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**Abstract**

This paper explores the perspective that, in working towards a truly sustainable preservation of the past, conservators need to engage with uncomfortable changes to allow the intentional and deliberate introduction of artistic creativity into conservation. It aims to set out certain examples of creative practices that are nurturing sustainability within conservation and that provide the evidence and justification for launching *creative conservation* within conservation theory and ethics to create a new conservation ecology. This new approach correspondingly reflects recent theoretical developments within the broader field of heritage studies. However, conservation professionals tend to be conservative and are reticent to allow artistic creativity to guide their conservation activities in an explicit and intentional manner.

**INTRODUCTION**

*To achieve long-term sustainability, it is necessary to strive for a green economy and come up with solutions to address limitations to resource footprints. This will require innovations across the board and creativity in all fields. Creativity and sustainability are closely linked.*

Hans d’Orville (2019, 65)  
Former Assistant Director-General for  
Strategic Planning of UNESCO

Creativity is central to any human activity, driving imagination, invention and creation. It is also intimately interconnected with sustainability, as Hans d’Orville clearly expresses, since people need creativity to cope with new and alternative solutions for sustainable development.

This paper discusses the issues of sustainability, sustainable development and creativity. It is particularly concerned with the affordability of creative thinking in caring for cultural heritage that has suffered degradation, deterioration or unrepairable destruction. As there is no apparent consensus on the definition of sustainability, sustainable development and creativity, this study will begin by discussing the terminology and the ways in which this topic relates to debates that have emerged in conservation and critical heritage studies over the last decade.

The meaning of sustainability and sustainable development in the context of this paper is intrinsically connected to that set out in the 1987 Brundtland World Commission Report *Our common future*, which defines it as development that ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’ (United Nations World Commission on Environment and Development 1987, part I, point 3, paragraph 27). This has evident links with cultural heritage conservation and its mission to preserve cultural heritage for future generations who may value it as much as we do (Cornelius and Högberg 2021). Moreover, in line with debates on inter-generational justice in conservation (see Taylor 2013 and Henderson 2022), and the need to foster symbolic and social relationships with communities in the present, the authors also consider sustainable conservation processes to be ones that balance present and future access.

As Camarero et al. (2019, 145) put it, the concept of creativity ‘remains a somewhat hazy concept, the boundaries of which prove hard to define’. In this paper, creativity is considered a fundamental human trait that allows people to use their skills and imagination to produce or create something, artistic or otherwise (covering both technical/scientific and artistic creativity). Both types of creative practice are also defined in the *Creative economy* report published in 2010 by the United Nations Conference on Trade and Development. This report defines artistic creativity as involving ‘imagination and a capacity to generate original ideas and novel ways of interpreting the world, expressed in text, sound and image’ and scientific creativity (also used to mean technical creativity herein) as involving ‘curiosity and a willingness to experiment and make new connections in problem-solving’ (UNCTAD 2010, 3).

### Creativity and conservation

While much has been said about the conservation-sustainability nexus, it can be argued that the power of creativity in nurturing sustainable development in conservation studies has been overlooked.<sup>1</sup> Even though conservation has always been inherently creative, this aspect has been somewhat obscured. Indeed, as stated by Hanna Hölling (2017, 158), for decades the ‘creative side of conservation and restoration has been banned from the day-to-day repertoire of conservators’ and restorers’ activities’.

As far back as the mid-20th century, and in the wake of the devastating Second World War, the Italian architect Renato Bonelli (1911–2004) defined restoration as ‘a critical process, and then a creative act, the one ... an intrinsic premiss of the other’ (Bonelli in Jokilehto 2018, 275). According to Bonelli in his seminal paper ‘Il restauro architettonico’, originally published in 1963 in the *Enciclopedia universale dell’arte*, when the figurative image is interrupted by visual destruction, critically controlled fantasy and creativity are needed to recompose the missing parts and rediscover its complete unity, or *vera forma* (Bonelli 1995). Thus, creativity is applied to re-establish the potential unity of the work of art in the technical sense of problem-solving. The old is not transformed or replaced by the new and freely created. Creativity is constantly critically rehearsed.

