries. The Tate Federation is another example and of course the corporate art fairs that run their own academies. It is the 'corporate cluster culture' that started to rule, in which collaboration and co-production go hand in hand. You probably recognise these scenarios, but what is your point of view from a local perspective? In what way has the global heritage structure affected the content of what you're doing on a local level?**

LW Who is included in a view of ourselves as contemporary art museums? It is anyone sharing the common purpose (i.e., the purpose noted by Jill). A person's involvement in different strands of museum activities will vary, depending on the situation. Be it direct or indirect, sustained or fleeting, involvement draws on a familiarity (and more so) with the work and practices of artists, and the work of museums. For example, many people share responsibility for the fiscal well being of a museum. While some of them will be more involved in multiple activities surrounding the display of a work, for instance, all those with fiscal responsibility benefit from familiarity with the work when making decisions or supporting actions around its display, today and in future.

Becoming and being familiar with works is an active process, unfolding across time, events, and people. In the past, the process of familiarity was bogged down way too easily, for way too many people, given the limitations or difficulties in sharing.

While not completely effortless (relationship-building remains, both in terms of people and information), museums now place a greater emphasis on open exchanges of and contributions to information and ideas.

JS

The Guggenheim's global expansion has reminded us that artworks gain experiential resonance from their context. A particular artwork on display in Bilbao may travel to Venice and end up conveying a completely different story.

The dotcom bubble in 2000 allowed us to reflect on business models in the technology sector that were solid and those that were not. When the Web was first introduced we thought it would democratise knowledge and that great hope remains elusive today. News organisations around the world have had to revisit their operations to constantly rebalance the relationship between sustainability and content.

For some, the global expansion of museums was seen as a creative and efficient business model, especially for a collection as great as the Guggenheim's; a collection that could and should be shared widely. We might wonder if the global expansions that have taken place in museums and in universities are ultimately sustainable. If resources are parlayed into satellite structures, does that come at the expense of investments in other valued areas requiring our resources: resources for enrichment, research or possibilities for personal discovery? For me, there's no judgment in asking these questions. In fact, I find the experimental and progressive impulse exhilarating. Critical and constant review, however, seems in order.

Right now, the great global is encouraging us all to look for and revere the local. John Falk (Oregon State University) has done some very interesting research that helps us see our museum visitors in a new light. He reminds us of the 'I' and the 'i' identity. While the demographic coordinates that define our capital 'I' identities remain a fundamental part of who each of us is, we also carry a series of lower-case identities – e.g., mother, sister, expert, explorer – with us at any given time. Our lower-case identities shift and morph depending on our context and our company.

LW

What makes expansiveness tick? The types of expansiveness noted here (diffusion, clustering) are about openness and movement, in many ways making space for the kinds of experimentation and exploration Jill has noted. Taking an expansive approach around how museums function could include spending time imagining what a highly collaborative, experimental environment looks like or is.

Thinking about expansiveness reminds me of an earlier conversation led by Christiane around Hannah Hurtzig's *Flight Case Archive*. One of the things about the work that has stayed with me (in my museum worker identity) is how the artist's ideas around staging the work can directly affect how, where, when, and why audiences seek out and engage with it. Can we ask the same of museums: How might a museum set the stage for expansiveness, beginning at the local level, with artists, museum workers, researchers, collectors, the audience/visitors? I'm interested here in how people and situations influence the setting of the stage, in creating physical and mental spaces for expansiveness of the kind described here.

What if instead of acquiring an artwork, you acquire a network of relationships?

Archive & Memory

3.1 THINKING FROM HISTORY TOWARDS AN EMPOWERING OF USE(R)S

An e-mail interview with Jussi Parikka

— ANNET DEKKER

« I see media archaeology as a historical and theoretical enterprise in which excavations of media function as a theoretical force. Media archaeology is decisively non-linear, and rigorously theoretical in its media historical interest in knowledge. »

3.2 IMAGINATIVE RATIONALISATION AND SPECULATIVE ARCHIVING

Thoughts about language in media art database archives

— NINA WENHART

« Challenges abound in the field of digital archiving and preservation. Traditional methods have led to a dead end when it comes to finding adequate solutions. »

3.3 ON RE-COLLECTION: NEW MEDIA, ART, AND SOCIAL MEDIA

An e-mail interview with Richard Rinehart

— ANNET DEKKER

« Social memory is the long-term memory of civilizations, and the preservation of cultural artefacts (artworks) is one way in which social memory is practiced. »

> **Museums are good at keeping track of factual information, but they struggle with contextual information.**

3

3.1

THINKING FROM HISTORY TOWARDS AN EMPOWERING OF USE(R)S

An e-mail interview with Jussi Parikka

— ANNET DEKKER

Although you're probably best known for your research and writing on media archaeology, I would like to talk to you about one specific issue that also plays an important role in media archaeology but seems at times to be taken for granted: the relevance of memory. But before we really get started, what is your interest in media archaeology?

Media archaeologists have mostly been interested in audio-visual cultures. This emphasis was less of a focus for me. Instead I started combining these ideas into an analysis of accidents, software and network culture, so as to introduce ideas about archaeology of (malicious) software: how did computer viruses contribute to our understanding of Internet culture, and could we invert the idea of such types of software from being nuisances to incidental features of networking. Software provided me with a way to think about the archival features of digital culture and focus on its anomalies as a way to investigate the flip sides that are actually more interesting than the usual narratives of digitality.

More generally, for me media archaeology has developed as a way to think about time and memory. In other words, it isn't only an empirical excavation of the losers and lost ideas of media history, or even about the medial conditions of existence of culture, but also an intensive investigation into how memory, time and heritage are being contextualised in technical media. So there definitely is the pull to see media archaeology as a set of theories and methods that investigate media history through its alternative roots, forgotten paths, neglected ideas, and machines. It challenges the supposed newness of digital culture. But what is important to note is that media archaeology provides new ideas to further understanding of media cultural temporality: circularity, recurrence, deep times, recursion, and so forth.

Furthermore, I see media archaeology as a historical and theoretical enterprise in which excavations of media function as a theoretical force. Media archaeology is decisively non-linear, and rigorously theoretical in its media historical interest in knowledge. In a Benjaminian vein, it abandons historicism if it implies the idea that the past is a given and is out there waiting for us to find it. Instead it believes in the radical assembling of history, and histories in the plural, but such that it is not merely a subset of cultural-historical writing. Media archaeology needs to insist on the material nature of its enterprise – that media are always articulated in material, also in non-narrative frameworks, be they technical media such as photography, or algorithmic media features such as databases and software networks – and that the work of assembling temporal mediations takes place in an increasingly varied and distributed network of institutions, practices and technological platforms. What media archaeology investigates are also the practical rewirings of time, as happens in artistic and creative practices, through digital and traditional archives, as well as DIY and circuit bending that recycle and remix obsolete technologies as much as they investigate aesthetic and political economic conditions of technical media. Media archaeology takes place in artistic labs, laboratories where hardware and software are hacked and dissected, and in places where one can experiment with concepts and ideas.

Nowadays media archaeology is often related to media ecological research. Sometimes people refer to Marshall McLuhan's research agenda, but I think recent developments are interesting too. Media archaeology is more of a historical way of describing and analysing the material entangled into our cultural concerns. Media ecology in the wake of Matthew Fuller has grown again to an interesting conceptualisation, which enables us to understand cultural formations as forces. Fuller's take is inspiring, as it evades the usual hermeneutic and interpretational emphasis of cultural analysis, and looks at the non-discursive. This is to me something that media archaeology – in some of its forms – can develop as well. But it's definitely the historical focus that distinguishes media archaeology from other related theories.

How will a media archaeological approach help to deal with digital information that is process based, distributed and rapidly becoming obsolete – think of the many net art projects or experiments, on Facebook, Twitter or Tumblr? Could you perhaps give an example of how such an approach would work?

Media archaeology has always been interested in futures, but through the past. The two questions are intertwined: any question of archivability is a question set in the future tense; what will be preserved, what are the protocols and guidelines of preservation that will document the current moment? But, there are various media archaeologies out there. At times the only thing they share in common is a name, and a certain ethos: to investigate the new through the old, and the past as a resource for the new. A lot of earlier media archaeology stemmed from film studies and visual culture analysis, although, for instance, Lev Manovich's *The Language of the New Media* (2001) could be said to have incorporated elements that were media archaeological. Anyway, focusing on software cultures was not overly present in many key theories, even if they did incorporate implicit ideas of how to approach preservation: any cultural heritage object or document can be seen as medial, and its preservation processes as mediatic.

A tighter relation with archives and issues of digital content does, however, have huge potential for the field. Wolfgang Ernst's writings[1] have been for me the most useful in elaborating this link to preservation analysis, as it theoretically insists on elements of time and memory in its take on technical media, and it is partly related to his own work in the Media Archaeological Fundus, in Berlin: not the work of preservation, but of operational old media.

1 See Wolfgang Ernst (2013) *Digital Memory and the Archive*, edited by Jussi Parikka. Minneapolis: University of Minnesota Press.

Ernst's approach forces us to really think about the nature of time and preservation in relation to technical media. In short, for Ernst technical media is really media only when operational. Heritage objects, for instance old media devices, are not necessarily operational, and often the idea of preservation runs counter to the principles of technical media. A media object or a piece of software preserved as source code are not necessarily media if they are not operational, but you cannot really preserve operationality that easily, right?

The Media Archaeological Fundus is a collection: it contains various objects, ranging from old submarine radios to old media technological measuring devices; from old GDR educational computers to radios, etc. But it is not only a collection, as their intro explains:

> The Media Archaeological Fundus (MAF) is a collection of various electromechanical and mechanical artefacts as they developed throughout time. Its aim is to provide a perspective that may inspire modern thinking about technology and media within its epistemological implications beyond bare historiography. Students, researchers and interested people are welcome to visit but also examine the so called Dead Media technologies.[2]

2 The Media Archaeological Fundus, *http://www.medienwissenschaft.hu-berlin.de/medientheorien/fundus/media-archaeological-fundus/*.

What strikes me is the emphasis on examination, an invitation to get close to the technological apparatus to investigate its epistemological and ontological implications. It is also a tinkering space in the sense that it does not have any consistent archival guideline that it follows, besides this

operationality. Official cultural heritage institutions are the ones that have to struggle with archival guidelines in the sense of restoring old computers: do you keep them in the found state, as original as possible, but without functionality, or try to restore them to operational status but then lose some of their 'historical authenticity'?

This issue becomes more complex with software: what is software, where do you find it, what is the relation of software to its execution, its hardware, its situation, etc.? Where do you start the preservation work? In this sense, the future of software is an open question, as it has a different meaning to permanence. Some media theorists such as Wendy Chun have been excellent in outlining this ephemerality that relates to the materiality of software.[3] In short, Chun is able to flag the constant conflation of storage and memory, which compounds the difficulty of actually investigating the specific machinic life of memory. Memory degenerates, and it does not automatically mean the same as storage. Paraphrasing Chun, digital technologies are introducing a paradoxical endurance of the ephemeral, a degeneration at the heart of supposed digital permanence. It relates to software, it relates to technical media, all of which have to be seen in terms of their processuality. I think that, in a way, Chun also accounts for the fact that a lot of the models for technical prosthetics of memory, like Vannevar Bush's Memex, are idealisations that often forget the more entropic side of memory machines: they are physical, they need maintenance, there is no eternal storage.

Interestingly, this is the other side to the fear that 'nothing will be lost, ever', which overshadows social media data-mining and storage practices as part of the big data capitalism of the Facebook era.

I think we should focus more closely on this notion of degeneration, as picked up by Paul Demarinis.[4] As he shows, memory in the technical age is about 'relay and delay'. Memory circulates; it's the magnetic flux that makes hard drives memory devices, and facilitates the movement of data across physical transmission channels. A disembodi-

3
Wendy Hui Kyong Chun (2011) *Programmed Visions. Software and Memory*. Cambridge, MA: The MIT Press.

4
Paul Demarinis (2011) Erased Dots and Rotten Dashes, or How to Wire Your Head for a Preservation. In *Media Archaeology: Approaches, Applications and Implications*, edited by Jussi Parikka. Berkeley, CA: University of California Press.

ment introduced by technical media is completely grounded in physical transactions, even if those might escape human senses. Hence, Demarinis' observation: perhaps memory is only a special case of delay, and in this context, computer memory has to start with the electromagnetic relay: 'a coil of wire, energized by an electric current, generates a magnetic field and pulls a bar of iron toward it.'[5]

5
Demarinis (2011:115).

In the article 'Zombie Media' that you wrote with Garnet Hertz and in your book *Insect Media* you refer a few times to an expanded idea of memory.[6] You state in the article that 'Media in its various layers embodies memory: not only human memory, but also the memory of things, of objects, of chemicals and of circuits'. Could you explain how memory functions in this wider context, and if it could be a useful strategy for organisations to consider when thinking about their archive?

6
Garnet Hertz and Jussi Parikka (2012) Zombie Media: Circuit Bending Media Archaeology into an Art Method. In *Leonardo*, vol. 45, no. 5, pp. 424–30. Jussi Parikka (2010) *Insect Media: An Archaeology of Animals and Technology*. Minneapolis: University of Minnesota.

We consider memory as an integral feature of individual human and social identity. Memory structures our being and our activities. But when it comes to time, the question of duration expands this human-centred perspective: memory is a duration that can also include non-human things. Non-humans have also durations, and often very different sets of durations. This is not only a realisation that non-human philosophy has invented, history consists of different durations – from short to long term – that relate to non-humans, such as geographical formations.[7]

7
Braudel, Fernand (1980) *On History*, translated by Sarah Matthews. London: Weidenfeld and Nicolson.

Hence it is interesting for museums to consider how to exhibit non-human modes of time and duration to be able to pitch this entanglement of times that are so disparate: the slowness of geology and ecological moments compared to human lived experience, even if they are completely intertwined.

We are involved with similar issues when it comes to technical media, and preserving them. What is the specific temporality of the machine – not just its relation to us – that we need to attend to? Ernst speaks about the 'Eigenzeit',

the specific temporality of the machine. This is something that institutions have to deal with if they want to understand technical media – analogue and digital. They should start cultivating their technical knowhow in relation to such questions of time, i.e., the time of the machines in the collection, and curatorial strategies and narratives that highlight this sort of non-human temporality.

In the same article you mention that digital media has become archaeological and as a result you opt for an approach involving reuse, remixing and sampling, in some way bringing back the ideals of Aby Warburg and the construction of his 'Bilderatlas Mnemosyne'. Could you give an example of a contemporary practice and explain what it would mean for organisations?

My thoughts on this are still a work-in-progress, and are inspired by some thinkers in the field of digital media such as Mark Amerika and others who know their remixes inside out. I think the ideas of distribution and archives, not in the sense of preservation but of reuse, are becoming more and more the *lingua franca* of memory in digital culture. We are forced to look at the question of whether preservation as preservation is even desirable, or if we should look at the active use, reuse, and remixing of archival resources as a better way to 'retain' cultural memory. This would mean a multiplication of archival objects and hence a different set of power relations in relation to heritage institutions: heritage institutions would no longer be the holders of unique objects but act more as relays in enabling active participation in their collections. This would empower users and mean a radical change for most institutions. Archiving and memory of software culture already occurs beyond their walls. A lot of amateur and small-scale preservation started way before institutions became involved.

