THE CHALLENGE OF OPEN SOURCE FOR CONSERVATION

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ABSTRACT

In this chapter the main focus is on artists who create their work by applying open source strategies. Such artists work according to a specific mentality, while practicing art in ways that move beyond the object and stress the processual characteristics of todays network cultures. Exploring a way to comprehend such open practices in this article I address the consequences of such practices for conservation. In other words, what challenges arise when an artwork, or parts of it, can be copied, used, presented, and distributed freely and by everyone? While exploring the ideology of open source by analysing the artwork *Naked on Pluto*, I argue for a conservation practice that builds upon the idea of the "processual," which stresses the value of distribution and development through which knowledge and practices survive. In the end, I will focus on how these artworks might influence the role of the conservator.

KEYWORDS
CONSERVATION | OPEN SOURCE | PROCESSES

RESUMO

O presente artigo foca-se sobre artistas que produzem o seu trabalho utilizando estratégias de código aberto. Estes artistas trabalham de acordo com uma mentalidade específica produzindo arte que se situa para além do objeto e sublinham o carácter processual da atual cultura em rede. Explorando um modo de compreender este tipo de práticas, neste artigo considero as consequências destas práticas para a conservação. Ou seja, que desafios surgem quando uma obra de arte, ou parte dela, pode ser copiada, usada, apresentada e distribuída livremente seja por quem for? Enquanto exploro a ideologia do código aberto analisando a obra *Naked in Pluto*, defendo uma prática de conservação assente sobre o ideia do "processual" que sublinha o valor da distribuição e desenvolvimento através das quais sobrevivem o conhecimento e as práticas. Por fim, foco o modo como estas obras podem determinar o papel do conservador.

PALAVRAS-CHAVE
CONSERVAÇÃO | CÓDIGO ABERTO | PROCESSOS

Naked on Pluto

N*aked on Pluto* (2010) by Dave Griffiths, Aymeric Mansoux, and Marloes de Valk is a multiplayer text adventure that uses data available on Facebook.[1] The project can be experienced in different ways: as an online game with a dedicated website, as an installation that presents certain components, as a research blog, or in video documentation and workshops. As such, *Naked on Pluto* is an assemblage of different projects that circle around a "Plutonian identity." Before moving into the function and the relations between the various elements of the work, I will first explain the concept behind the work, and more specifically the game.

The game was inspired by the role social networks play in feeding the explosive market for personal data. Data on the Internet is often collected, without people's awareness, through scrapers and trackers that easily, but often in non-transparent ways, follow, direct, and extract information. This kind of invisibility obfuscates privacy settings. *Naked on Pluto* addresses the privacy issues underlying Facebook by exposing the nature and limits of the social network, while slowly pushing the boundaries of what is tolerated by the company. *Naked on Pluto* accomplishes this without violating Facebook's terms of service (Waelder 2014). The artists' extensive research into how users are exposed on social networks, how their data is used, and what having another life in a database means can be found on the research blog, alongside the various phases of *Naked on Pluto's* development. The game sits midway between old fashion text-based gaming and dystopian science fiction. Although it was not possible to play the game inside Facebook, the artists tried to mimic the aesthetic interfaces and corporate design formats as closely as possible, while still retaining their own Plutonian brand. As De Valk (2011) explains: "The design builds on the idea of overwhelming amounts of information, making it a challenge to find important information in a "tweet-like" aggregation of feeds that seems both familiar and confusing at the same time."

Once logged into the game, via one's Facebook name and password, the user is immersed in a story about surviving in and exploring the entertainment capital of the Solar System: Elastic Versailles revision 14 (EVr14), a city on planet Pluto, resembling Versailles in Paris. EVr14 runs as a corrupt artificial intelligence system. It was designed for the promotional parades of personal and ideological powers.[2] Immediately after a successful log-in, the game uses the available information on one's Facebook account, and mixes everything indiscriminately with the landscape of EVr14. A player's personal data and that of her/his "friends" become elements of a satirical, interactive fiction. *Naked on Pluto* can be seen as a caricature of the explosion of insidious online harvesting mechanisms that highlight the ambiguous character of social networks (personal intimacy versus "friends" as quantifiable assets). The goal of the game is to escape.

