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(Re)coding the past for the future

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Cultural heritage, (de)colonialism, 3D scanning and printing, media art, digitization, archaeology, oil

Abstract

In light of increasing social unrest and wars around the globe, a growing number of not-for-profit organizations and commercial businesses are trying to fill the gaps that befall cultural heritage sites due to bomb strikes and looting. 3D scanning and printing are among the main vehicles to restore cultural heritage by generating detailed copies of an artifact, building or even site. In terms of accessibility and preservation there are undeniable benefits, but in what ways do these technologies affect cultural heritage politics? While commercial businesses profit from selling copyrighted files, or by providing restricted access, several artists' initiatives try to counter these practices. Even though they use similar technology, their aim is to empower people by giving them control over their lost heritage. These 'decolonial' practices signify a desire to overcome or resist a colonial conditioning, favoring collaboration and freely sharing over individual and/or monetary gains. In the process, such examples challenge the conventional meaning of value, which is dictated by the market and based on copyrights around authorship and ownership. Instead what is valued and becomes valuable is belonging to a wider community in which control over (re)use is embedded in the network.

Introduction

Trafficking of cultural heritage is nothing new. It ranges from the looting of archaeological sites, theft from cultural heritage institutions and private collections, to the displacement of artifacts due to war. Recently a new tactic was added to this list: filming the destruction of 'fake' ancient relics, while the originals are quickly and illicitly traded on the profitable market in ancient artifacts. Following the

release of videos depicting the 'scene' by ISIS, many outraged Western nation states responded by claiming the preservation or rebuilding of some of the remains, ignoring their own role in these (fake) demolitions, and reinstating conventional methods of appropriation. At the same time, a new player entered the marketplace: commercial companies specializing in the 3D modeling and printing of ancient statues.

The possibility of generating detailed copies of an artifact without having to physically engage with it brings undeniable benefits in terms of its accessibility and preservation. It allows people access to lost 'treasures': a digital model can capture the appearance and shape of an object in a way that a 2-dimensional representation could never do. But do these technologies affect cultural heritage politics? Rather than being committed to the preservation of cultural heritage it could be argued that commercial companies profit from selling copyrighted files. Drawing attention to the importance of a freely shared memory and the power of technology, I focus on several practices that counter these practices. While using similar tactics their aim is to empower people who have lost their heritage, thus proposing a decolonialist practice. These methods signify foremost a desire to overcome or resist a colonial conditioning, favoring collaboration and sharing over individual and/or monetary gains. In the process, such examples challenge the conventional meaning of value, which is dictated by the market and based on copyrights around authorship and ownership. Instead what is valued and becomes valuable is belonging to a wider community in which control over (re)use is embedded in the network through which ideas, objects and methods circulate as a produced, shared, and distributed resource.

Recognizing that the term 'decolonial' might too closely reference the period of actual decolonization when nation

states loosened their hold over their colonies, the prefix 'post' that is often used, denies what is still present: a power imbalance now perpetuated by the use of high-end technologies. Decolonialist efforts show why it matters when tech companies or influential Western institutes conserve or rebuild cultural heritage, rather than someone who was directly affected by the destroyed or otherwise lost buildings and artifacts. In this way, old questions remain urgent. By exploring several examples I hope to answer one of them: how are cultural memories produced and configured, to whom do they belong, what power structures do they embed, and what values do they engender?

Giving form and shape to the invisible

The use of digitization techniques moved from the initial digitization of paper, photographs and forgotten objects in museum collections to developing detailed 3D models from existing, damaged or destroyed artifacts, statues or even archaeological sites. In some cases these techniques have been used to test the boundaries of art and heritage collections, such as Oliver Laric with his project *Lincoln 3D Scans* (2012) [Fig. 1], which he developed at the invitation of The Collection in Lincoln. The project can be seen as a continuation of Laric's earlier works, for example, *Kopienkritik* (2011) and *Versions* (2009-present) in which he questions the value of copyright and ownership. At times entertaining and fun to see, the projects are interesting and provocative in discussions about copy vs. original, appropriation and the value of authenticity. As Laric says of his latest attempt, *Lincoln 3D Scans*: 'the project aims at making the collection available to an audience outside of its geographic proximity and to treat the objects as starting points for new works'.^[1] Scans of objects in the collection can be downloaded copyright-free from a dedicated website, and new versions are presented in the online gallery. The collection is still growing and shows how Laric's method of freely sharing and re-using inspires many to continue the creative process and give new meaning to the objects. Such 'radical' appropriation is less visible in more traditional