I guess in terms of examples any sort of remix is as good as any other. The idea is that the whole responsibility of 'caring' for collections is translated into a question of use: how are collections used in productive practices, from amateur practices, parodies or just haphazard reuses of material from

YouTube to more professional takes like Eclectic Method mix-tapes, live coders' performance practices using whatever audiovisual material is at hand, and media artists such as DJ Spooky, who in some of his pieces has more consciously connected remixing to a reversioning of critical histories.

Remix as one form of digital aesthetics is what keeps the regenerative nature of digital media technologies as part of our social activity of production. Internet culture meme production is another way of understanding the workings and the reworkings of memory in the digital age.

Most museums still cling obsessively to material and physical perfection. But with more attention for digital archiving and preservation strategies, how will these be applied to non-digital objects? How do you think they could – or should – affect the role and function of restoration and memory in the museum?

Material objects aren't going anywhere: this is an important realisation emphasised by the digital. The persistence of the material, hardware and energetic aspect of digital media becomes a way to reintroduce materiality that is ephemeral. Non-digital objects will continue to be the focus of our archiving and exhibiting software cultures. This is because of the need for hardware to run things – despite the research into the emulation of software that keep it 'refreshed' in new contexts, we need to understand the interconnectedness of hardware. We should not forget that software runs on machines. Projects such as the Science Museum's high-profile restoration of the Babbage machine are important examples, but could we push this further?[8] Should we start to think of a more educational role for hardware as well, one that reaches out to the masses, the users, etc. The archives in software culture reach out beyond the interface towards the machine, and growing numbers of open projects such as Raspberry Pi are needed as a link between technology, education and the archive.[9]

There are interesting ways in which earlier ideas such as Andre Malraux's *Imaginary Museum* are being picked up

8
See *http://www.sciencemuseum.org.uk/objects/computing_and_data_processing/1862-89.aspx*.

9
The Raspberry Pi is a credit-card-sized single-board computer developed in the UK by the Raspberry Pi Foundation with the intention of promoting the teaching of basic computer science in schools. For more information see *http://www.raspberrypi.org/*.

again, for instance at the Transmediale Festival in Berlin in 2013. How do museums without borders work, or at least, help to redefine the functions of museums with walls? We are faced with questions of copies and the diminishing role of the original, but even more fundamentally, with the question of what makes the copy exist? Well, of course, the answer is: technologies of reproduction, nowadays closely coupled with transmission. The distance between storage and retrieval is diminishing. In the Internet age, the archive begins with torrents. In the words of Wolfgang Ernst, 'The sound of the archive is the ping signal of data transmission testing'.[10]

10
Ernst (2013:84).

In order for contemporary media culture to survive, Jon Ippolito and Richard Rinehart, argue for a redefinition of social memory. What is your take on this?

Questions of preservation should concern education, participation and learning about technical media cultures in an historical setting. Like Media Archaeological Fundus, can we use the idea of collections in more educational ways to understand the development of technical media culture and how the fleeting materiality of programmable culture is changing our ideas of tangibility?

This is also a social question: memory works through the social and is more like transmission than storage. That's how memory is refreshed and kept alive on a social level too. But such events involve a range of non-humans as well, which is also one of the lessons of media archaeology: the social starts before humans get involved!

In a way, practices – or one could say cultural techniques – of memory are actually what create the social. Perhaps the social doesn't even exist without the various ways in which memory is sustained, articulated, archived, controlled, passed on, distributed, received, and remixed. Memory institutions are actually not archivists of memory, but creators of it: they create the futures in which memory is perceived as memory. Museums do this, archives do this. Principles of collection guard the limits of future memory.

Archaeology is about the arché: the command. In the age of computers, this is concretely linked to the machinic constitution of memory.[11]

11
Ernst (2013:45).

Can we move away from classification to telling narratives?

3.2

IMAGINATIVE RATIONALISATION AND SPECULATIVE ARCHIVING

Thoughts about language in media art database archives

— NINA WENHART

In contemporary discourse, speculation is generally referred to in a negative context: to risky business and hazardous transactions in economics, and to statements that cannot be proven in everyday language. In philosophy it is a way of generating knowledge when traditional methods reach their limits; and in its original sense it means 'to observe', the Latin interpretation derived from the Greek word for theory. This notion of the term is quite the opposite of its current predominant use.

The one I prefer comes from my grandmother. She was Bohemian, geographically – not in her lifestyle. She was a farmer and a very practical person. Instead of 'I have to think about something', she would say 'I need to speculate about it'. It was combined with gazing at the ceiling as though she could see and compare different scenarios in her mind that she could zoom in and out of, rewind and fast-forward, examine, change and rearrange in every detail. By imagining and envisioning future options, she could try out a train of thought and evaluate its effects. It was an iterative approach of arriving at a certain kind of experience and security regarding on which option to base her next actions. A combination of rationalisation and creative thinking, comparable to what we now call action research.

Alfred North Whitehead states, 'the speculative reason is in its essence untrammelled by method. Its function is to pierce into the general reasons beyond limited reasons, to understand all methods as coordinated in a nature of things only to be grasped by transcending all method'.[1] Whitehead,

1
Alfred North Whitehead (1929)
The Function of Reason.
Boston: Beacon Press, p. 65.

of course, wasn't referring to digital art, but systems and categories in general. However, as many of the issues relating to digital art database archives arise from this complex, his ideas can be mapped onto our area of interest. Challenges abound in the field of digital archiving and preservation. Traditional methods have led to a dead end when it comes to finding adequate solutions. I therefore suggest speculative archiving as a way of creative thinking that is based on our vast knowledge and experience of failure. Speculation is as risky an approach as anything to do with archiving digital art. The difference is that it conceptually includes the possibility/likelihood of failure. Leaving behind the secure foundations of traditional, non-digital strategies that are inadequate for digital art, it is an attempt to develop archival strategies, concepts, and experiments that come from within the realm of digital culture. It also means that core archival assumptions, definitions and practices need to be rethought. As Whitehead described in the above quote, imaginative or speculative thinking needs to be undogmatic, and not restricted by categories in advance; it needs to be curious and necessarily open-minded. But it also requires a stable foundation to start from. I will take this as a starting point in this essay. One aspect of this process is to lay open the context-dependence and historicity of database archives by deconstructing their descriptive meta data. Represented as unambiguous facts they seem to exist somewhere beyond time and place.

Let's time-travel a little to somewhere between the end of the 1990s and the mid-2000s – the high time of database archives for digital art. An important component of archives established during this period are their descriptive meta data – data about data that is not generated automatically but consists of interpretations (by one person or a group of experts or sometimes even 'common sense'). It is important to note the difference between an interpretation among equally adequate ones and the reduction of interpretations to a single, truth-indicating one.

In creating their descriptive meta data, the five database archives in my comparison used different approaches: a standard terminology such as the Getty Art & Architecture Thesaurus, their own vocabulary created from scratch, or

a terminology that included participatory practices. In any aspect of naming and ordering by names, the groundwork for what forms how and what we know – and what we don't – is laid out. The givers of names create worlds of knowledge, determine what is in them, and how everything is related. Therein lies massive power, even more so when naming is connected to structuring. Database archives do not simply name. They create systems of public knowledge. By exclusion and structuring, they assert and incorporate power. Their interpretations undergo a qualitative shift: in the technological environment of the database, interpretation becomes hard fact that appears to be discovered, natural = truth rather than a context-dependent cultural construct. The difference is that the first implies nature's laws and essences, whereas the second shows choice, culture, authorship, one particular view among many. It is a hegemonic power play that is conducted with words. Such an approach has been attacked by deconstructionists for decades and is reinstated in archival systems that neither technologically nor theoretically have to be based on unambiguous hierarchies. This combination results in a closure of the system and has often proven to be an obstacle to growth and necessary change – any newly added project will challenge and sooner or later contradict the system's unambiguity. In a still emerging field such as digital art, this poses a significant problem to sustainability and thus to one of the core tasks of an archive. These database archives' fate is that of all closed systems: They develop towards a state of maximum entropy and 'suffer from inadequacy and incoherence'.[2] Closed structure and growing content mismatch. Aloha the second law of thermodynamics.

I would like to – very briefly – summarise the outcomes of what was an in-depth analysis of the five database archives.[3] My research investigated how the descriptive meta data were conceived, how they were structured, and what they included and excluded. Therefore it gravitated around questions of a speculative base for alternative approaches. For my analysis I chose the database archives of V2_, the Daniel Langlois Foundation, the Rhizome ArtBase, the Database of Virtual Art, and netzspannung.org. I collected the research data between 2006 and 2010.

2
Alfred North Whitehead (1985) *Process and Reality*. New York: The Free Press, p. 6.

3
For more information see Nina Wenhart (2010) *The Grammar of New Media. Descriptive Meta Data in Database Archives for Media Art.* MA Thesis. Danube University Krems. An extract of the theoretical part can be found at *http://p-art-icles.blogspot.co.at/2011/01/w0rdm4g1x-or-how-to-put-spell-on-media.html*.

Since this research was undertaken, many of these archives have been discontinued or changed significantly.

The first problem encountered was that most of the archives failed to articulate how their vocabulary was created. The main exceptions here are V2_ (and via their deliverables it was also possible to obtain some information about the creation of the Langlois Foundation's vocabulary[4]) and Rhizome ArtBase. The second challenge was to access the full list of terms. To give an example: In the case of netzspannung.org, you can access their vocabulary with the 'Archive Browser' tool.[5] This flat list of 1700 terms does not tell you which ones are created by netzspannung and which ones by its users. Nor does it provide insight into the internal structure of neztspannung's terms. The only way to find out was to submit a project to their archive. Here in the project entry mask is the only chance to see the netzspannung-terms, a 120-word vocabulary split into three categories: technique, format, topic (of the 40 terms in the technique category, 11 are different versions of 'tracking'). The rest of the 1700 words were created by users, not all of which make sense (such as: Aaa, sdafsda, sxjhk hfjk asfjkl). The netzspannung archive applies a mix of own and user-generated terms, of flat list and slightly structured terminology. The thesaurus of the Database of Virtual Art could be easily accessed by expanding all of its categories at once; this way the vocabulary and its structure of up to four subcategories became visible. Rhizome took a very interesting approach. Their vocabulary is flat and dynamic and at the time of the research consisted of one set of terms provided by the editors (most stable), another created by the artists who submitted projects (highly dynamic) and a third that was coined 'Active Terms', a pool of the hundred most used terms over a period of time. As with V2_, the Daniel Langlois Foundation's vocabulary consists of a flat list of terms, based on Getty's Art & Architecture Thesaurus. V2_ chose to also incorporate the Art and Architecture Thesaurus' structure, which included as many as nine subcategories.

To summarise, my analysis found that each database archive used different structural approaches: flat lists, hierarchical taxonomies, and mixed approaches.

4
See V2_ (2003) *Deliverable 1.3. Description models for unstable media art.* http://v2.nl/files/2003/publishing/articles/1_3_metadata.pdf.

5
http://netzspannung.org/archive/browser/index.xsp?tab=keywords.

As the scope and content of the vocabulary of these archives varied greatly, one of the buzzwords at that time was 'interoperability', technologically as well as in 'terms of terms'. In relation to terminologies the 'lack of a standard vocabulary' was considered a main obstacle to establishing connections between archives: Everyone used different labels for similar things, sometimes for the same artworks.[6] The hope was that interoperability between the archives would be enhanced through a merging and solidification of terms. But is it really desirable to have a standard vocabulary and flatten possible interpretations by selecting a single preferred one? My research showed that only ten terms were shared by all databases. These included Artificial Life, Surveillance and Virtual Reality. Many were quite unspecific or very general (Animation, Performance, Television, Collaboration); others reflected more on digital archiving itself (Archive, Database, History). At the other end of the spectrum, terms that were specific to one database archive only provided insight into the focus of that individual archive. I found these terms much more interesting than the shared ones. Moreover, juxtaposing the different attributes each archive contributed to a richer understanding of an artwork. These non-shared terms offered the opportunity to identify certain interpretations as, for example, the Langlois Foundation's or Rhizome's. This shifted the anonymous, truth-indicating notion of a single archive's terminology back into perspective as being one interpretation of several other equally adequate ones. Such a perspective was missing at the level of an individual database's specific terminology; this type of insight would also have been thwarted if a uniforming standard terminology had been applied. On the speculative meta level I created, a multitude of relations and comparisons could be drawn and thus a kind of interoperability was achieved that was simultaneously based on overlaps as well as differences.

I'd like to return this comparative discourse to singular database archive categories. Categories are a way of gaining an overview of a system. Mapping the territory of an archive in such a way is achieved by reducing complexity. This provides a benefit on the macro level, but has the opposite effect on the micro level of individual projects

6 V2_ (2003) *Deliverable 1.2. Documentation and capturing methods for unstable media arts*, p. 9. *http://v2.nl/files/2003/publishing/articles/1_2_capturing.pdf/view?searchterm=deliverable.*

where the same strategy deprives information. The question is how both goals – providing overview as well as detailed information – can be combined within the same structure. Thinking in terms of essential qualities simplifies thinking. A prerequisite of a system that believes in and is based on hierarchically structured categories is that it presumes that all essential qualities are already known in advance and that everything in the (digital art) world can be sorted into them. Categorically closing a system's structure therefore assumes that no further essential qualities will ever be discovered. The future is suspended in such concepts. A little thought experiment: If these digital art database archives had existed since 1985, what categories would they have included? And how would they have dealt with net art, how would it have been possible to add something so different to the system later on?

The exclusion principle found in database archives is twofold. Semantically, it excludes interpretations (i.e., disambiguation and chaos) to create order. As a result, it 'de-riches' knowledge and asserts power. Structurally, it prescribes a very limited number of possible relations and one place for one thing only. 'The categorization scheme is a response to physical constraints on storage, and to people's inability to keep the location of more than a few hundred things in their mind at once', writes Clay Shirky, and he continues that 'If there is no shelf, then even imagining that there is one right way to organize things is an error'.[7] A categorial system implies truth, which is qualitatively very different from interpretation. These internal contradictions meet external ones, too: In a database archive, knowledge follows the creators' logic. But when you as a user search for something, you probably don't go to these archives first. You use a search engine. And most likely what you type in won't match with the database archive's expert terminology. In this sense, your search term is already a simple, unsystematic type of descriptive meta data. It might not be a term an expert would choose, but it is an aid to finding, to the initial shaping of your thought. Your simple search term and the experts' communicate via the artwork. When I became interested in digital art, I wanted to find information about a work where 'a bald man on a bicycle was

7
Clay Shirky (2005) Ontology is Overrated: Categories, Links, and Tags. *http://www.shirky.com/writings/ontology_overrated.html.*

riding through a virtual environment made out of letters'. And there it was among the search results, Jeffrey Shaw's *The Legible City* (1989).

In the end, all naming means exclusion of contingency and assertion of power. As Donna Haraway wrote: 'Linnaeus may have known himself as the eye of God, the second Adam who built science, trustworthy knowledge, by announcing at last the correct names of things. And even in our time (…) scientific debate is a contest for the language to announce what will count as public knowledge'.[8] What at some time might be the 'new paradigm' of contemporary science is still not absolute. Naming and public knowledge through naming is always historical and context-dependent. There is no such thing as the 'correct name'.