The structure of the game

The structure, or architecture, of *Naked on Pluto* is built in the same way that traditional games are built: The player starts with a fixed path, which opens up into problems with less rigidly defined solutions. Although the game has no defined levels, the architecture consists of different spaces that can be entered — for example, the *DanceRoom*, the *PalaceCourtyard,* or the *Casino* — provided that the player has collected the right objects or answered a question. The game starts with a prolific textual exchange between the player and the computer, in which bots (a computer programme that performs automated tasks) mix and muddle up data, faces, and profiles, generating a framework of strangely familiar relationships. The complexity of the exchange increases as the game progresses. This intricate use of exchanges relates to the specifics of sandbox games. Gaming is generally understood as "a type of play activity, conducted in the context of a pretended reality, in which the participant(s) try to achieve at least one arbitrary, nontrivial goal by acting in accordance with rules" (Adams 2009, 3). However, sandbox games are less goal-oriented and do not follow strict rule-sets. The

term "sandbox" refers more to the mechanics of play and how, as in a physical sand pit, the user is able to play creatively without specific goals.

In the case of *Naked on Pluto*, the gameplay is facilitated by using bots, among other means. The bots help players get around in the game. They might also give information, but can get information from the player as well. Often disguised, their job is to make players feel comfortable. For example, the "red velvet chatterbot," or "love-bot," tries to make "visitors feel loved, attractive and confident."[3] Love-bots are part of Elastic Versailles' intricate way of entertaining visitors and putting them into the right mind set to share personal Facebook information freely with its agents, and "soak up mountains of advertisements and spend coins like there's no tomorrow."[4] Next to receiving messages from bots, players are triggered by new and old information from people they know on Facebook. Players can free themselves from the "harassment" of the bots only by resisting the temptation and waiting until their resources run out, or until the logic of the plot loses all sense.

Naked on Pluto can be played with multiple people. Creative input can be shared with friends. In addition, players can contribute to the story by adding elements to the game, which can potentially lead to other games within the game. In other words, parts of the game world can be explored, built upon, and developed collaboratively. This ensures that players are not completely lost in the game or bored. But it also gives players a sense of agency and control over the game. To better situate a potential future of *Naked on Pluto,* I will discuss the relation to Facebook and its (dis)connection to open source.

Naked on Pluto and Facebook

Facebook, the "freely" accessible social networking service, started in February 2004. On its website it states that "Facebook's mission is to give people the power to share and make the world more open and connected."[5] Facebook is owned and operated by Facebook Inc. Any person 13 years of age and older can register and use the site by providing Facebook with their name, date of birth, and email address. After registering, users can create a personal profile to which they can add other users and post and exchange messages: publicly, privately, or through a text-based chat function. They can join "common interest user groups" and categorise their Facebook friends into lists, such as "Close Friends" or "People From Work." There is limited possibility to design a page, but there are multiple applications that can be used to "personalise" one's profile page. The popularity of Facebook was still growing while *Naked on Pluto* was being developed.

The artists behind *Naked on Pluto* are concerned with certain aspects of social networking sites, in particular online privacy issues. Although it is not the goal of the game to resolve any of these issues, the artists seek to make the back-end more tangible by addressing often unseen tactics. As previously mentioned, this happens by making profile content and connected user data visible by using it in a different context. The game uses the "Facebook Connect" application (a freely available service from Facebook) and asks players for permission to access the following information (Plohman 2011, 240):

- Basic information: name, profile picture, gender, networks, user ID, list of friends, and any other information that is shared with others;
- Profile information: likes, music, TV, movies, books, quotes, "about me" details, activities, interests, groups, events, notes, birthday, home town, current city, website, religious and political views, education history, work history, and Facebook status;
- Photos and videos: photos uploaded, videos uploaded, and photos and videos of the user;
- Friends' information: birthdays, religious and political views, home towns, current cities, likes, music, TV, movies, books, quotes, activities, interests, education

history, work history, groups, events, notes, photos, videos, photos and video of them, "about me" details, and Facebook statuses;
• Posts in a user's news feed.