The fact is that conservation has always creatively acted upon artworks, as conservators constantly seek to fill in or engage with lost materiality, contending with the (re)creation of both tangible and intangible aspects (Pane 1944; Carbonara 1976; Hölling 2015a, 2015b and 2017; Jokilehto 2018). For a number of authors, however, only creativity applied in the technical sense of problem-solving is acceptable (Urbani 1996, Price et al. 1996, Muñoz-Viñas 2002, Domínguez Rubio 2020). This form of creative practice is not so straightforward. Indeed, as expressed by the sociologist Fernando Domínguez Rubio, the work of the conservator is always creative, as it is a mimeographic labour of care, in that the conservator is devoted to ‘creating sameness’ (Domínguez Rubio 2020, 40). This means that the conservator is always creating the same work (as intended by the artist) and not a new one. Therefore, as he vividly emphasises, conservators are not typically permitted to exceed the boundaries of mimeographic labour

(technical creativity) and to enter the ‘sacred domain of neographic labor [artistic creativity] reserved for artists’ (Domínguez Rubio 2020, 72). Drawing on this analysis, it is thus unsurprising that the conservator is still tasked with doing his/her work invisibly, especially if we take into account the theoretical developments we have seen in the last thirty years, which have deconstructed notions of neutrality, objectivity and, critically, invisibility (Villers 2004; Brooks 2008; Étienne, pers. comm., 2013; Peters 2020; Miller 2021; Nogueira 2022).

In this paper, the realm of invisibility is left behind; it demonstrates that the sustainable future of cultural assets, primarily those severely damaged, can be dictated by our success in *intentionally* and *visibly* practising artistic creativity. The authors argue that conservation studies need to extend beyond the traditional (and often invisible and technical) creative art of the conservator, mainly by positing the emerging possibilities of embracing artistic creativity within the framework of the *creative conservation* approach under development since 2012 by conservators and researchers at the Technology, Restoration and Arts Enhancement Center (TECHN&ART) at the Polytechnic Institute of Tomar (IPT) in Portugal (Triães et al. 2013).

### CREATIVE CONSERVATION: INTRODUCTION TO A NOVEL APPROACH

The idea of developing a new kind of heritage conservation – creative conservation – emerged while searching for new approaches to recover, preserve and communicate artefacts that were severely damaged or otherwise thought lost and/or somewhat useless (but nevertheless of historical and/or cultural significance). Inspired by industrial heritage, creative conservation was thought of as a way to endow these artefacts with an afterlife, incorporating new materials, meanings and significance. At the core of this framework is the view that, despite their apparent uselessness, such artefacts establish meaningful connections with a community when time, effort and creativity are invested in them. Creative conservation is not applied to create a new artistic product; rather it is concerned with creating an intentionally creative conservation (by)product. In this sense, creative conservation is not expected to:

1. Transform or alter the material fabric of existing objects or fragments beyond common acceptable limits and/or take over the artist’s role.
2. Re-establish the artwork/artefact in its original context, usage or meaning. Instead, these are considered unretrievable: creative conservation is only to be applied when traditional conservation-restoration models are unsuccessful.
3. Contribute to the perspective that everything should be preserved and maintained, as some may think. Instead, it encourages the creative transformation of certain objects or fragments so that others can be disposed of, thereby promoting the sustainable preservation of the past.

To define it in a couple of sentences, creative conservation can be said to be a framework that promotes artistic creativity in its intentional application to the creation of a new and innovative conservation (by)product, which

might be an installation, an exhibition, a performance or an object, among many other, yet to be envisaged, possibilities. This new creative approach brings together original materials and an innovative interpretation that establishes new meanings for these materials while fostering their sustainable preservation.

## CREATIVE CONSERVATION IN PRACTICE

The above definition of creative conservation opens the way to plenty of interpretations about the challenges and limitations of this approach. These limits are particularly elusive when examples of interventions are considered that could have been deemed creative in the past, sometimes with unexpected consequences and/or leading to intense ethical debates. This section expands on the definition of creative conservation by giving some examples of what it is, what it can be and what it is not, starting with the latter and the case of the facsimile of Veronese's *Wedding Feast at Cana* in the monastery of San Giorgio Maggiore in Venice.

In 1562, monks commissioned Veronese to produce a 70-square-meter trompe-l'oeil canvas to cover the entire rear wall of the Abbey's refectory. The painting illustrated the biblical episode of *Wedding at Cana*. In 1797, during the Napoleonic occupation, the painting was seized, cut up into sections, sent to Paris for re-assembly and placed on display in the Louvre. The canvas has yet to be returned. In August 2007, a facsimile produced using (at the time) sophisticated digital technologies was assembled and placed in the refectory following a suggestion by the sociologist and philosopher Bruno Latour. According to Latour, Pasquale Gagliardi and Pedro Memelsdorff, editors of the volume *Coping with the past. Creative perspectives on conservation and restoration*, the 'new intimacy with works of art created by these technologies reveals unexpected aspects and potential, and in some cases allows us to study them more freely and more creatively' (Gagliardi et al. 2010, xvi). Although technical creativity was undoubtedly fundamental to the problem-solving process of creating the facsimile, this was not an example of creative conservation. The goal was to create a copy that was indistinguishable from the original and not to repurpose an original piece that was damaged beyond repair. According to cultural historian and geographer David Lowenthal:

The replica *Nozze di Cana* restores the original integrity of that other work of art, the Palladian interior. Moreover, the painting is far better seen in Venice. Viewing in Paris is distorted by nearly obtrusive doors, by the selfie-addict *Mona Lisa* mob that precludes contemplation. In most ways, the replica is more faithful to the original than the physical original. (Lowenthal 2019, 33)

Another known example of a very creative approach to conveying cultural heritage comes from the Operation Night Watch at the Rijksmuseum. In this case, artificial intelligence (AI) was used to reconstruct the missing sections of Rembrandt's *The Night Watch*, with a copy of the work by Dutch painter Gerrit Lundens serving as a reference. The missing parts were printed and mounted alongside the original painting (Escalante-de Mattei 2021, Lu 2021). In this case, AI was identified as the most suitable

solution in keeping with its capacity to reconstruct the missing parts as if Rembrandt himself had painted them. While both examples demonstrate the creativity behind conservation operations in general, this is distinct from creative conservation. The next section demonstrates how creative conservation works in the space between the undone and the unrecoverable to introduce new meanings, significance and usage alongside alternative forms of knowledge, interpretation and communication.

### Timecard – A work unit

The installation *Timecard – A work unit: Evoking the collective memory of the Tomar Spinning Factory* (Figure 1)<sup>2</sup> consists of 768 timecards that previously recorded the monthly attendance of workers at the Tomar Spinning Factory. Left scattered throughout a partially dilapidated building, the effort to collect and repurpose these timecards came together with cleaning and stabilisation followed by encasement. This then led to an intentionally creative intervention that exploited the exhibition space and the format of the cards and their colour and the opportunity for repetition. Playing with visual scales, a kind of curtain was created to represent the factory workers. The sheer mass of timecards in the display paid tribute to the often-anonymous blue-collar workers. Yet, each individual became recognisable with a closer look at each duly identified card (Triães 2020).



**Figure 1.** *Timecard – A work unit: Evoking the collective memory of the Spinning Factory of Tomar.* An installation on display at the Complexo Industrial da Levada in Tomar. © Ricardo Triães

The juxtaposition between conservation treatment and exhibition approach provided a novel interpretation of a hidden cultural manifestation. This example demonstrates some of the ways in which creative conservation might propel conservators to participate in a process of artistic creative transformation. In the case of *Timecard – A work unit*, this means going beyond the merely documentary: indeed, this approach will inevitably preserve the cards in the long-term because they are no longer just pure documents, after acquiring not only new aesthetic values but a new function. Without creative conservation, these cards would, at best, just be placed in

storage and could end up losing their significance for present and future generations.

### Quinta Nova tile collection

Although creative conservation was initially designed for the preservation of industrial heritage, it soon became clear that it could be adapted to objects from other contexts that similarly share the fate of having lost their original function and meaning. Confronted with a pile of historic 17th- and 18th-century tile fragments that were about to be thrown away by their owner, TECHN&ART/IPT conservators and researchers realised they could apply creative conservation to this case. The tile fragments were part of a large collection of tiles from Quinta Nova, a rural residence located in a small village in the municipality of Torres Novas in Portugal. There was no feasible scope for restoring the original tile panel as various sections had been sold, stolen or otherwise destroyed, with those remaining almost all broken and many missing fragments.

Despite this, researchers decided to work on the fragments in keeping with their historical importance and significance. They also decided to apply creative conservation in order to foster their long-term sustainability. To ensure their meaning was not lost to present and future generations while also fostering their continued preservation, and after completing more traditional conservation on the tiles' material stability, conservators worked creatively (in an artistic sense) on the fragments. Some fragments were selected according to their size, shape and colour to recreate one of the motifs represented on them in a large-scale vertical display panel entitled *Figura Avulsa* (see Figure 2). As none of these fragments were subject to modification, it was highly challenging to identify fragments with the right colour, shape and size to put this puzzle together (Loureiro et al. 2016, Triães et al. 2018). The vertical display panel was assembled in 2018 at the IPT's facilities. While it still remains in its initial location, it can be perfectly disassembled without causing any damage to the tile fragments. Without using this artistic creative approach, most of the fragments would have been placed in poor storage conditions and eventually forgotten and lost, losing their significance to contemporary and future societies.



Figure 2. *Figura Avulsa* is on display at IPT since 2018. © João Paulo Pedro

These examples convey the power artistic creativity can exert in nurturing the sustainable preservation of the past, because present and future generations are then called upon to connect with the results.<sup>3</sup>

### ON CREATIVITY, THEORY AND ETHICS

Influenced by critical heritage studies, the authors intend to explicitly emphasise the creative power of conservation in nurturing the sustainable preservation of the past. According to David Harvey and Jim Perry (2015, 3), editors of *The future of heritage as climates change: Loss, adaptation and creativity*, a new kind of heritage conservation is needed, one that ‘draws on creativity for adaptive solutions and ... ensure[s] that future generations are empowered to make decisions about values and the ways heritage assets are passed on through time’. Already back in 2010, and referring to built heritage, the scholar Ionnis Poullos (2010, 182) proposed precisely that: ‘[c]onservation should move towards a completely different context of understanding and safeguarding heritage: shifting the focus from protection towards creation’.