Categorial schemes install principles before they discover fact. 'The aim at generalization is sound, but the estimate of success is exaggerated', and results in, 'misplaced correctness. (…) There are aspects of actualities that are simply ignored so long as we restrict thought to the categories'.[9] It is not the initial clarity of these first principles that should be sought, as Whitehead suggests; on the contrary, they should emerge as the result of such an effort, or co-create each other. The categories function as fixed rules. Such a structure is inadequate for a world that is still developing, as it will lead to incoherent results and to the collapse of the closed system. Reaching a final accuracy through language is an ideal. With his concepts of Family Resemblance and Language Games, Ludwig Wittgenstein paid tribute to these realities and developed a model of relating and ordering content that is not based on essentials and where rules are made up and changed in the process, 'as we go along. (…) And is there not also the case where we play and make up the rules as we go along? And there is even one where we alter them as we go along'.[10]

'Rationalism is an adventure in the clarification of thought, progressive and never final'.[11] For areas where knowledge is generated out of language, speculation offers a way of working with approximations, of showing that knowledge is always context-dependent, an open-ended dynamic process. According to Whitehead such imaginative rationalisation combines a rational and an empirical side,

8
Donna Haraway (1991) *Simians, Cyborgs and Women. The Reinvention of Nature.* New York: Routledge, p. 81.

9
Whitehead (1985:7).

10
Ludwig Wittgenstein (2001) *Philosophical Investigations.* Malden: Blackwell Publishing, p. 33, §83.

11
Whitehead (1985:9).

12
Ibid, p. 3.

coherence and logics with adequacy and applicability.[12] Its universality depends on its ability to communicate. Any stability reached is temporal and a source for further questioning that lays out new paths for investigation. Instead of only seeing change and openness as obstacles to stability, sustainable systems should be conceived as ongoing processes. As digital archiving is still a very young discipline and its methods and strategies have not consolidated yet, we have the unique historical advantage that everything is still in transition, that we can question any presumed (pre-digital) stability and rethink our knowledge-bases from scratch. Why not enjoy this adventure a little more instead of just dreading it?

«

How will the ‘transiency’ of software affect our cultural memory?

»

3.3

ON RE-COLLECTION: NEW MEDIA, ART, AND SOCIAL MEDIA

An e-mail interview with Richard Rinehart

— ANNET DEKKER

One of the chapters in your book is titled 'Open Museum', referring to André Malraux's *Musée imaginaire* (Museum without Walls) from 1947. Malraux discussed the ways in which mechanical reproduction, in particular photography, was changing our understanding of images and visual culture in general. He demonstrated how the unprecedented availability of reproductions was turning the past into an archive, and he challenged observers to draw connections between visual traditions and motifs that had until then been considered unrelated. You use this example to argue for a position for an Open Museum. Could you explain what this idea involves and what the main risks and rewards would be for museums and artists?

The idea of the Open Museum certainly draws on Malraux's *Museum without Walls*, as well as on a few other precedents. For instance, it also draws on a museum ethos that was first widely articulated in the nineteenth century and is now so fundamental to the modern museum that it usually goes without saying: that of the museum as a public resource, operated for the benefit of a broadly defined social constituency that stretches across demographics and generations.

To this you add Malraux's observations about photographic media facilitating a kind of 'opening up' of images to cultural re-mix. And to that you add contemporary open-source movements, facilitated by digital media that not only enable – but prefer – multiplication, distribution, and recombination. Museums have already tapped into this Zeitgeist with blogs, visitor commentary, and putting their collection catalogue online (another value-shift that goes unsung; how many museums had card catalogues of their collection available to the public before the Web came along?) the Open Museum is not a radical idea; it's a logical progression from pre-existing conditions.

The main challenge of the Open Museum approach to broadly sharing digital collections and cultural heritage would seem to be economic (if we 'give away' art, how do artists make a living, etc.), but this is where museums are well placed. Museums are already engines for transforming private wealth into public good, and the Open Museum merely extends to collections what museums already do with their websites, participatory education, and public exhibitions. So, the actual challenge is one of values. Museums, their donors, and the public they serve have the opportunity to re-define stewardship, patrimony, and access for the twenty-first century.

Another important theme in the book is the focus on variability. You describe how variability is built into media artworks; therefore, any strategy concerned with preservation should follow a similar trajectory. Could you name an example of how such a process would work? And in what way would it affect the structure of the museum as it is now?

That's a topic for a whole book! Actually, Jon and I advocate for treating each artwork on its own, recognising the specific preservation needs of each piece. Rather than a blanket solution, we propose a collective approach that could result in different solutions for different works. The collective approach simply entails making explicit the parameters for preserving and manifesting each artwork – interviewing

the artist, collaborators, even viewers – about the work and inscribing the resulting recipe into the official 'transcript' of the work. Such a practice will certainly affect the museum, but not necessarily in a revolutionary manner. It simply means that where museums once had the luxury of relying on physics to maintain the integrity of a fixed physical artwork, minimising or at least disguising their curatorial interventions; museums now need to make explicit what has been implicit – how and how much they change an artwork over time.

You've argued for acknowledging variability as an inherent characteristic in artworks. Elsewhere in this book Jussi Parikka's suggests an approach that is based on reuse, remixing and resampling. This seems to take variability in another direction, how far would you take the notion of variability? In other words, how far can an artwork change before it becomes something else?

Preservation (including traditional approaches) balances integrity against variability. Some aspects of a work may need to change for the work to survive; paintings are lifted out of frames and onto new backings; films are copied onto new film stock (and then digitised); and HTML for Internet art is updated online. But change too much and the work becomes something else, sometimes even a new work. Beethoven's *Fifth Symphony* becomes *A Fifth of Beethoven* the disco re-mix and Da Vinci's *Mona Lisa* becomes Duchamp's *L.H.O.O.Q.* Preservation is well-served by a recipe (as mentioned above) that authoritatively guides the necessary changes to a work and helps navigate the border between preservation and remix. Both preservation and remix may be desired social outcomes for an artwork, and that border is different for every work.

Although the use of open standards is always emphasised in any discussion about future preservation strategies, in practice open source practices are not always easy to handle. On the one hand there is of course the endless discussion about which license to use, or how to use a license. On the other hand some

practices show that these open works are at the same time very closed; few people are able to (re)work and understand the sensibilities of their original coding. For some artists this is one of the cores of their work. An emphasis on variability and emulation could overlook these sensibilities; would that be a matter of accepting a loss in favour of prolonging a work's life? Or could it be that some works are not meant to live forever, either as originals or as emulations, and other strategies, for example, documentation, need to be considered? Could you envisage such a practise and what would it mean for the artwork and for the economy of the art market?

There are several questions packed in here. For instance, and perhaps ironically, remixes that use original code allow the remix artist to engage with the original work on a deeper material level rather than the appropriation that is more widespread with artworks that cannot be physically re-mixed (think *L.H.O.O.Q.* again.) Remix can allow access to the 'material subconscious' of the work – all the accidental, nuanced, and previously hidden decisions of the original artist – whereas appropriation only allows access to the surface, it's cultural context and associations. Again, variability, perhaps ironically, may sometimes allow more of a work to survive.

To address your other questions: Even a Variable Media approach would usually favour preserving the form and material of the original where possible; emulation at least runs the original software; even if in a different environment. But what happens when using the 'original' hardware, software, and contexts aren't possible? What happens after the last Mac Mini dies one hundred years from now? And this will happen much quicker and more frequently than with traditional media art. There is no prescriptive answer from a Variable Media approach other than to document any guidelines (especially the artist's intent) as early as possible in anticipation of this event. Those guidelines will be different for each work. In some cases, the artist may have decided that once an historically-specific model of computer hardware is no longer operational, their work then enters the

realm of pure documentation. A different artist will allow future conservators to migrate their code endlessly as long as parameters X and Y are preserved in each manifestation. A third artist might allow his or her work to birth successive generations of derivatives and remixes because their real project is to interrogate these very boundaries.

In the book you also propose reinventing the notion, or canon, of social memory. How do you think social memory will help museums, and individual artists, to better safeguard their artworks? In other words, what are the stakes involved for a future preservation that is based on social memory?

Social memory is the long-term memory of civilizations, and the preservation of cultural artefacts (artworks) is one way in which social memory is practiced. Traditional approaches to art preservation serve social memory, but, as Jon and I argue in our upcoming book *Re-collection: New Media, Art, and Social Memory*, these traditional approaches need to be updated (not just adapted) if they are going to work for new media art. Moreover, these necessary updates are not purely technical or logistical; they occasion our re-thinking of how art preservation serves social memory in the larger sense.

One of the arguments you must have heard a lot is that memory is unreliable. It could lead to a mystification of a work or past experience, or important aspects are (purposely) forgotten or changed. What is your take on this?

Yes, Jon and I have heard the critique that the Variable Media approach leads to artworks becoming purely conceptual entities whose future manifestations become subject to the arbitrary whims of future curators. However, we argue a) that this is already happening with regard to new media art because preserving the 'original' form at all levels is a delusion, and b) recognising the inherent variability in media art will allow us to better control the fluidity (or 'mystification) of artworks. Galleries and museums already

exhibit media art in media and formats other than those in which they were originally created, but they often do so without any explicit parameters that are part of the meta-data, part of the historic record of the work, and without acknowledging the transmigration in the presentation of the work. Exhibitions show films on DVD and preservation projects migrate CD-ROM-based artworks to software running on hard drives. These are necessary moves, but they're interventions and interpretations too. The Variable Media approach does not argue for *more* variability in preserving each artwork; it argues for *more explicit* variability that results in more variability where appropriate and less where restricted.[1]

You emphasise the acknowledgement of amateur and non-institutional practices. This could also be an interesting approach for safeguarding contextual information. I can imagine there is much to learn from a 'bottom-up' strategy. Nevertheless, my experience is that some of these networks are formed around very stringent frameworks, sometimes being stricter than museums in their approach and rules. What were the main advantages that you noticed and how do you think a museum could implement these?

Social memory has long been practiced from both top-down (museums, governments) and bottom-up (folk and pop cultures) perspectives. As mentioned earlier, new media presents the impetus (and the tools) for reconsidering how we practice social media such that we might now consider new ways of integrating top and bottom strategies. Online communities (game-specific communities come to mind) offer one model, but not the only one. Sometimes the solution is simple. In one of the first online archive projects, the Bancroft Library at UC Berkeley, digitised and placed online hundreds of historic photographs from their collection of California history. They asked viewers to provide any knowledge they had of the photo or its subjects and allowed viewers to comment online. The institution gained invaluable knowledge related to their archives that would have previously been cost-prohibitive to gather.

1

After reading this interview, Jon Ippolito added: 'Isn't it interesting how people seem to think relying on memory of the actual use of an object is mystifying it? Somehow we think archaeologists who dig an artefact out of the ground and try to figure out what it was used for without any context are being objective and scientific. Yet what is lost in that detachment from context is precisely the social memory of that object. Social memory, passed down orally or re-performed or re-created from version to version, may change over time. But to claim that a curator knows better than a Maori oarsman the meaning of a dugout canoe is preposterous.'

94

cd-rom
cabinet
(⊙)

CD-ROM Cabinet

CD-ROM COLLECTION

Mediamatic

THE CD-ROM CABINET

— SANDRA FAUCONNIER

« They are early multimedia experiments in which artists freely explored all manner of interaction and aesthetics that would only become mainstream decades later. »

IMAGES

Related to texts:

1.2
Light
Heavy
Weight
Curating

2.2
We’re not hobbyists or dabblers anymore

2.3
Museum
Refresh

> **If an artist creates an artwork and the next day it becomes a filter in Photoshop, then does that obliterate the art?**

«

Documentation is proof of a work's evolution.

»

CD-ROM COLLECTION

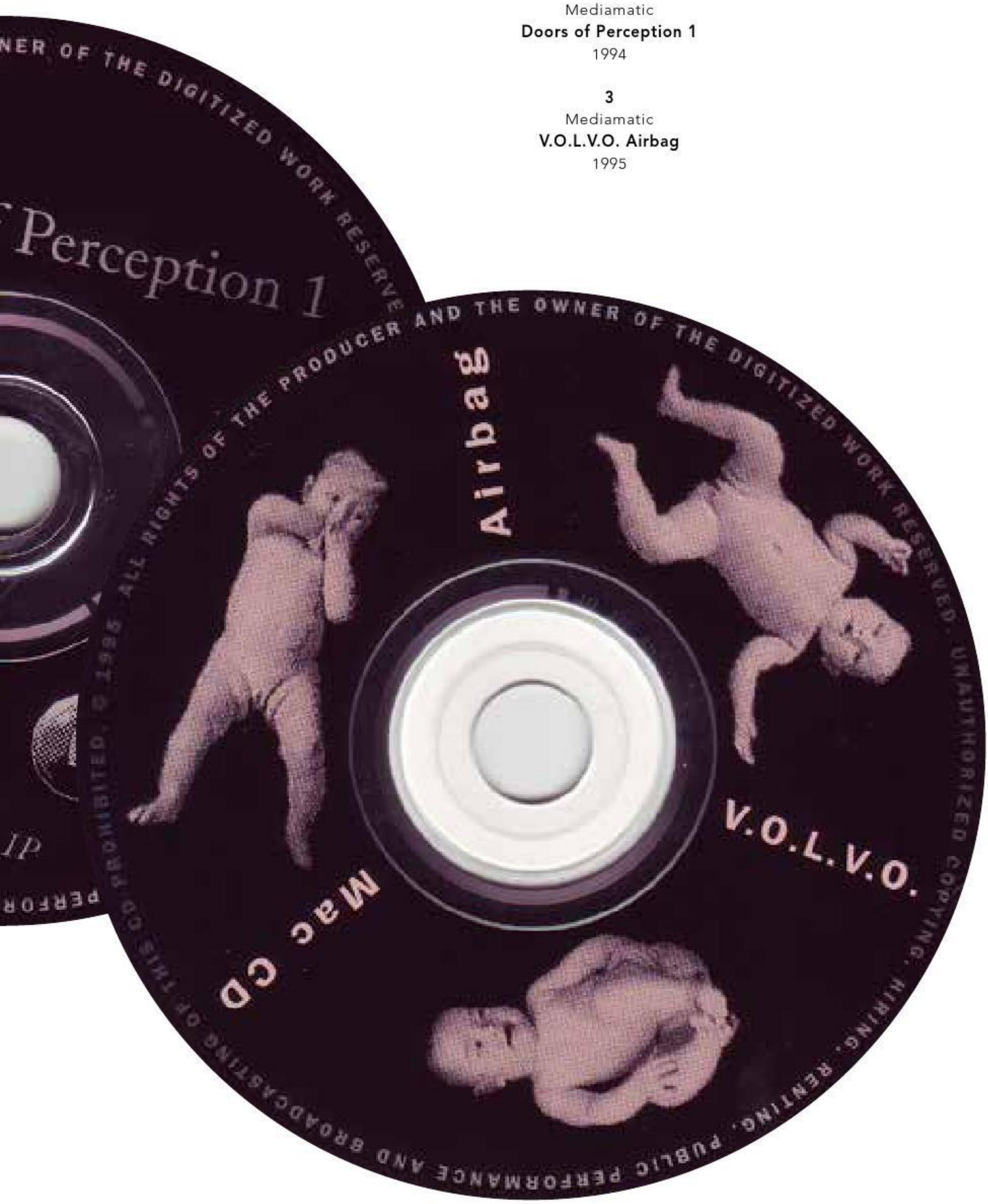
Mediamatic


MIXED MODE
BLIND VOL 3 FINAL (DEF!*)
BlindRom™ 0.9
THE PROTOTYPE
1. BlindRom v.0.9 121 Mb
REQUIREMENTS
Software : Quicktime
3. Brain 5.1 (Total Hoverty) 15:09
3. Brain 5.1 (Fix) 11:16
4. Beat Slam 3:35
D THE OW
s of
stitute
DoPRom
produced by
Mediamatic
MANCE AND BROADCASTING OF