museums and archives. While these might provide access to their collections and even to free downloadable 3D scans, institutes that allow the public unrestricted access to their objects are rare. Often what is available are simplified models or merely a small selection of everything that is scanned. On the one hand, this brings out the dilemma of power: losing control over their objects is not something most collectors are willing to risk. Yet, it needs to be acknowledged that high-quality 3D scanning is still an expensive process that not everyone has access to.

This became clear when in December 2015 two artists, Nora Al-Badri and Jan Nikolai Nelles, presented 'The Model Unwrapped' [Fig. 2] at Europe's largest hacker event, the Chaos Computer Congress in Berlin. They placed a 3D model of a bust of Queen Nefertiti from the Neues Museum in Berlin online that could be downloaded for free and used. They claimed the scan was made with a mobile device (Wilder 2016), but the quality of the scan cast doubt on whether or not the scan was genuine. The project, which became known as 'The Other Nefertiti', attracted widespread attention and became a discussion point for professionals.^[2] Setting the discussion about the genuineness of the scan aside, the goal of the artists was to return the statue from the Neues Museum in Berlin to Cairo. Although the Nefertiti bust is one of the most copied objects from ancient Egypt, which imbues any discussion or use with additional excitement, for the artists it 'represents all the other millions of stolen and looted artifacts all over the world currently happening, for example, in Syria, Iraq, and in Egypt'.^[3] Since the museum does not allow direct access to the statue the artists' aim was to make it public again, as they state on the website: 'With the data leak as a part of this counter narrative we want to activate the artefact, to inspire a critical re-assessment of today's conditions and to overcome the colonial notion of possession in Germany'.^[4]

Besides important issues of technical capabilities and copyrights, what this example highlights is the call for provenance. Provenance is a fundamental principle in archival and conservation practices but is

increasingly important in situations where there is little oversight of where the information comes from and who approved it. One way to ensure a more reliable process of provenance could be to open up to the public instead of obstructing access – as Laric emphasizes – and also allowing people to set the terms. As Bethany Nowviskie, Director of the Digital Library Federation, argues, this includes ‘actively configuring classification systems, search-and-discovery interfaces, or other tools to express independent narratives of the world’ (Nowviskie 2016). Examples can be found in activist attempts, for example, in projects where a reconstruction becomes a political and social vehicle to address misconduct (the project *Saydnaya* by Forensic Architecture in collaboration with Amnesty International), or where data is crowd-sourced for use as evidence in potential future trials (*The Syrian Archive*).[5] What these projects share is a desire to use technology as a tool to make visible and open up content or conduct that is neglected, forgotten, discarded or deliberately concealed. In this way, it makes sense, as also Nowviskie points out, to ‘take the notion of cultural heritage not as content to be received but also as technology to be used’. This means that artifacts and events are no longer merely about the past, but become tools that can be used to imagine alternative pasts and futures (Nowviskie 2016). Several major initiatives have been started in recent years to provide access to destroyed cultural heritage. Perhaps one of the best known is Google’s project *Wonders of the World* (2012-present).