Many archaeologists have also advocated the need to pursue creative conservation practices to foster the sustainable preservation of the past. Cornelius Holtorf (who holds the UNESCO Chair on Heritage Futures), for instance, has called for new approaches to ensure that in the face of drastic change, our cultural heritage remains beneficial and meaningful for present and future generations through reconstruction or even ‘creative reinvention’ and therefore approach conservation as a creative construction for the future. According to Holtorf, cultural heritage inevitably undergoes a constant and continuous process of creative transformation over time (Holtorf 2015 and 2020; Holtorf and Högberg 2021). In his words, ‘cultural heritage, whether tangible or intangible, is sustainable to the extent that it has the capability to adapt to change, and to help us to adapt to change, through creative transformation’ (Holtorf 2020, 282). Tracy Ireland (President of Australia ICOMOS) defines archaeological conservation ‘as a socially embedded creative practice, rather than a politically neutral scientific technique’ (Ireland 2015, 106). According to Erica Avrami, ‘Conservation is not merely an act of stewardship that privileges the past over the present; it is a creative destruction of alternative futures’ (Avrami 2009, 183; 2021, 213). Such approaches allow present and future generations to change narratives and values and decide what to keep rather than burdening them with an increasing number of heritage assets (Avrami 2021).

Even though these authors do not clearly establish a connection with artistic creativity or creative conservation as defined in this paper, they have been at the core of recent debates on the importance of creativity for the sustainable preservation of the past. Within this framework, what will enable the sustainable survival of a number of heritage assets is not just passive conservation but rather creative conservation, as it seeks to generate solutions to the current crisis of accumulation of the past. In many cases, this accumulation has turned out to be meaningless given the number of heterogeneous materials that are put into storage and never studied again, hence losing their significance to contemporary and future societies (Harrison 2013).

As presently defined, creative conservation may facilitate new uses and futures for heritage through the sustainable reuse of materials. Arguably, this may make conservation more inclusive by adopting creative practices that are normally regarded to be outside its scope, such as those performed by Indigenous cultures, for instance.

There will be major risks, however, from conservators and other practitioners applying creative conservation without knowing what it is or how and when to make the most of it. Creative conservation may be inappropriately used to justify creative interventions based on *radical subjectivism* (Muñoz-Viñas 2005, 147–150), in which conservators' choices and tastes are given prominence, increasing the subjective nature of conservation decisions, beyond what might be acceptable (Muñoz-Viñas 2005).

Ultimately, this may bring the discipline into disrepute. Therefore, it is of the utmost importance to open up a dialogue and an interdisciplinary conversation that places creative conservation at its centre, collectively analysing and ultimately defining its practices and outcomes within conservation theory and ethics.

## CONCLUSION

Creative conservation may change how conservation professionals engage with sustainable development and their own practices and doctrines.

The real difficulties now stem from:

- Discussing how creative conservation might align with existing conservation codes of ethics and current conservation training and education programmes
- Reflecting upon whether or not and how to establish further limits within creative conservation
- Defining when to apply creative conservation and by whom
- Understanding the ways in which creative conservation interplays with deaccessioning policies and practices
- Investigating how to identify, evaluate and compare the benefits of creative conservation for heritage conservation
- Questioning how creative conservation can relate to issues of taste, subjectivity, cultural difference and political agendas.

In sum, this article is intended as a call to action for conservators, practitioners and scholars to join a collective debate on creativity and sustainability across the heritage conservation sector in light of the scope granted by creative conservation.

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## NOTES

- <sup>1</sup> For the sake of clarity, the authors use the term 'conservation' for both preservation/conservation and restoration. Different interpretations may, however, appear in the words of other authors as quoted or alluded to in this paper.
- <sup>2</sup> In Portuguese: *Cartão de Ponto – A unidade de trabalho: Evocação da memória coletiva da Fábrica da Fiação de Tomar*. On display from 30 April to 12 May 2014 at the Complexo Industrial da Levada, in Tomar, as part of the event *Há trabalhos na Fábrica*.
- <sup>3</sup> For more examples of creative conservation, see Triães et al. (2018), Triães (2020) and Chasqueira et al. (2022).

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**THEORY, HISTORY, AND ETHICS OF  
CONSERVATION**

The power of creativity in nurturing  
sustainable development

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