1
Gerald van der Kaap
BlindRom(tm) 0.9
1994

2
Mediamatic
Doors of Perception 1
1994

3
Mediamatic
V.O.L.V.O. Airbag
1995




MACINTOSH CDROM
© 1996 ALL RIGHTS OF THE PRODUCER A
IDEA-ON>!
Hamm
1928

4
Troy Innocent
Database of Experience
1996

5
Mari Soppela
Family Files
1998

6
JODI
OSS/**
1998

OSS/••••

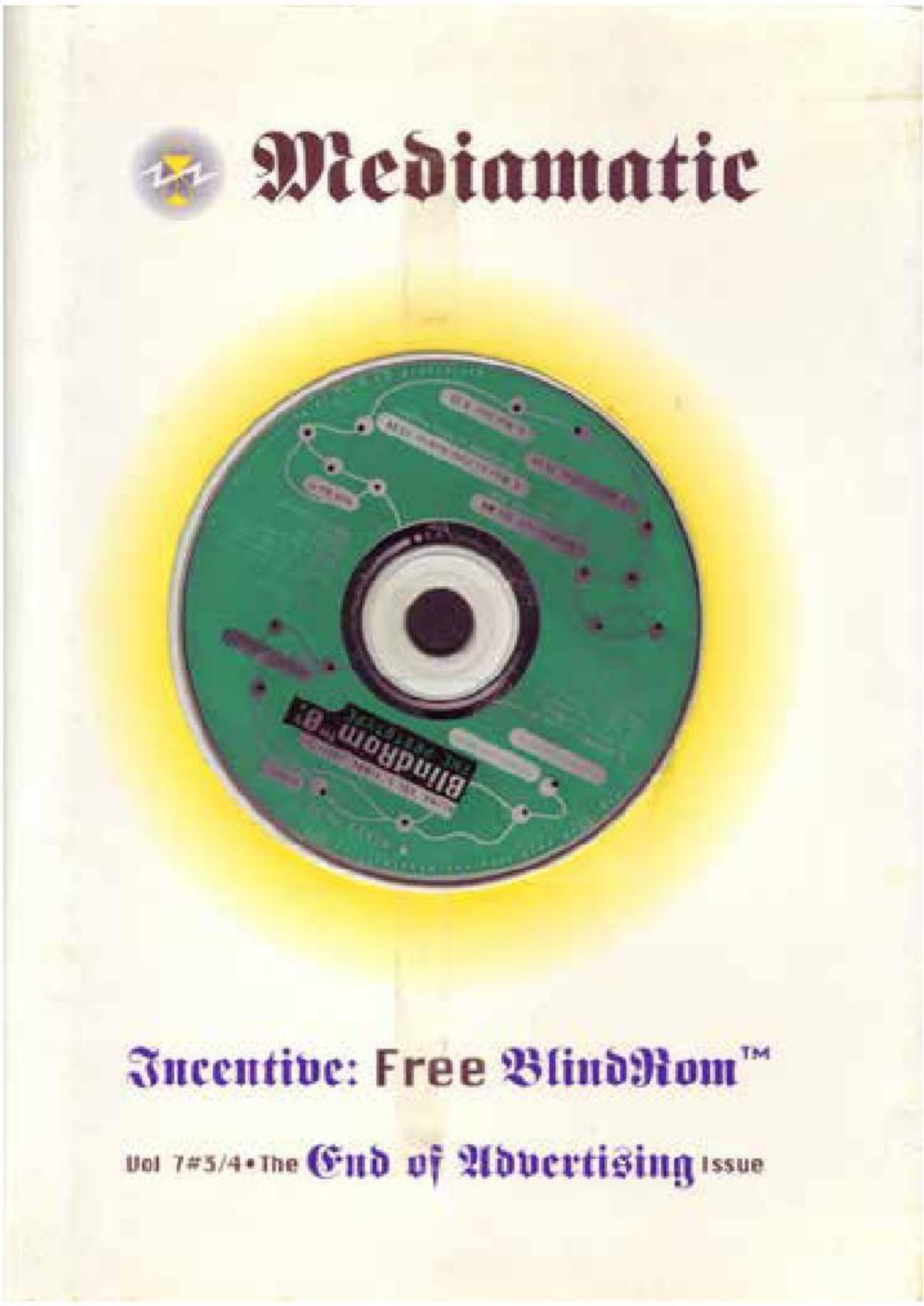

1999 MMCD07 ISBN 90 74728 308
Mediamatic CD08 ISBN 90 74728 316
Mediamatic CD08 2001 Davolio
Animations by Cesar Davolio

7
Florian Thalhofer
[small] world
1999

8
Cisare Davolio
Annunciation
2001

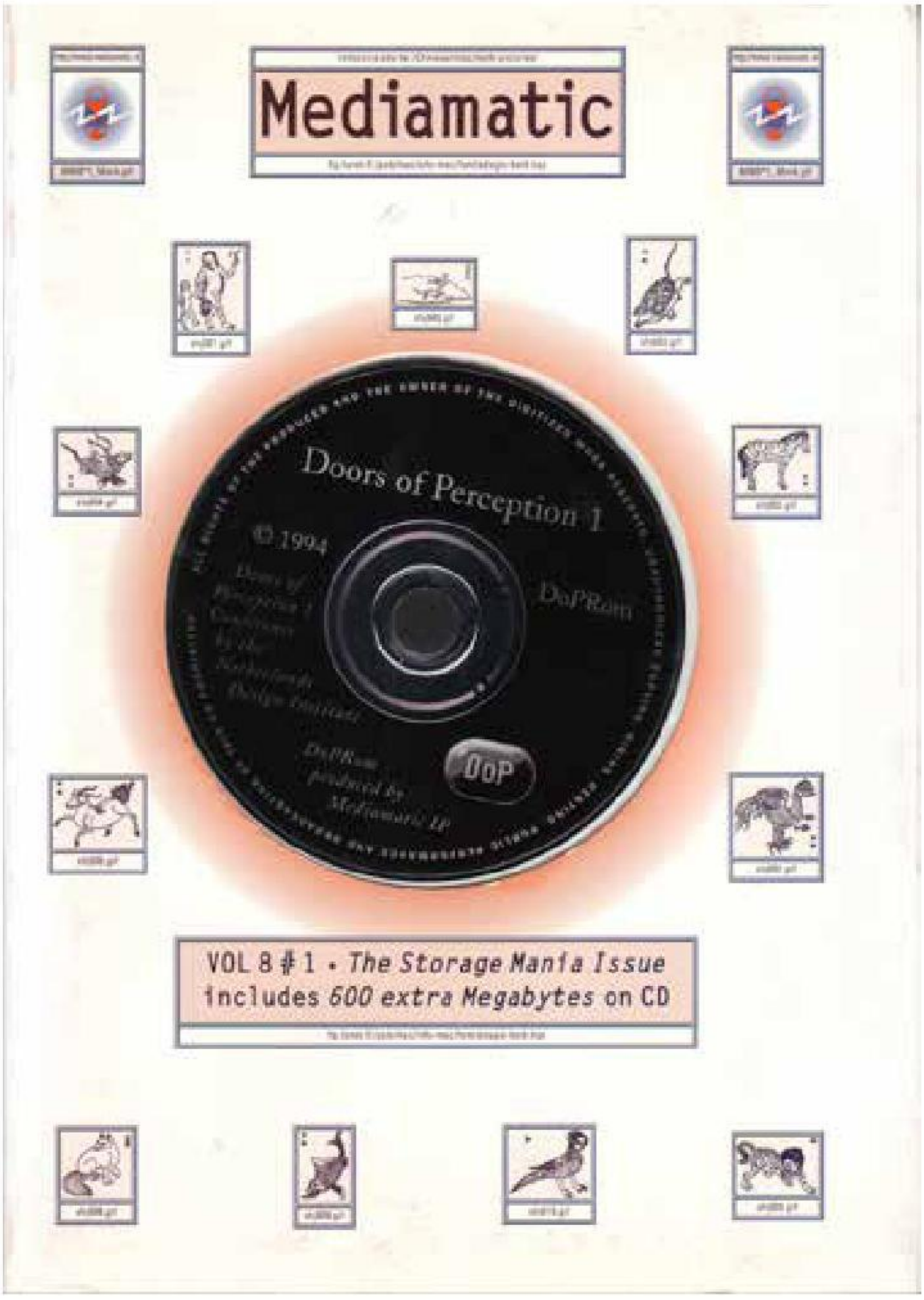
9
Mathilde ter Heijne
For a Better World
2001

1



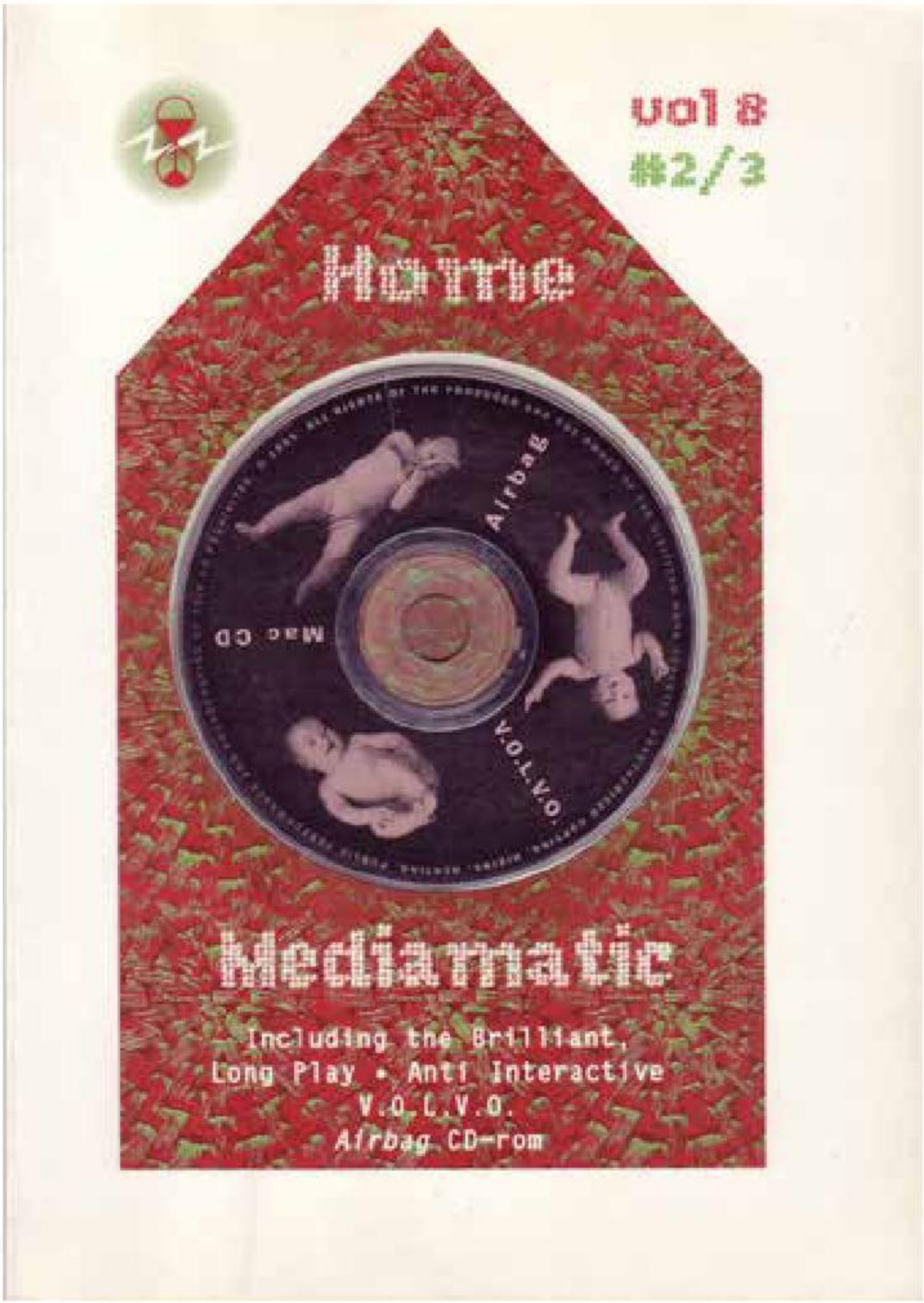
Incentive: Free BlindRom™

2

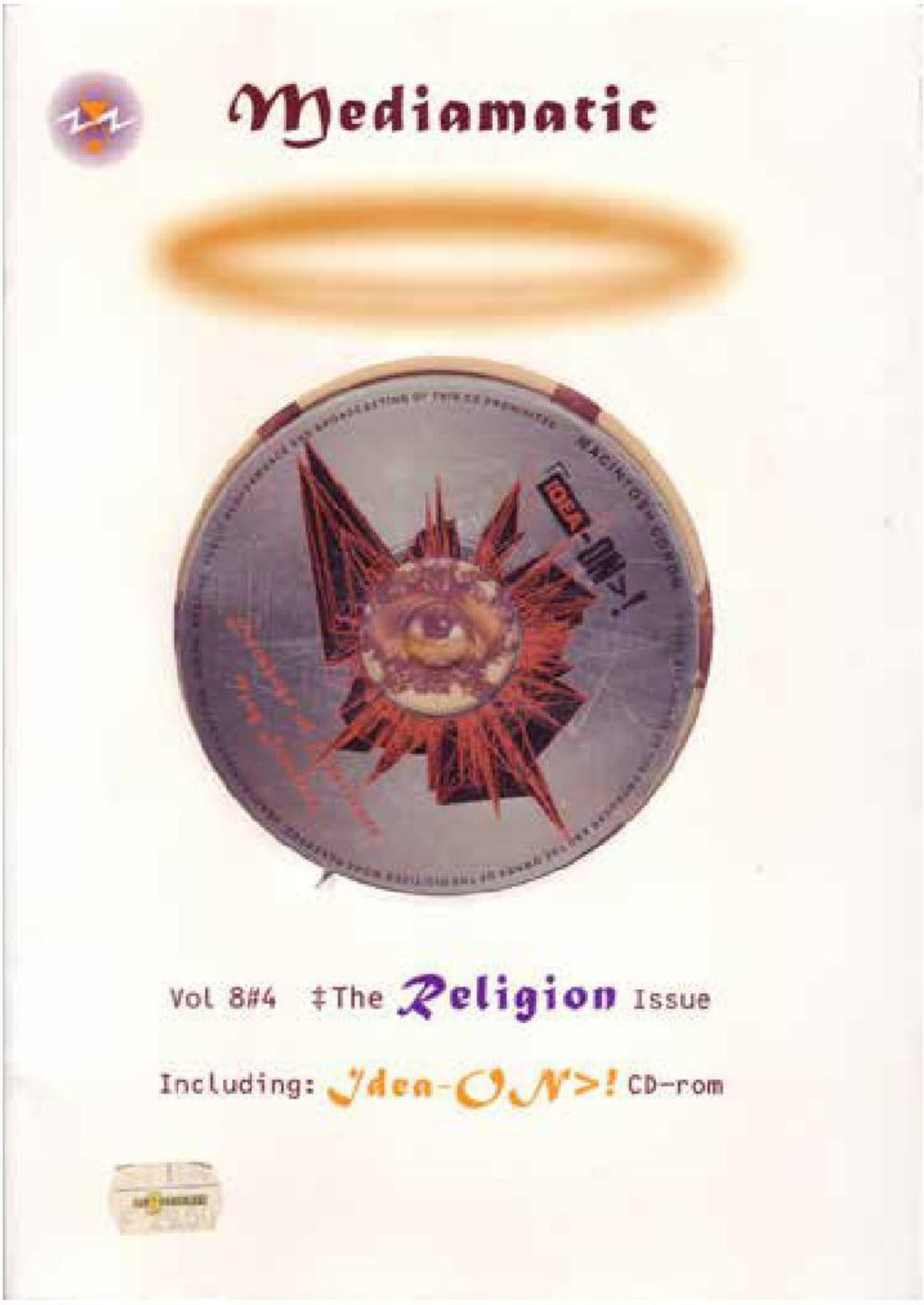

Mediamatic
Doors of Perception 1
©1994
DoP'Rom
DoP
VOL 8 #1 • The Storage Mania Issue
includes 600 extra Megabytes on CD

cd-rom
cabinet
(⊙)