There were several reasons to choose Facebook as a platform instead of other social networking sites. Foremost, it was used because of its size and reach. With millions of active users worldwide, Facebook has become the world's most popular social networking service. At the same time, Facebook has also fuelled discussions about online privacy with its dubious policy changes, data leaks, and discrepancies between the way it markets itself as open and self-regulatory and how it actually functions as a multi-billion-dollar business that answers to its investors (Olsthoorn 2012). Another appealing and practical aspect of using the platform is that Facebook makes it easy and possible for anyone to access their user information, without checking by whom or why. This is possible with the so-called "Facebook application." The application does not run on the Facebook platform and is outside of Facebook's control, but it authorises access to user's data (De Valk 2011). *Naked on Pluto* uses the availability and manifestations of commercial applications to question the inner workings. It is through infiltration that the workings of the system(s) are exposed. This is also one of the reasons why the artists do not want to violate Facebook's regulations, because that would mean the end of the game, and would effectively halt their efforts to make the system more visible from within.

What happens to the conservation of an artwork when a restricted commercial platform that is not easily accessible is used, particularly when its regulations and terms continually change? If it were up to the artists, it would be possible. As mentioned, they document their entire process. All steps of *Naked on Pluto's* development are freely available. However, at this moment, it is not possible to gain access to Facebook's source code to ensure that that part of the game will function correctly. When working within a closed environment, one always has to deal with technical problems that cannot be controlled. Changes to the Facebook API might change data feeds, and in the worst case could lead to the breakdown of the game or the disappearance of data. For example, the bots that rely on data from your Facebook friends might not have access to the same data anymore, which affects the content and goal of the work since it loses the connection. For conservators, this is of course a problem that is hard to overcome. However, this is not the concern of the artists. As they see it, *Naked on Pluto* is a specific comment on Facebook and the state of social media at the time when it was developed. The game loses all meaning when that context changes.

Concerning future presentations, the artists emphasise the organisation of workshops with the game-engine instead of keeping the game technically alive. They also write about and add contextual information to the documentation of *Naked on Pluto*. It is important to note that this attitude signals the processual part of *Naked on Pluto* and, as I will argue in the upcoming sections, ensures its longevity, albeit in different forms. In the next section I describe open source strategies and analyse how these are used in *Naked on Pluto*, while showing how this way of working affects and benefits conservation. While exploring the value of open source, I argue for a practice that departs from the idea of the processual by stressing the significance and need for acknowledgement of distributed networks through which knowledge and practices survive.

Pros and cons of open source
Open source is based on and used as an engineering principle in which the software, code, instructions, and/or tools on how to work the code are open for anyone to use, change, or distribute. In the last decade, the use of "open concepts" has exploded to the point where the meaning of the word "open" can vary greatly.[6] It goes beyond this paper to go into the history and different voices that surround open source in more

detail; instead, I will show how "open" is used in *Naked on Pluto*,[7] and will explore in particular its challenges in relation to conservation.

Naked on Pluto is developed in Free/Libre Open Source Software (FLOSS), and made available under a GNU Affero General Public License (AGPLv3).[8] All of the software is documented on Gitorious, a free and open source web service for managing, sharing, and viewing git repositories (the data structures). Gitorious is a way of archiving code, and is also available as an installable web application so that third parties can use the interface in their own installations.[9] Other features of Gitorious are the ability to host/clone repositories, view changes, and leave comments. Using Gitorious allowed each of the artists to work independently, experiment within their clone, and push the changes to the main repository once they were ready (Plohman 2011, 240). In short, anyone, including museum staff, can use the material on the git repository as they see fit. A downside of open source is that (external) expertise may be required in order to understand and use the software.[10] A related challenge (as discussed previously) is that it can be hard to decipher, and is not always properly documented or annotated, making it difficult to understand why choices were made. As such, the learning curve of open source can be an obstacle, especially for those not familiar with the practice and ideology. This is a problem underlying many open practices. It is not easy to learn a completely new system, especially one that is often tweaked or changed to the point where multiple versions can consequently lead to compatibility problems. As Mansoux and De Valk explain, this is because, unlike many proprietary systems, open systems approach their users differently: "Its design is based on the assumption that users are capable of learning to master the system, instead of the assumptions that users are helpless" (2008, 11).