Digitization and modern colonization

In continuation of Google Street View, in 2011 Google set up Google Art Project (in 2016 renamed Google Arts & Culture). The project is dedicated to showing the interiors of art and heritage institutes (Sood 2011). Initially employing the same technology as used in the Google Street View Car, with the development in 2016 of highly specialized digitization techniques (referred to as the Google gigapixel art camera), people can move through the gallery and zoom in on specific paintings or objects. At the highest resolution, the faintest paint strokes and the minutest cracks in the

paint can be seen: details that would be hard to discern in the museum itself. Preceding the success of Google Art Project in November 2009, Google made a public manifestation of their digitization project of the collection of the Iraq National Museum in Baghdad, owner of the finest Mesopotamian collections in the world.[6] According to Google’s chief executive Eric Schmidt the aim was: ‘to make the images and the ideas of [Iraq’s] civilization available to all the people of the world’ (Nordland 2009). Although perhaps responding to the international indignation at the plundering and destruction of many objects in the museum a few years earlier, in particular in 2003 after the American invasion, Google’s initiative nevertheless provoked controversy and debate around the world.[7] Even though Google stated that they would bear all the digitization costs, such philanthropy often comes at a price. Google’s endeavor to digitize the ‘treasures of the world’ enables many to see things they otherwise never would, but it also raises several questions, for example, what happens when people are referred to corporations instead of public institutions for such information and services?

All corporations exist to make a profit, and in the case of Google this is by providing third parties with access to Web users, and profiting from charging for that access.[8] To attract users Google needs content. Through content it can generate traffic, track users and generate even more data.[9] Data and database structures are what make Google different from archives and museum collections; together these comprise a carefully built entity for preserving culture and memory, while a database reacts to input and searches for information by making the most efficient connections. The more data there is the better the connections and predictions become, and the more profitable it is. It is therefore not surprising that Google wants its users to remain inside their website. Inside Google Cultural Institute you can do all kinds of things with the material – zoom in and out, rotate, make selections, curate your own exhibition framed by your own descriptions, and invite friends to come and see it – but you cannot download the information, place it on your own website, share it, or re-use it. For that would mean that

Google no longer controls the data, losing it revenue. Many refer to this type of technology-enabled access as a new form of colonialism: a commercial, digital or techno-colonialism. Some even compare this to the motivations behind previous colonial collections, where profits were made from privileged access to certain kinds of information through exploration, discovery and collecting (Juarez 2017).

Recently several counter-movements have started, for example, the non-governmental collaborative initiative #NEWPALMYRA which collects data from international partners, and uses it to create a digital reconstruction of Palmyra. They present workshops about the process and share the models and data in the public domain. The project is not to be mistaken for the reconstruction and exhibition of Palmyra's Arch of Triumph in Trafalgar Square in London for World Heritage Day in April 2016. This project gave little credence to the complex history and context of the artifact. Moreover it reiterated and reinforced a colonial mindset, reasserted by Boris Johnson, when he was Mayor of London, in which Western society is portrayed as civilized and other societies, in this case Muslim, as 'barbarians' (Brown 2016). As critics observed, the role of the West in the rise of ISIS, which led to the destruction of these statues, was ignored. In this sense, and as also concluded by archaeologist Nour Munawar: 'reconstruction can be as destructive as the destruction itself' (Munawar 2017).

Regaining control over cultural heritage

Similar criticism can be found in the work of Iranian/American artist Morehshin Allahyari. In her project *Material Speculations: ISIS 2015-2016*, she uses 3D modeling and printing to reconstruct relics that ISIS destroyed in Iraq [Fig. 3]. The work was motivated by the videos that ISIS released of the destruction – or at least removal – of many objects in the Mosul Museum in Iraq and of the ancient statues and artifacts in the 2000-year-old UNESCO World Heritage Site around Hatra and in Nineveh, an ancient Assyrian city of Upper Mesopotamia. Thinking of a way to

counter their acts, and reflecting Boris Buden's appeal to 'make the memory a site of political struggle, or better, a political cause' (Buden 2014:8), Allahyari recreated twelve statues and artifacts as a way to provide 'a practical and political possibility for artifact archival, while also proposing 3D-printing technology as a tool both for resistance and documentation'. [10] Based on extensive research and discussions with archaeologists, historians, and Mosul Museum employees, she gathered as many images, videos, and maps about the artifacts as she could. However, lacking the material needed to create a 3D visualization, she created her models from scratch based on the images in exhibition catalogues, tourists' snapshots and her imagination. She placed a flash drive and memory card with all the research inside each of the printed resin models, creating 3D time capsules: data included the artifact's history and background, details of its destruction; the 3D file of the object; the documentation of Allahyari's modeling and printing process; the e-mail correspondence with specialists; a list of literature she consulted; and ISIS' self-published videos of their demolition.