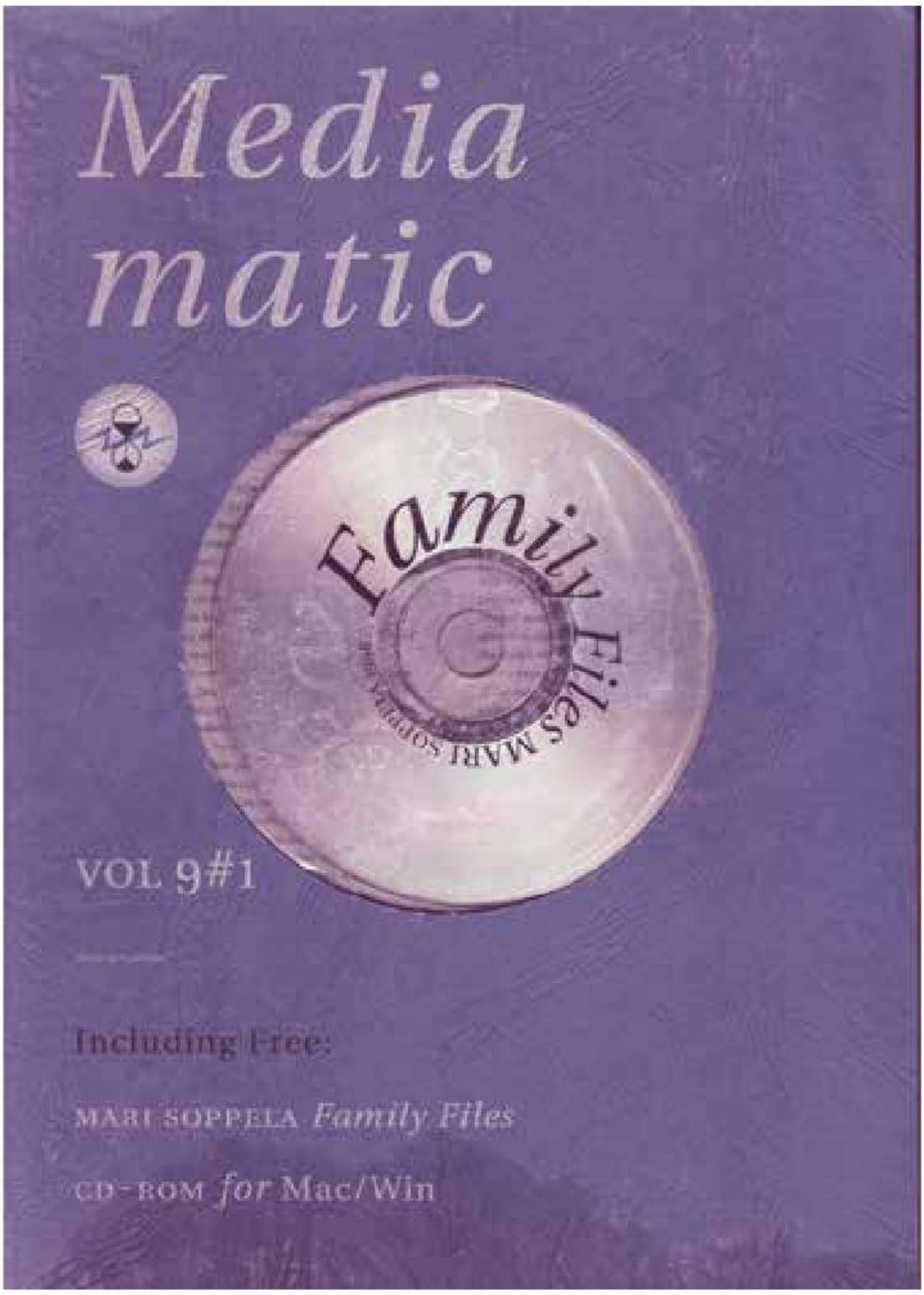
3



4


Mediamatic
Vol 8#4 ‡The Religion Issue
Including: Idea-ON>! CD-rom

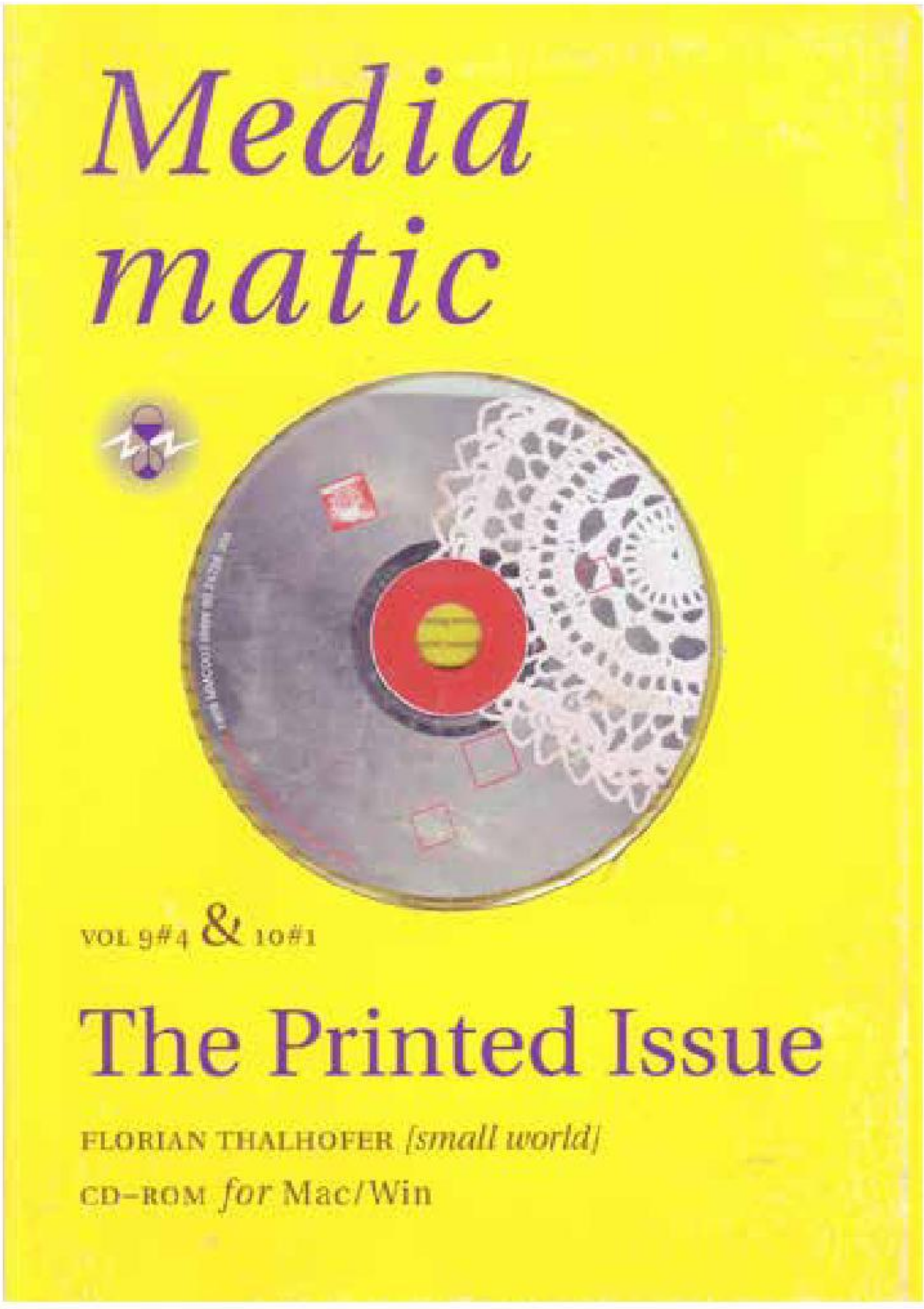
5


Media
matic
Family Files
MARI SOPPELA
VOL 9#1
Including Free:
MARI SOPPELA Family Files
CD-ROM for Mac/Win

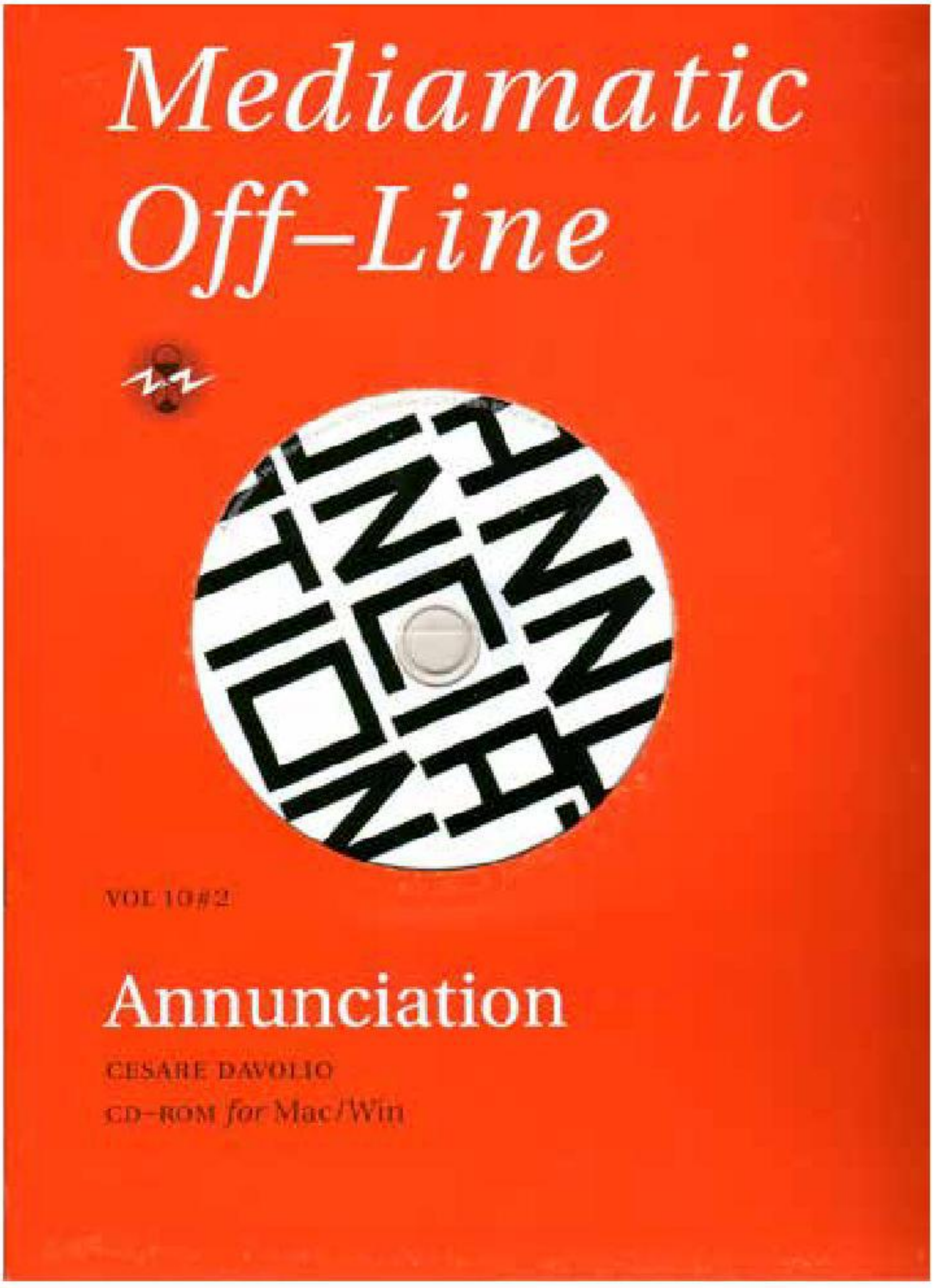
6


Media
matic
OSS/••••
VOL 9 #2/3
Context issue
OSS/•••• by jodi
CD-ROM for Mac/Win