These challenges do not necessarily pose problems for conservators. For one, as open source code allows access, it increases possibilities for maintenance that can keep the work operational. Furthermore, the challenges posed by learning to programme or use open source software is countered by a lively community of users and developers that are active in helping others with their problems via mailing lists, forums, and IRC (Internet Relay Chat) channels. Another reason why open source sometimes poses problems is its incompatibility with some proprietary hard- or software systems. However, this is also a problem with many proprietary hard- and software. In addition, most proprietary systems use the concept of planned obsolescence, which means that a piece of software or technology has a limited build-in life span (Bulow 1986). Moreover, whereas the incompatibility in open source practices encourages out of the box thinking — i.e., looking for other possibilities when something is not working — the freedom of choice in many proprietary systems quickly comes to a halt when technology stops functioning, or worse, companies stop doing business. Without access to source codes, a programme cannot be developed further or adjusted to new needs. In conclusion, the use of open source strategies makes it easier for conservators to access the work, and thus maintain or recreate it.

However, one of the main parts of *Naked on Pluto* is not documented on Gitorious: the platform that the game works with, i.e., the data in and of Facebook. This means that if Facebook closes or changes its APIs, the game is useless since there is no more input data. A solution to this challenge can be found by looking at the function and distribution potential of open source, in particular as it is used in *Naked on Pluto*, and how these allow for different processes to happen.

Open source and the museum

Following the open source ideologies of the artist behind *Naked on Pluto*, the artwork can be characterised by the processes of distribution and re-use of concepts and ideas. This is an important issue for conservation, as it may have many consequences for the perception of the artwork (and, consequently, to the economic value of the work). Conservation thus faces two challenges: First, in what way can conservation work within the confines of a restricted system? And second, what are the consequences of dealing

with such a process, where parts can be copied, used, presented, and distributed freely and by everyone?[11] Whereas some museums have become accustomed to the idea that an artwork can no longer be presented with the original material or equipment, how will they handle open source? Who or what will be responsible, decisive, or accountable for artworks that are open (freely available for everyone to use, share, document, collect, conserve), dispersed, distributed, and dependent on people outside the scope of the museum?

To find answers to these questions, I organised a discussion with conservators, curators, and researchers in December, 2012. *Naked on Pluto* was used as an example to study the biography of a software-based artwork that depends on third parties, and functions on open source principles.[12] Although many interesting points surfaced, ranging from the method of questioning to the possibilities of technical preservation, it became apparent that museums find it difficult to deal with open licenses. The object-oriented way of thinking about collecting and conservation, and the processual way of thinking from open practices, where the authorial role is addressed differently, may clash.

From a licensing point of view, the question about ownership is not relevant, because if someone else modifies the work, it is no longer the same work, since one of the underlying rules of some open software licenses is that changes are credited. Modification can be made, but it would have to be credited as "based on *Naked on Pluto.*" This does not mean that the artists mentioned do not have a preferred way of exhibiting, or documenting, the work. It means that there are no fixed rules. As such, anyone can present, exhibit, preserve, document, or do as they see fit with the project without permission from the artists. Potentially, even an acquisition could happen just as easily, where a gallerist or distributor could sell a work to anyone interested. More importantly, the artists see the acquisition process in reverse: The process and the development is what they are paid for, and the outcome is for everyone else to use. This means that economic "acquisitions" at institutions are related to an engagement with the practice, and not to the outcome of that process. Put into practice, this would extend the role of the museum to one of producer, or facilitator, of artworks.

In summary, the way a work develops is informed by the "licenses" that are used. Even though they are not necessarily written down, further distribution and the future of the work could be influenced. Consequently, it is crucial to first understand the meaning and function of the "licenses" used and versioning methods before trying to describe and document a work. Also, the economic acquisition model would likely differ from other practices. For example, in performance or conceptual art, the "idea," "concept," or "instruction" of the work is acquired by museums. But in most cases the institute acquires a development — and possibly an evolving — process. What, then, are the consequences of this reversed practice for conservators? How is a process conserved?