The objects are created by 3D printing the models in resin layer by layer. UV light hardens the material into a translucent object. Some attribute a ghostly quality to the objects that 'evokes the dynamics of presence and absence, lost and found, disappeared and reappeared, ancient and contemporary' (Sandals 2016). Speculating on the past and the future Allahyari moves beyond a merely metaphoric gesture by making the different models and research available for download. By allowing people to print their own copy and construct their version of the past, she proposes a new method for the 'reconstruction' of history. By placing the 'reconstructions' between quotation marks, Allahyari emphasizes that these are not real replacements, because she believes there is no 'honest way that one can replace these artifacts' (Lorenzin 2015). Rather than preservation she regards her projects as a form of transformation suggesting a continuation of the destroyed objects.

In light of discussions around iconoclasm, the project could be seen as

reinforcing Western values of cultural heritage,[11] in which instead of idolatry, the collecting and presentation of (sacred) artifacts is accepted as the preservation of the past for educational, cultural or scientific purposes.[12] In their videos of the destruction of sculptures and artifacts, ISIS repeatedly includes quotations from the Qur'an condemning the worship of any type or form of physical derivative of the immaterial God. In line with Sunni Islamic tradition, also strictly adhered to in Saudi Arabia which follows the Salafist branch and where consequently all statues and cultural heritage are (quietly) being destroyed,[13] it could be argued that their destruction merely reflects 'a consistent objection to religious mediation, whether as spiritual aspiration or material practice' (Flood 2016, 118). However, ISIS' use of video and photography to record the destruction, and their distribution over the Web as a religious act is only one part of the story. At the same time, their actions of 'image-smashing and image-creation' are closely following the trend in contemporary warfare to depict and fight a war through images (Mitchell 2011).[14] This is strengthened by analysis of the videos which shows that it is likely that some the statues and structures were simply replaced with plaster models before being blown up, while in the meantime the real objects were illicitly traded (Stubblefield 2016). Similarly, Western museums neutralize public icons and other religious artifacts by turning them into art, making them highly profitable entities (Gell 1998). Not surprising, the destruction of such value (monetary and cultural) generates a lot of attention, outrage and counter acts in which the statues and their physical and digital reconstructions circle around in perpetuity gaining in value with every cycle. At the same time, shown in cities far from their origin or only accessible behind high pay walls, they disappear from public sight and use. National regimes, public museums, international commerce and terrorist groups are all implicated in hijacking cultural heritage for polemical purposes.

Providing a practical and political alternative archival method for endangered or destroyed artifacts with her project *Material Speculations: ISIS*, Allahyari tries to expose

the hypocrisy inherent in the inconsistent (re)actions of the different parties involved in cultural heritage. While acknowledging using similar tactics as ISIS, she says: 'The objects we researched for *Material Speculation: ISIS* are now free to flow as zeroes and ones; as digital files. And those files can be altered, edited and reconstituted in countless materials – or no materials at all – able to jump across continents and cultures as easily as the videos of ISIS carrying out their destruction in the first place' (Lorenzin 2015). It could be said that she participates and perpetuates the narrative of cultural heritage, but Allahyari clearly resists the symbolic and economic value attached to the original or authentic object by open sourcing her research and files. On the one hand, by creating a free and shared system, Allahyari challenges conventional Western methods of preserving history, while on the other, by proposing 3D-printing technology as a tool for resistance as well as documentation, the project reflects the hope that technology will help to fill the gaps caused by the ongoing destruction. However, by distributing the project in open source it is also a critique on the proprietary infrastructure in which most 3D printing is now controlled by Western tech companies who own the copyright on much of the world's cultural heritage – or as Google framed it 'the treasures of the world'. As mentioned, the wording, the exclusivity and the hierarchies that are presented within these constellations highlight a modern version of colonialism that instead of nation states is now performed through technology and commercialization. In an attempt to explore methods of de-colonization, Allahyari offers a counterexample in which inherent qualities of technology such as easy distribution and sharing are part the work rather than merely tools that also empower the disempowered in the process. Whereas Google Cultural Institute and many other commercial 3D companies lack a defined or ethical position towards the material they use, Allahyari shows the importance of the 'social life' of things.[15] By documenting and presenting the social and cultural changes the objects have endured, she emphasizes how they acquire value and meaning. This process of value and evaluation is no longer fixed, but