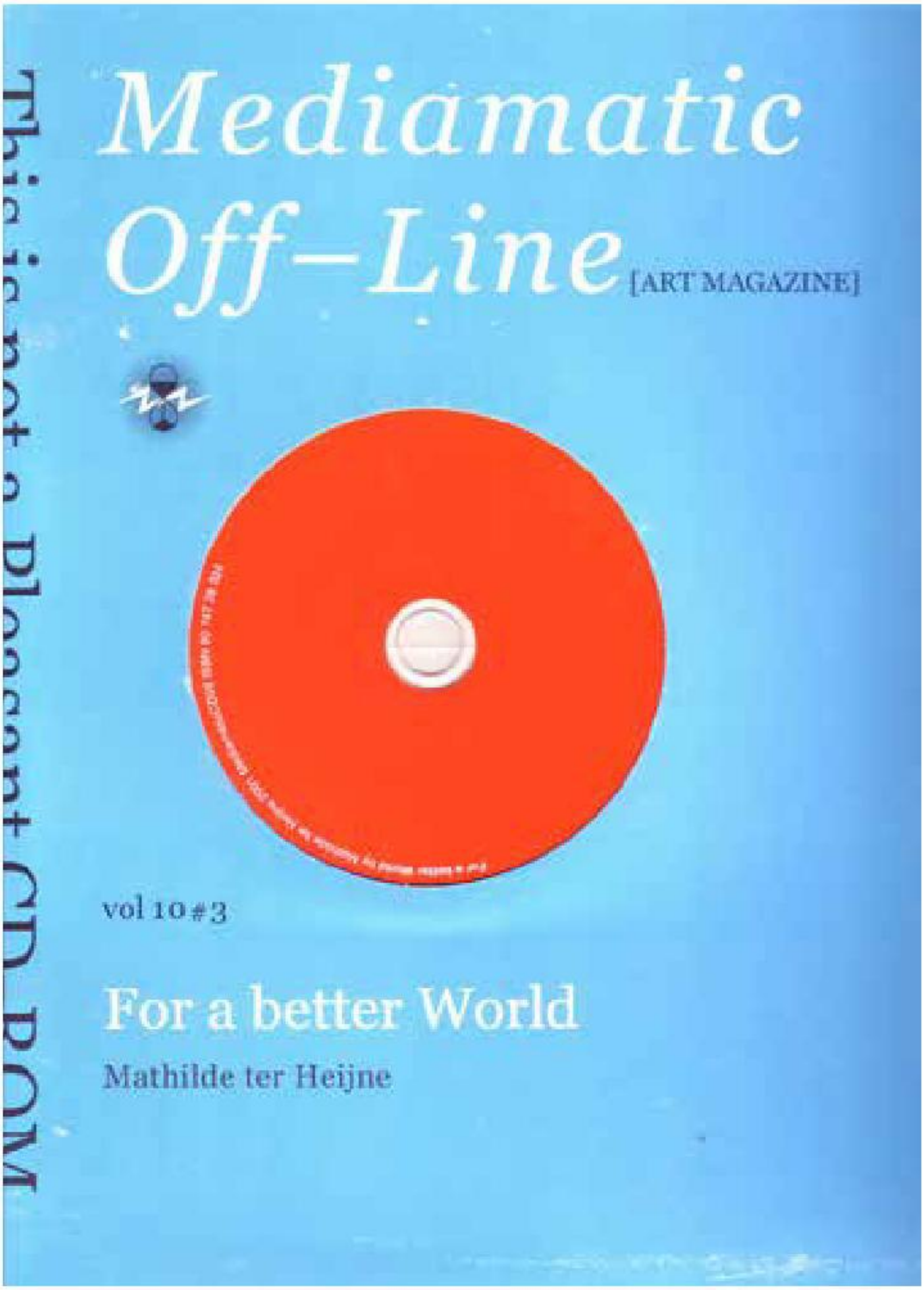
7


Media
matic
VOL 9#4 & 10#1
The Printed Issue
FLORIAN THALHOFER [small world]
CD-ROM for Mac/Win

8


Mediamatic
Off-Line
VOL 10#2
Annunciation
CESARE DAVOLIO
CD-ROM for Mac/Win

9


Mediamatic
Off-Line
[ART MAGAZINE]
vol 10#3
For a better World
Mathilde ter Heijne
Mediamatic CD ROM

115

THE CD-ROM CABINET

— SANDRA FAUCONNIER

Throughout the 1990s the CD-ROM, the predecessor to the DVD, was a popular medium for interactive content such as games, encyclopaedias, business presentations, educational software and art. That decade saw a blossoming of a remarkable and largely uncelebrated niche in digital art production: CD-ROM art – interactive artworks produced specifically for the CD-ROM medium.

In the Netherlands, Mediamatic was an important producer and driving force behind this kind of work. Art CD-ROMs often appeared as supplements to *Mediamatic Magazine*. Participating artists included Yariv Alter Fin,[1] Mari Soppela,[2] JODI[3] and Gerald van der Kaap.[4] There was also significant production of artistic CD-ROMs during the 1990s in other countries, particularly in the US, Canada and the UK. Big names such as Antoni Muntadas, Laurie Anderson, Valie Export, Michael Snow, Chris Marker and

1
http://www.mediamatic.net/44728/en/permanent-flux-past-present-and-future-of.

2
http://www.mediamatic.net/5842/nl/mari-soppela-s-family-files.

3
http://www.mediamatic.net/5652/nl/oss.

4
http://www.mediamatic.net/5651/nl/blindrom.

5
Contact Zones. The Art of CD-ROM by Timothy Murray was a travelling exhibition from 1999 to 2001 in which several of these pioneering works were presented together. The exhibition website still exists and is an excellent record and source of several projects: *https://contact-zones.cit.cornell.edu/.*

Zoe Beloff all published interactive works on CD-ROM, with multimedia publisher Voyager playing an essential role. Finally, there was a small but thriving scene of experimental productions by less well-known artists and collectives including Antirom, Morton Subotnick, Linda Dement and many others. All of these were true pioneers in this area.[5]
A huge diversity of work has been produced for CD-ROM. It includes virtual spaces, game-inspired experiments, interactive musical environments, literature, and hypertext presentations by artists. They are early multimedia experiments in which artists freely explored all manner of interaction and aesthetics that would only become mainstream decades later. One splendid example of this phenomenon is the 2011 iPad album *Biophilia* by singer-songwriter Björk, who collaborated on the project with multimedia artist Scott Snibbe, among others. *Biophilia* attracted a great deal of media attention using a visual language and interaction systems that had been introduced in CD-ROMs twenty years earlier. CD-ROM artworks often occupy a special place in an individual artist's oeuvre. Sometimes they are a unique interactive excursion in an artist's career, as was the case for Laurie Anderson and Michael Snow. They may also form part of a larger series of works in a variety of (off-line and online) media dealing with a similar theme and method (JODI and Antoni Muntadas).

Seen as a whole, projects on CD-ROM form a remarkable and exemplary case for the conservation of digital art: the projects are all fairly small-scale and manageable; they're all based on old but nonetheless fairly standard Windows or Mac software; and there is generally a concrete physical component that make the object saleable and collectable – CD-ROM discs usually come in specially designed packaging. With minimal effort and technical knowledge it is now possible to save these projects from obscurity, conserve them and make them available in as authentic a state as possible.

FRAGILE: A MATTER OF URGENCY

Many CD-ROM artworks are still available through living private collectors and still extant organisations, but they can also be found on online auction sites. A large proportion of

the artists are still alive, and several projects are still fresh in the memory of devotees of the form. Enthusiasts have already ensured that an extensive collection of mainstream shareware CD-ROMs can now be found on the Internet Archive.[6] A small collection of experimental artistic CD-ROMs would be a valuable supplement to this collection. Even though it is still possible to find emulator software that play CD-ROMs, thanks to active online communities of enthusiasts and hobbyists who want to keep old computer games functioning, the greatest obstacle – and the reason for haste – is that it will soon be impossible to run CD-ROM discs due to the rapid evolution of hardware. Increasingly, PCs and laptops are no longer even equipped with DVD drives! Most important of all, the maximum physical lifetime of the disc is no longer than a few decades.

6 *http://archive.org/details/cdbbsarchive*

WHY 'CD-ROM CABINET'?

I use the word 'Cabinet'[7] to acknowledge the art cabinet as a historical phenomenon. Popular in the seventeenth and eighteenth centuries, individual collectors used these items of furniture, called 'Cabinets of Curiosities' to house and display their personal art treasures. This personal approach to collecting art preceded and pioneered the emergence of cultural institutions such as museums, galleries, art organisations and festivals. I see in this phenomenon a clear parallel with the contemporary reception of Internet and CD-ROM art, because once again the interests and expertise of individual enthusiasts and researchers are well ahead of institutional developments.

7 With sincere thanks and kudos to Hicham Khalidi, who suggested this term as a title for this project!

Foremost my aim is pragmatic: I want to put this subject more broadly on the agenda and embark on a short and effective personal initiative to save a number of important CD-ROM art projects from oblivion.

ACTIVITIES: LATE 2012 TO MID-2013

The *CD-ROM Hackathon* at Baltan Laboratories on 12 and 13 December 2012 led by Ben Fino-Radin (digital conservator at MoMA and Rhizome.org) yielded a number of so-called 'disk images'. These operational items of software derived from CD-ROMs allow end-users to run the art project on their own computer without owning the physical disk.

I am currently researching the possibilities for making them accessible to the general public for the long term. A number of principles are central to my approach:

— Sharing ownership: I want to encourage multiple parties to engage with this material through a wide range of individual methods;
— Transparency and distribution: ensure that the CD-ROMs are easy to find and that interested parties have the practical and legal framework and freedom to view the works, to reuse them, and to document them.

In concrete terms, this will involve the following:

— Clearing of rights: contact the makers to enquire if their works are free of copyright restrictions or whether they can be published under Creative Commons licenses. This is an important guarantee for permanence;
— Approaching enduring online platforms that can guarantee long-term conservation. For broad interest in the long term, the most suitable locations would be Wikimedia Commons and the Internet Archive. In addition, the arts projects should appear as closely as possible to the original context of their publication. For example, Mediamatic CD-ROMs should be made available on this organisation's own website;
— Thoroughly and individually documenting the ways in which the works can be viewed by the public.

The CD-ROM Cabinet receives financial support from a Mondriaan Fund Mediation Grant.

For more information and updates:
http://www.fauconnier.nl/fokky/cd-rom-cabinet

☒

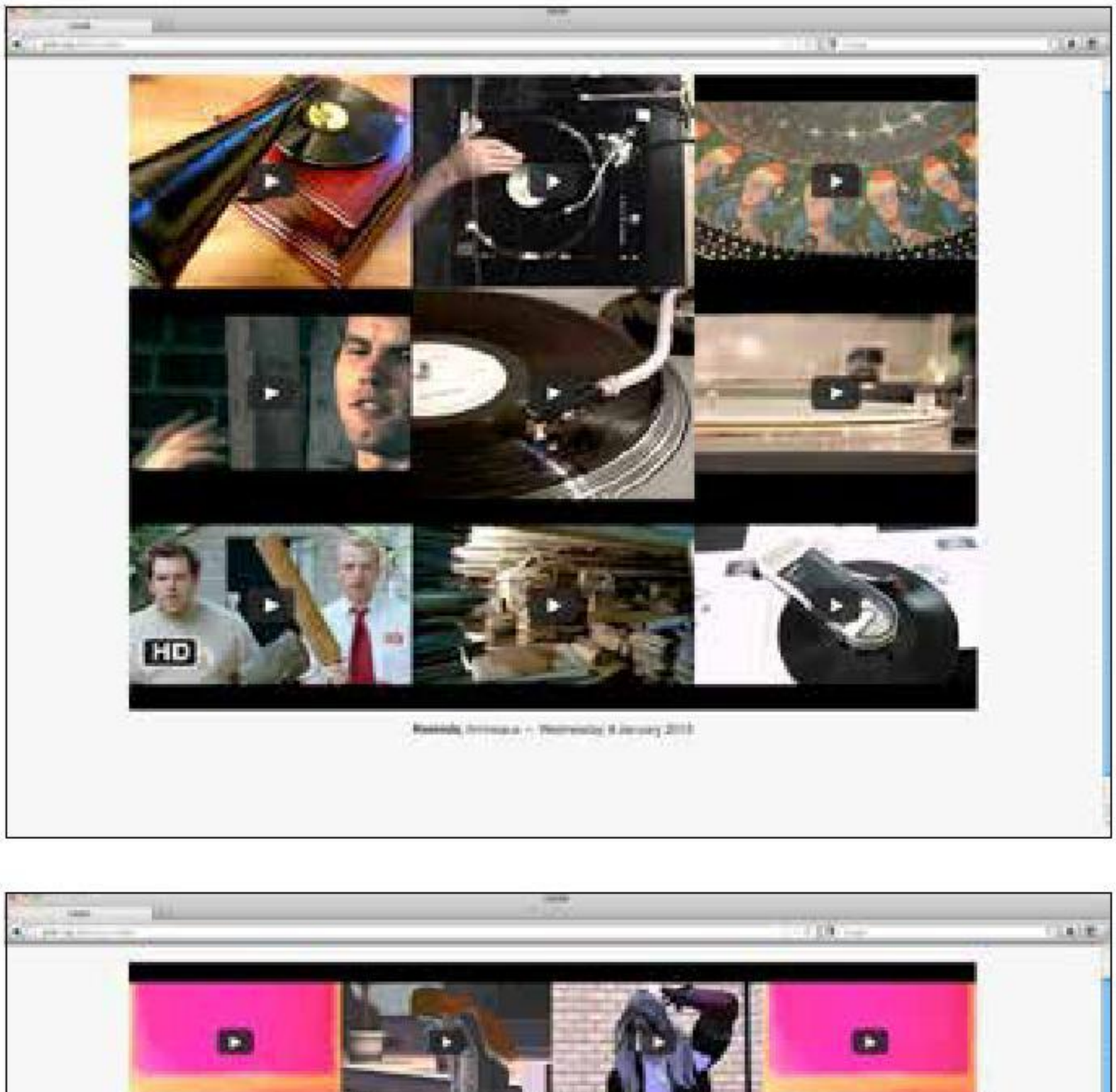
IMAGES
related to texts:

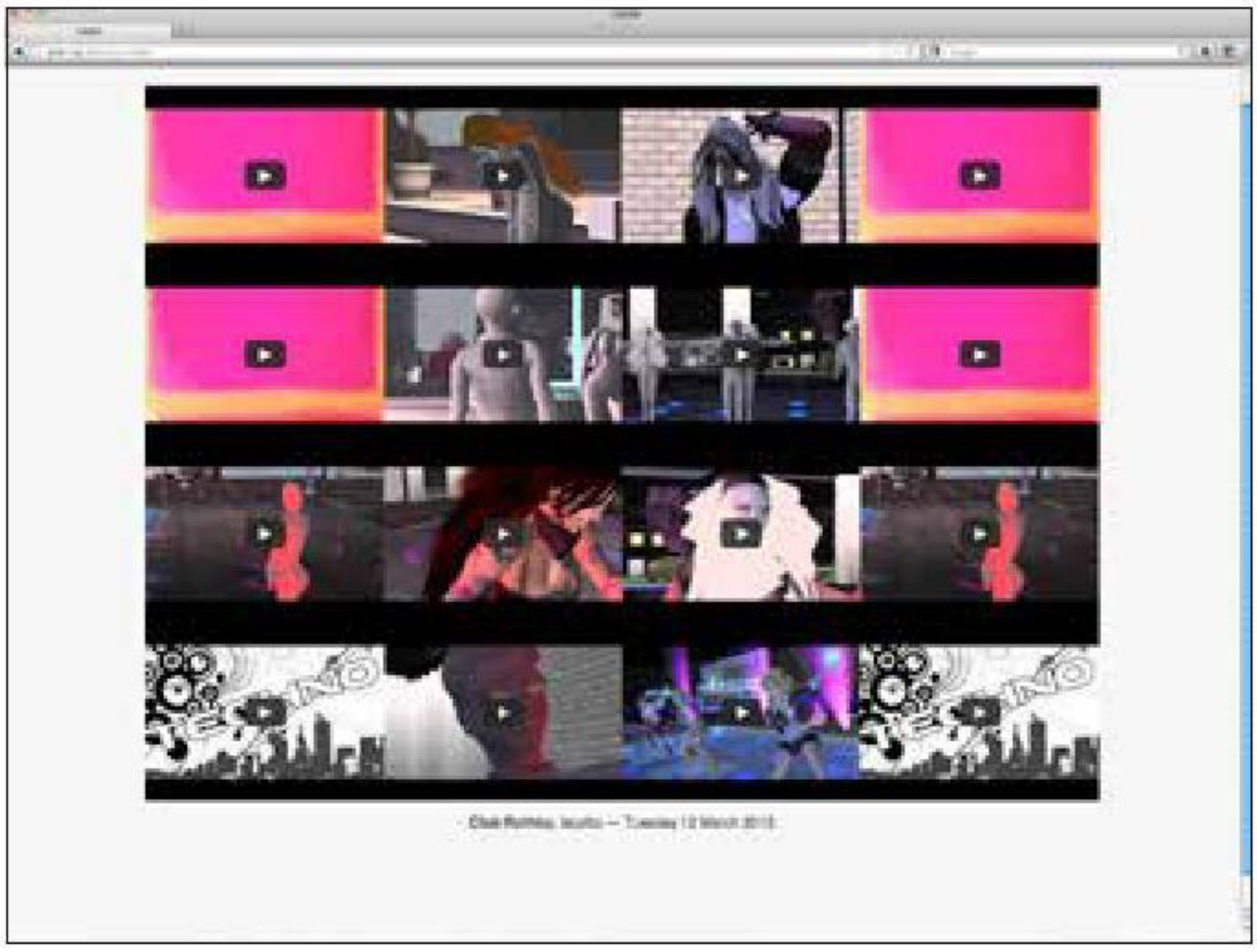
timineaux
Rekkids
9 January 2013

laturbo
Club Rothko
12 March 2013

curatingyoutube
problems visualised
10 April 2013

jamiehouse
Untitled
16 April 2013





see article
↓
1.2
LIGHT
HEAVY
WEIGHT
CURATING
PAGES 25–31

Sakrowski
Curatingyoutube
2008 – present

Paolo Garcia
and Addie
Wagenknecht
Webcam Venus
2013

–

sexcutrix as
La Fornarina
(1518), Raphael

allison_may as
Woman with
a Comb (1884)
Edgar Degas

ricadoll as
Mona Lisa (la
Gioconda)
(1503-6)
Leonardo da
Vinci

see article
↓
2.1
WE'RE NOT
HOBBYISTS
OR DABBLERS
ANYMORE
PAGES 46–52

Paolo Garcia and Addie Wagenknecht

Webcam Venus

2013

–

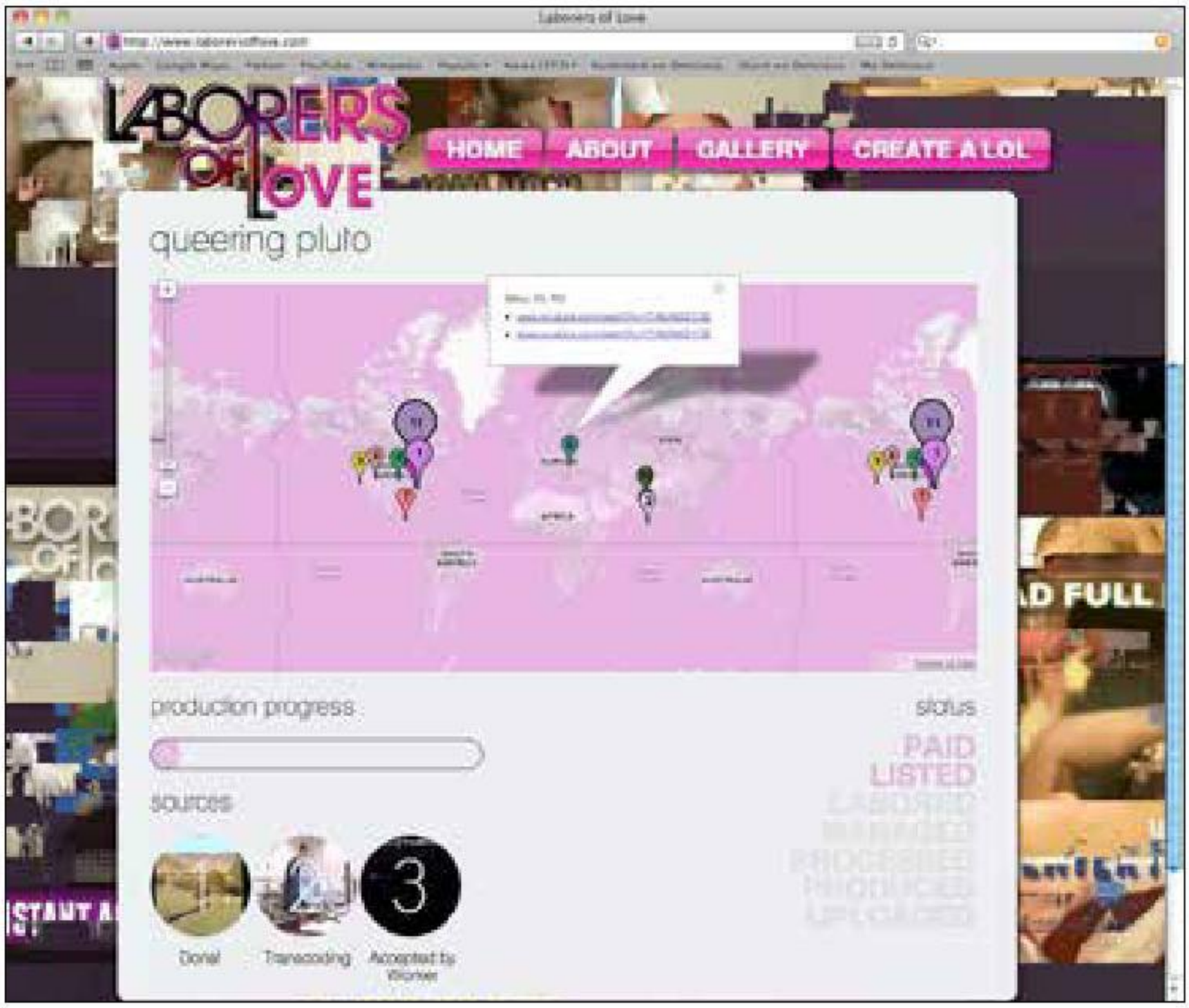
kimisquirtx as *Venus of Urbino* (1538), Titian

urxxxsecrettoy as *The Birth of Venus* (1486), Sandro Botticelli

boobz_4_play as *Reclining Nude* (1917), Amadeo Modigliani

images
(☒)

Stephanie Rothenberg, Jeff Crouse
Laborers of Love
2010



see article
↓
2.1
WE'RE NOT
HOBBYISTS
OR DABBLERS
ANYMORE
PAGES 46–52

Joe Delappe
Taliban Hands
2011

see article
↓
2.1
WE'RE NOT
HOBBYISTS
OR DABBLERS
ANYMORE
PAGES 46–52

Heath Bunting
BorderXing Guide
2001 – 2011

–

Rio Chanca
Portugal

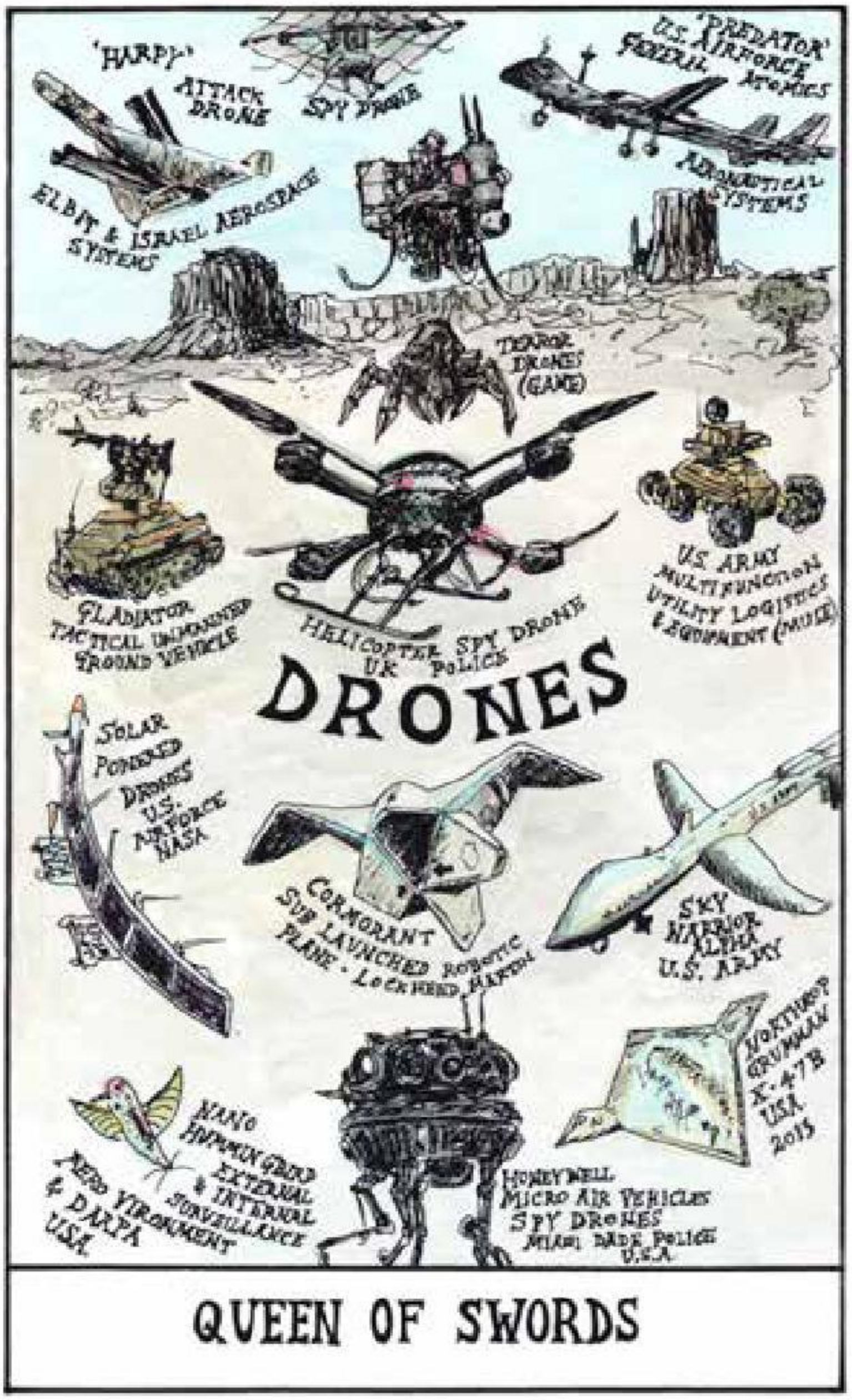
Storta Gronda
mountain pass

see article
↓
2.1
WE'RE NOT HOBBYISTS OR DABBLERS ANYMORE
PAGES 46–52

Suzanne Treister

HEXEN 2.0 / Tarot /
Queen of Swords - Drones

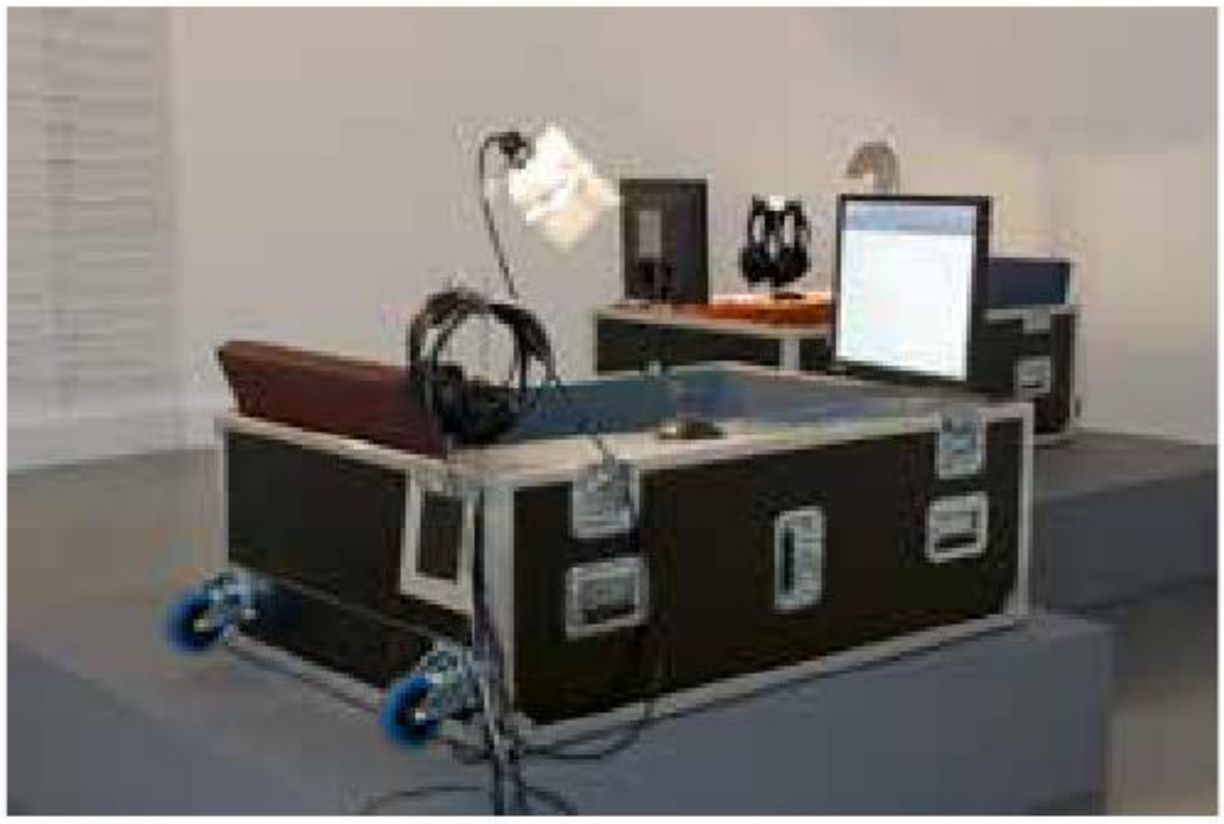
2009 – 2011



see article
↓
2.1
WE'RE NOT
HOBBYISTS
OR DABBLERS
ANYMORE
PAGES 46–52

see article
↓
2.3
MUSEUM
REFRESH
PAGES 54–62

Hannah Hurtzig
Flight Case Archive
of Mobile Academy
2003 – 2010



Collection Van Abbemuseum, Eindhoven.
Photo: Peter Cox, Eindhoven

images
(⊠)

see article
↓
2.3
MUSEUM
REFRESH
PAGES 54–62

Barry McGee
Untitled
(first SFMOMA installation)
1996

images
(☒)

Barry McGee
Untitled
(second SFMOMA
installation)
1996 – 1998

see article
↓
2.3
MUSEUM
REFRESH
PAGES 54–62

Barry McGee
Untitled
(third SFMOMA
installation)
1996 – 2004

Barry McGee
Untitled
(fourth
SFMOMA
installation)
1996 – 2010

see article
↓
2.3
MUSEUM
REFRESH
PAGES 54–62

«

Museums grapple with the notion of acknowledging the value of a cultural object they don't have to pay for.