Shifting roles: from artists to conservator and curator
The production of artworks by museums is not necessarily new; museums already have a tradition in commissioned artworks. However, in most cases (for example Whitney's Artport and Tate's online commissions) these works have a different status.[13] They are not part of the collection archive, which means that the museum is not required to take care of, or preserve these works.[14] Similarly, conservators are closely (re)tracing creation processes to understand which decisions were made and, consequently, how a work can be preserved. Although this may not be the final solution for net art, certain aspects are stable, such as some parts of the *Naked on Pluto* installation — for example the books, the marketing materials that are part of the installation and the written code. These traces can be presented in such a way that "form becomes attitude."[15] Such efforts need to recognise their contradictory or paradoxical status. As with documentation, they are reconstituent traces.[16] Next to these could be emulations of processes that open to new explorations and discoveries. As such, a museum moves from being a

custodian of "dead objects" to a place where conservation of the old goes hand in hand with production of the new. In this sense, an "open conservation method" means engaging with the work on its own terms, thus following different directions. In other words, by embracing variability, the core remains. The core connects to the value (and excitement) of open source that is connected to its practice through engagement in the developing process, its extension into the future, and the re-use (of parts) of the work.

Proposing that a work is open, and can be shared among many, challenges the museum's traditional focus on the original, or authentic work. As I have explained elsewhere, this is not to say that these works are not authentic (Dekker forthcoming). In short, with artworks that are networked and/or processual, authenticity can be identified in the relations between different components and/or artworks. In other words, the question is not whether museums can deal with the notion of a value-free artwork, but can the museum be FLOSS? When adhering to an open approach (in the sense of re-creation and reinterpretation), reinstallation is less of an obstacle. It would have to be acknowledged that multiple versions — or even parts of a work — exist and are scattered around different platforms. Freedom of choice is possible and likely leads to interesting results. This process shows itself already in the practice of curating. Firstly, even though it may be possible to preserve the technical aspects of net artworks, it becomes near impossible to preserve works that rely on third parties that use proprietary hard- or software. In these cases, the value of open source seems not to matter as much. This is because alternative solutions need to be conceived that are more likely found in collaborative efforts of curators and conservators considering both of their, and perhaps other, expertises. Secondly, in cases where a project is part of a larger continuum of other online or offline projects, the question of what constitutes a work is not always easy to answer. A process such as this is more about selection, organisation, and mediation — curation — than conservation.[17] Rudolf Frieling, curator at SFMOMA, describes a position where the museum as a "producer" is able to re-exhibit works via performative strategies, including commissioning other artists to conceive new installations for collected artworks (Frieling 2014). Thus, determining what and how an artwork continues is more important than what and how to preserve it. In these cases, documentation may guide the continuation of a process.

This leads to the conclusion that the conventional roles of artists and (museum) professionals are changing. Whereas the artist may still present the initial idea, and at times even guide the development of the work after its launch, in many cases and at a certain point(s) the artwork is distributed in a way that gives various parties control over the work. Besides challenging common concepts and strategies in presentation and conservation, these artworks also show that conventional roles are turning. Artists are not necessarily the main actors anymore. For example, the public can take over parts of the work. If the work itself is distributed in various versions, forms and platforms, knowledge from a wider perspective is needed to consider development, presentation, and possibly conservation of what has become part of a work. This is not to imply that the role of artists is less important; artists can provide insights that are hard to obtain without them. They are important sources to understand the intentions of the work, but their perspectives should not be limited to restoring the past. Equally, their knowledge should be used to enable an open future. In this sense, Frieling (2014) signals a new role for the museum as a producer of artworks that are validated by the artist(s). However, artists do not want to be involved in all cases. Unlike Frieling's suggestion of "an 'expanded performance' where the artist, the institution and the public are co-producers" (Frieling 2014, 156), the museum is more of a facilitator of development and processes.