moves and changes with every new iteration, thus not only averting destruction but also opposing imposed systems of description and classification. Rather than attempting to preserve cultural heritage Allahyari provides forgotten or destroyed objects, and their users, with agency to re-act in the world.

Oil

When asked to exhibit the project Allahyari suggests, among others, to create miniature models in real time by using a small customer 3D printer. If they wish the visitors can take the results back home. While this gives prominence to the distribution of the concept and the project, it also introduces the issue of using plastics, and in particular the debate around the black liquid of oil. Petrochemicals form the basis of many of our daily goods and while Allahyari applies the problematic 3D scanning and printing of many Western cultural heritage projects in the service of an alternative model, the ethics of the use of raw oil for 3D printing bring up other concerns. One of the main criticisms is that the contested fossil is at the root of many of the conflicts that Allahyari tries to critique. However, this is not something she has overlooked. *Material Speculations: ISIS* is also part of another project that Allahyari initiated with Daniel Rourke, *The 3D Additivist Cookbook*. The project explores the ethical implications of 3D printing. They coined the term #additivism, a merge of 'additive' (the technical term for the 3D printing process) and 'activism', to reconsider 3D printing as a medium. Rather than looking for ways to recycle existing material, and taking inspiration from among others Donna Haraway's notion of the Chthulhucene (2015), they want to focus attention to the urgency of the problem by addressing the core of the issue: people's relentless dependency on oil. As Allahyari mentions: 'Let's embrace this shitty thing we are living in instead of thinking about solving solutions solely from that environmentalist, singularity way of thinking about the future. Let's think about the horror we are already in, embrace the plastic, and think about another way to deal with it'

(Simensky 2015). But what happens when substituting decolonial with peak oil?

Petro-networks are extensive and their flows and leaks connect in many ways. Several artists (groups) have protested against the use of the so-called 'social licenses to operate' by companies such as BP and Shell who have large sponsorship deals with prestigious museums and cultural institutions [16]. Whereas it has become socially unacceptable to connect anything to tobacco industries (who were playing major roles before), oil pertains a more obfuscated image, which is partly due to its seeping nature that perpetuates itself in multiple shadow economies while surfacing in manifold social realities.

Rather than repressing or looking for other solutions, perhaps there is indeed a need to seize oil at its most vulnerable spot: in the unobtrusive and insipid everyday products, in affective and seductive objects, and in its exotic allure. Exploring these combinations and legitimating them as necessary evil, forces us to reconsider its consequences.

Conclusion

Overshadowed by political, social or even humanitarian issues cultural heritage has become a global business, in which conflicting acts and paradoxical statements constantly succeed each other. In an attempt to give control back to those whose heritage has been taken, some artists challenge the authority over world heritage. In these practices cultural heritage is presented as an open-ended process characterized by transformation, collaboration and sharing. In such an environment, an archive or collection is created in collaboration with communities and users, favoring local knowledge over standardized metadata and categorization. It supports a sense of belonging that is rooted in social exchanges and where value is placed on sustaining productive relations rather than on the objects. This dynamic model considers the network of ideas as a resource that is produced, shared and distributed, while giving credence to all involved. Such a method of exchange will reveal opposing versions of the past and entice thinking about new values and shape decision-

making. This process is not merely focused on sustaining what is made, but supports speculation and unrestricted re-making. This implies looking at cultural heritage in the future tense: rather than focusing on what someone else decided, what can emerge through its renewed use. It also requires the expertise of archivists, conservators and archaeologists to revive the process once initial interest fades or is threatened, or to mediate between systems and users. To enable this, it is imperative to comprehend and own the infrastructure that is available in order to experiment and apply the potential of technology in the best way possible.