»

Biographies

CHRISTIANE BERNDES	2.3
SARAH COOK	2.2
ANNET DEKKER	INTRO, 1.1, 2.3, 3.1, 3.3
SANDRA FAUCONNIER	THE CD-ROM CABINET
OLGA GORIUNOVA	1.2
JUSSI PARIKKA	3.1
CHRISTIANE PAUL	1.1
RICHARD RINEHART	3.3
EDWARD SHANKEN	2.1
JILL STERRETT	2.3
NINA WENHART	3.2
LAYNA WHITE	2.3

> **In reality artworks take on a life of their own, regardless of their authors' intentions.**

PAGES 140 – 143

BIOGRAPHIES

CHRISTIANE BERNDES is currently Curator and Head of Collections at the Van Abbemuseum, Eindhoven. Recent projects she curated include *Play Van Abbe*, a two-year programme around the museum's collection, including exhibitions, commissions, projects, lectures, publications and a symposium (2009–11); *Plug In. Re-imagining the Collection* (2006–9); *What Happened to Art* (2006); *Nederland niet Nederland* (2004–5); *stanley brouwn* (2005); and *One on One* (2004). She has been a member of the steering committee of the SBMK (Foundation for the Conservation of Contemporary Art) since 2000. She studied Art at the Jan van Eyck Academy, Maastricht, and Art History at Utrecht University. During her studies she worked as Assistant Curator at the Boijmans Van Beuningen Museum, Rotterdam, and the Van Abbemuseum, Eindhoven.

http://www.vanabbe.nl

SARAH COOK is a curator of contemporary art, writer, and sometime art historian. She is the author (with Beryl Graham) of *Rethinking Curating: Art After New Media* (2010), and co-editor (with Sara Diamond) of an anthology of texts about art and technology drawn from over a decade's research at the world-renowned Banff New Media Institute (*Euphoria & Dystopia*, 2011). Sarah Cook received her Ph.D. in curating new media art from the University of Sunderland (2004) where she co-founded the online resource CRUMB (*http://www.crumbweb.org*), and helped set up the MA Curating course. She lectures and publishes widely about emerging art forms and curatorial practice. She has curated exhibitions in Canada, the US, New Zealand, Mexico City, across Europe, and online, which have been widely reviewed, including in *Art Monthly*, *ArtForum*, *Mute*, *Rhizome* and *we-make-money-not-art.*

http://www.sarahcook.info

ANNET DEKKER is an independent researcher and curator. She has given various presentations at national and international conferences, been a member of juries and advisory boards, and regularly contributes to peer-reviewed journals and edited volumes. She is currently a core quest tutor at Piet Zwart Institute, Rotterdam. She initiated aaaan.net with Annette Wolfsberger in 2009; they coordinate artists-in-residences and set up strategic and sustainable collaborations with national and international arts organisations. Previously she worked as Web curator for SKOR (Foundation for Art and Public Domain, 2010–12), was programme manager at Virtueel Platform (2008–10), and head of exhibitions, education and artists-in-residence at the Netherlands Media Art

Institute (1999–2008). In 2008 she began a Ph.D. research into strategies for documenting net art at the Centre for Cultural Studies, Goldsmiths University, London, under the supervision of Matthew Fuller.

http://aaaan.net

SANDRA FAUCONNIER is an art historian interested in Internet technologies. From 2000 to 2007 she was a media archivist at V2_, Rotterdam, where she designed a description model for electronic art activities, developed a thesaurus of media art terms, and worked on various research projects related to subjects such as alternative copyright models and the preservation of electronic art. Later she worked at the collection and mediatheque department of the Netherlands Media Art Institute, Amsterdam (2007–12). She is currently project leader of the online video channel ARTtube, an active Wikipedia volunteer and guardian of the CD-ROM Cabinet, an experimental initiative to document and preserve CD-ROM artworks from the 1990s.

http://www.fauconnier.nl

OLGA GORIUNOVA is Assistant Professor at the Centre for Interdisciplinary Methodologies, University of Warwick, and author of *Art Platforms and Cultural Production on the Internet* (2012). She curated the *Fun and Software* exhibition (at Arnolfini in Bristol, and at MU and Baltan, Eindhoven in 2010/11) and is editing a collection *Fun and Software. Exploring Pleasure, Paradox and Pain in Computing* (forthcoming). She has been involved in the organisation of four Readme festivals of software art between 2002 and 2006 and the running of software art repository Runme.org.

http://www2.warwick.ac.uk/fac/cross_fac/cim/people/goriunova/

JUSSI PARIKKA is Reader in Media & Design at Winchester School of Art (University of Southampton). In addition, Parikka lectures in Digital Culture Theory at the University of Turku, Finland. Parikka has published widely on digital culture, network culture and media theory. He is also known for his writings on media archaeology. Parikka's books include *Digital Contagions: A Media Archaeology of Computer Viruses* and *What is Media Archaeology?* (2012). Parikka's *Insect Media* (2010) won the 2012 Anne Friedberg award for Innovative Scholarship (Society for Cinema and Media Studies). He has co-edited such volumes as *The Spam Book: On Viruses, Porn, and Other Anomalies from the Dark Side of Digital Culture* (2009, with Tony D. Sampson) and *Media Archaeology* (2011, with Erkki Huhtamo). He is the editor of the Wolfgang Ernst text collection *Digital Memory and the Archive* (2012).

http://jussiparikka.net

CHRISTIANE PAUL is Associate Professor at the School of Media Studies, The New School, and Adjunct Curator of New Media Arts at the Whitney Museum of American Art. Her recent books are *Context Providers – Conditions of Meaning in Media Arts* (2011, in Chinese 2012), co-edited with Margot Lovejoy and Victoria Vesna; *New Media in the White Cube and Beyond* (2008); and *Digital Art* (2003 & 2008). At the Whitney Museum she curated exhibitions including *Cory Arcangel: Pro Tools, Profiling* (2007), *Data Dynamics* (2001), and the net art selection for the 2002 Whitney Biennial – as well as the Whitney Museum's *artport* website. Other curatorial work includes *The Public Private* (Kellen Gallery, The New School, 2013), *Eduardo Kac: Biotopes, Lagoglyphs and Transgenic Works* (Rio de Janeiro, Brazil, 2010); and *Feedforward – The Angel of History* (co-curated with Steve Dietz; Laboral Center for Art and Industrial Creation, Gijon, Spain, 2009).

http://whitney.org/Exhibitions/Artport

RICHARD RINEHART is Director and Chief Curator of the Samek Art Gallery at Bucknell University. He has worked as Digital Media Director and Adjunct Curator at the UC Berkeley Art Museum, and as curator at New Langton Arts and for the San Jose Arts Commission. He has been a jury member for the Rockefeller Foundation, Rhizome. org, and others. Richard has taught courses on art and new media at UC Berkeley, UC Santa Cruz, the San Francisco Art Institute and elsewhere. He served on the boards of the Berkeley Center for New Media, New Langton Arts, and the Museum Computer Network. He lead the NEA-funded project, *Archiving the Avant-Garde*, about the preservation of digital art, and is currently completing a book for The MIT Press on collecting and preserving media culture.

http://www.coyoteyip.com

EDWARD A. SHANKEN writes and teaches about the entwinement of art, science, and technology with a focus on interdisciplinary practices involving new media. Academic posts have included the Hohenberg Chair of Excellence in Art History, University of Memphis; University Lecturer, New Media, University of Amsterdam; and Executive Director of Information Science and Information Studies, Duke University. Recent publications include essays on art historiography, sound art and ecology, art and software in the 1960s, aesthetic computing, and bridging the gap between new media and contemporary art. Shanken edited and wrote the introduction to Roy Ascott's, *Telematic Embrace: Visionary Theories of Art, Technology and Consciousness* (2003). His critically acclaimed survey, *Art and Electronic Media* (2009) has been expanded

with the crowd-sourced, multimedia *Online Companion*: *http://www.artelectronicmedia.com*. His forthcoming book, *Inventing the Future: Art, Electricity, New Media* will be published in Spanish, Portuguese, and Chinese as a book and as an e-text.

http://www.artexetra.com

JILL STERRETT has been the Director of Collections and Conservation at the San Francisco Museum of Modern Art since 2001. In this role, she oversees Conservation and the activities of three allied departments – Library & Archives, Collections Information & Access and Registration – in a museum structure designed to foster collaborations serving the museum's collections and programmes. She is particularly inspired by contemporary art and how it activates the museum in new ways. Jill has been a staff member at SFMOMA for 23 years, first as Paper Conservator (1990–2000) and then as Head of Conservation (2000–1). She has also worked at the Fine Arts Museum of San Francisco, the Library of Congress, the Philadelphia Museum of Art, and the National Library of Australia. Jill is a graduate of Denison University with a B.Sc. in Chemistry and a BA in Art History, and she earned her MA in Art Conservation from the Cooperstown Graduate Program.

http://www.sfmoma.org

NINA WENHART is a media art historian and independent researcher with a special focus on digital archiving. She has been working in this field for many years, including at the Ars Electronica Futurelab, the Ludwig Boltzmann Institute for Media.Art.Research, the School of the Art Institute of Chicago and the Danube University Krems.

http://ninawenhart-cv.blogspot.com/p/index.html

LAYNA WHITE is Head of Collections Information and Access at the San Francisco Museum of Modern Art, where her department is responsible for advancing the museum's collection and digital asset management systems; creating visual documentation for works of art; managing intellectual property issues; and fostering access to the collection and exhibitions through programmes such as the museum's on-line collection catalogue. Prior to SFMOMA, Layna was Collections Information Manager at the UCLA Grunwald Center for the Graphic Arts at the Hammer Museum, where she was involved in integrating collections needs with on-site and online public access. A background in art history and library and information science complements interests in museum practices around documentation and understanding pluralistic and changing needs around access to and use of museum collections.

http://www.sfmoma.org

144

SPECULATIVE SCENARIOS

or what will happen to digital art in the (near) future?

CONCEPT AND EDITOR
Annet Dekker

CONTRIBUTORS
Christiane Berndes
Sarah Cook
Sandra Fauconnier
Olga Goriunova
Jussi Parikka
Christiane Paul
Richard Rinehart
Edward Shanken
Jill Sterrett
Nina Wenhart
Layna White

TRANSLATION SANDRA FAUCONNIER'S ESSAY
Stephen Green

COPY EDITING
Mark Poysden

DESIGN
Eric de Haas
Tessa Kwee

PRINT
Lecturis, Eindhoven

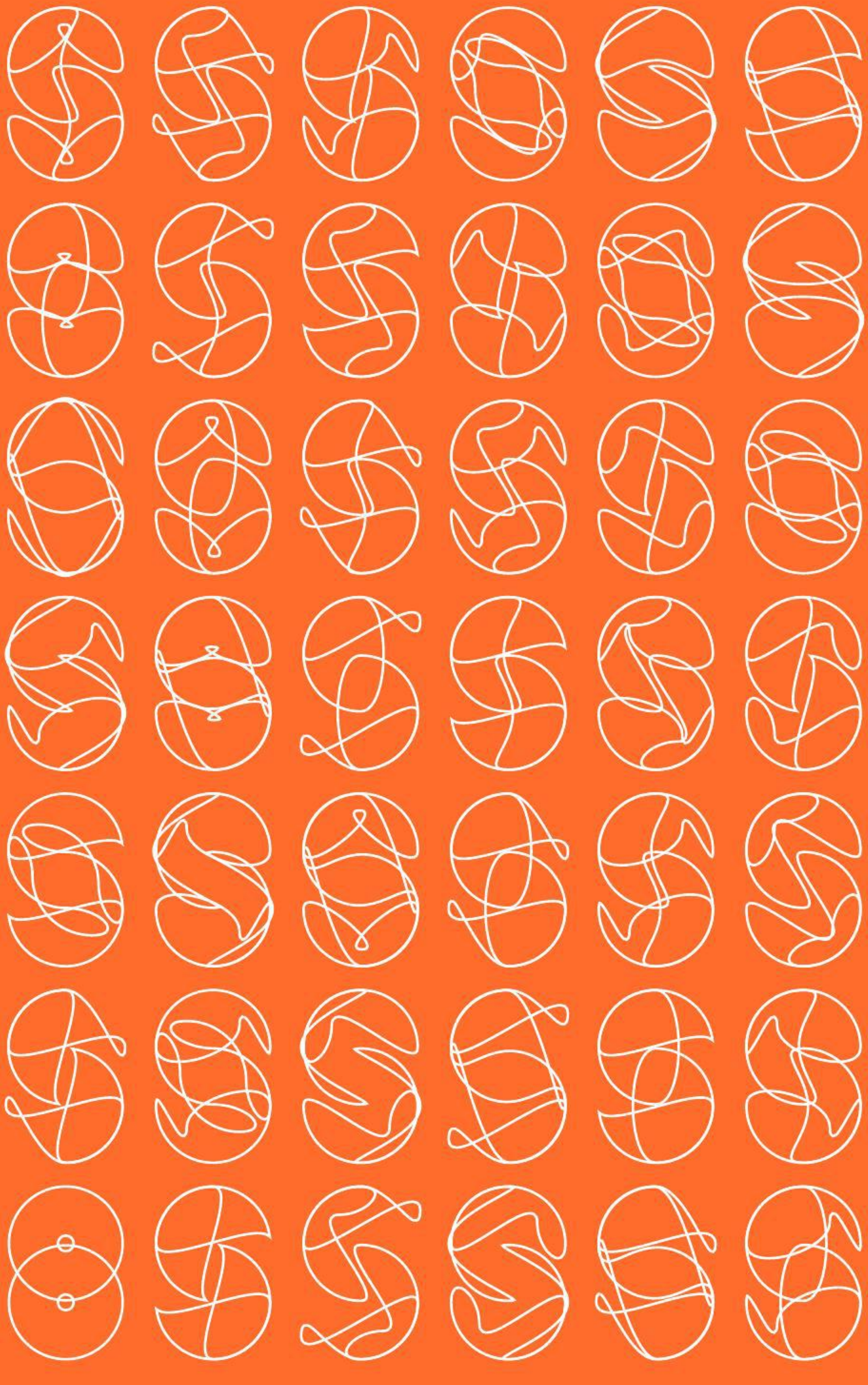
PUBLISHER
Baltan Laboratories
P.O. Box 4042
5604 EA Eindhoven
the Netherlands
info@baltanlaboratories.org
http://www.baltanlaboratories.org

THANKS TO
Eindhoven City Council
Virtueel Platform /
The New Institute

BALTAN LABORATORIES
2013

This publication and the conference 'Collecting and Presenting Born-Digital Art' were supported by Virtueel Platform, now part of The New Institute. Annet Dekker has edited three other publications on Digital Art for Virtueel Platform: *Archive2020. Sustainable Archiving of Born-Digital Cultural Content* (2010, with NIMk, DEN, EN), *Research: Archiving the Digital* (2011), and *Born-Digital Art in the Netherlands* (in Dutch with English summary, 2012, with SBMK, NIMk, DEN). These can be downloaded and/or read online: *http://virtueelplatform.nl/english/publications/* and *http://www.thenewinstitute.nl*.

The interviews by Annet Dekker with Christiane Paul, Jill Sterrett, Layna White and Christiane Berndes, Jussi Parikka and Richard Rinehart were made possible with financial support from the Mondriaan Fund Mediation Grant.



Speculative Scenarios

or what will happen
to digital art in
the (near) future?

CONTRIBUTORS

CHRISTIANE BERNDES
SARAH COOK
ANNET DEKKER
SANDRA FAUCONNIER
OLGA GORIUNOVA
JUSSI PARIKKA
CHRISTIANE PAUL
RICHARD RINEHART
EDWARD SHANKEN
JILL STERRETT
NINA WENHART
LAYNA WHITE