It would be easy to say that, when acquired, net artworks will change the structure of the museum. Although this may be true, it is more fruitful to see how a new *modus operandi* will affect other, more traditional, works of art. Such a change in perspective will bring insight into practices that are inherently processual. At the same time, this will generate new knowledge within traditional approaches and methods.

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NOTES

¹ The web address is: http://naked-on-pluto.net.

² For more information see: http://pi.kuri.mu/naked-on-pluto/ (accessed May 2015).

³ See blog entry *Naked on Pluto*: http://pluto.kuri.mu/2010/08/26/bots-bots-bots/ (accessed May 2012).

⁴ Ibid.

⁵ http://facebook.com (accessed May 2012).

⁶ The amount of information on the meaning and use of open source is overwhelming. See, among many others, Kelty (2008) on the history and cultural significance of Free Software. For some outstanding publications regarding the use of open concepts in art, see the edited volume by Mansoux and De Valk (2008) and Ippolito (2002) on why art must be free (as in free speech).

⁷ One of the main challenges concerns the ideology that underlies the definition of 'open'. In his dissertation, Mansoux (2015) analyses and reflects upon the plurality of, sometimes overlapping, sometimes contradicting, ideological and ethical interpretations of free culture practices.

⁸ This copyleft license is aimed towards server side applications and they specifically choose it to highlight and contrast the closed nature of Facebook's source code (Waelder 2014). For more information about this specific license, see http://www.gnu.org/licenses/agpl-3.0.html.

⁹ This is one of the main differences from GitHub, another popular online web service with similar features that appeared around the same time (both 2008). Another difference is that GitHub consists of mostly convenience features, while Gitorious focuses on community-based features, which helps build a community around a project.

¹⁰ This is also true for the reading and understanding of the structure of Gitorious, which is not always apparent to an outsider.

¹¹ Some solutions may be found in the conservation of games. The challenges of the conservation of gaming have attracted some attention among scholars and researchers. See, for example, Kirschenbaum et al. (2009); Winget (2008); and Lurk et al. (2012). The former two focus specifically on approaches to emulation that are developed in digital communities that enrich the object centered method of institutions with additional layers of information, from anecdotal narratives to contextual descriptions. Lurk et al. (2012) focuses on (mass) content preservation through emulation instead of selection of discrete aspects. However, there are no case studies yet of the conservation of processes.

¹² The discussion was part of the working conference *Collecting and Presenting Born-Digital Art* (CPBDA). This particular group, moderated by Gaby Wijers (LIMA) and Paulien 't Hoen (SBMK), with special guest Pip Laurenson (Tate), discussed the process a work goes through when it becomes part of a collection and the information that is needed to keep the artwork alive in the future. They involved different roles and disciplines from artist to registrar and from curator to conservator. For more information, see http://www.baltanlaboratories.org/borndigital/ (accessed August 2013) and Dekker (2013b, 3-11).

¹³ For more information see: http://whitney.org/Exhibitions/Artport and http://www2.tate.org.uk/intermediaart/archive/net_art_date.shtm (accessed May 2015).

¹⁴ For more information about these kinds of contracts, and the difference between collection and commissioned work in relation to the Whitney Artport, see Verschooren (2007, 5-6). This is not to imply that museums are not trying to change this situation. For example, Whitney Artport (curated by Christiane Paul) is trying to bring the commissioned net artworks into the collections. Similar initiatives are undertaken by other museums. For example, initiatives of the Variable Media Network and Matters in Media Art. <?> This is a pun to the exhibition title "When attitudes become form," which was curated in 1969 by Harald Szeemann. He described a "new" group of artists who were less interested in making final objects and more interested in showing the artistic processes in an "exhibition." As he described, "The major characteristic of today's art is no longer the articulation of space but of human activity; the activity of the artist has become the dominant theme and content" (Szeemann 1969). According to Szeemann, the attitude of the artists greatly determined the form of the work; the practice of the artists that I am describing here turns this statement around.

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¹⁶ For information about the changing meaning and function of documentation in conservation, see Dekker (2013a).

¹⁷ It could be argued that this is just as much the practice of a conservator. Whereas I do not deny this, in cases of "versioning" the next instance of the artwork relates to production and facilitation of the new rather then treatment of the "old."

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