References

- [1] <http://lincoln3dscans.co.uk/>. The scans can also be downloaded from My Mini Factory; a website that launched in 2013 as a curated social platform for 3D printable objects with the aim to “empower creators to share digital objects with 3D printer owners around the world” <https://www.myminifactory.com/>.
- [2] See, for example, Voon (2016).
- [3] Al-Badri, cited in Voon (2016).
- [4] <http://nefertitihack.alloversky.com/>. Accessed August 15, 2017.
- [5] See <http://www.forensic-architecture.org/case/saydnaya/> and <https://syrianarchive.org/>.
- [6] A few months before Google’s announcement, Italy’s National Research Council presented their online vision of the museum’s collection to show the history of Iraq and interpret its historical and cultural contribution to global cultural heritage (their digitization efforts were made possible with an extensive grant of nearly one million euros from the Italian Ministry of Foreign Affairs). Italy’s efforts could be seen as highly selective, as they wanted to share a particular point of view, showing only certain aspects of the museum and its collection. For more information, see: <http://www.virtualmuseumiraq.cnr.it/prehome.htm>.
- [7] Art historian Thomas Stubblefield (2016) provides an interesting perspective on the way iconoclasm is made affective in today’s warfare. Giving a detailed analysis of a series of demolitions in Iraq and the way they were subsequently portrayed and disseminated through mainstream media shows how these acts advance specific political agenda of terrorists and regimes.
- [8] It is noteworthy to point out that Schmidt’s visit to Iraq was ‘part of a delegation, led by Peter Pace, the former chairman of the Joint Chiefs of Staff [US Marine Corps], to encourage business development in Iraq’ (LaVallee 2009).
- [9] For an in-depth analysis of Google Cultural Institute and their cultural endeavor in relation to their business model read ‘Powered by Google:

Widening Access and Tightening Corporate Control’ by Schiller & Yeo (2014).

[10] <http://www.morehshin.com/material-speculation-isis>.

[11] Allahyari is fully aware of this tension, and uses it to her advantage. For example, in the public zip of *King Uthal* she titled each of the images in the ‘Destruction Images’ file, which when read in succession say:

Ultimately.the.only.way.to.stop.the.destruction.of.Iraq.and.Syria’s.cultural.heritage.is.to.stop.the.socalled.War.on.Terror.and.the.military.invasion.of.the.MiddleEast.Because.everything.is.a.cycle.and.nothing.can.be.truly.done.without.breaking.this.Cycle.

[12] This perspective is taken up in many other non-Western countries and also by most Islamic countries, the main discussion in the latter belief system is still around 3D statues. For more information, see Flood (2016).

[13] See, for example, Osser (2015), and on the legality of destroying cultural heritage, see Wangkeo (2003). At the same time, Saudi Arabia has organized several traveling exhibitions of pre-Islamic sculptures and other antiquities from its heritage (Flood 2016).

[14] Art historian of Islamic cultures Wendy Shaw proposes an additional way of considering the videos. Regarding them as creative acts rather than a (war) crime, and analyzing the narratives that give the destruction its power, she argues, might provide ‘a more inclusive, more complex understanding of archaeological legacies beyond the paradigm of universalism’. From such a perspective, she says, ‘the video documentation of the destruction of the Mosul Museum becomes an act of creative destruction, suggesting modes of heritage as invested in the local as the global, in absence as in presence, and in listening against the grain to the multiple messages vested in symbolic action’ (Shaw 2015).

[15] I borrow the term ‘social life’ from Seely Brown and Duguid. In their book *The Social Life of Information* (2000), they argue for a stronger emphasis on the context of social networks around information. Information, they argue, only acquires meaning through social context.

[16] See for example the resources on the activist and education research platform ‘Platform’, <http://platformlondon.org/oil-the-arts/>.

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