

## The Amsterdam Principles

### Continual development

Ever since photography was introduced, heritage organizations have embraced it as a technique with which an object can be objectively brought to life in a methodical manner without the interference of human interpretation.

Photographers were already using the medium since its inception to capture images of art, heritage pieces, and architecture. It was not, however, uncommon to photograph diverse objects using one's own approach by placing theatrical lighting, dramatic backgrounds, and contrived still lifes in the images. This tendency has persisted even as new photographic techniques are being introduced. Paintings and works on paper were often made to look more enticing without applying any knowledge of color management. With the arrival of digital processing techniques, this tendency continued and even intensified and led to results that had little to do with the original artwork, especially with regard to paintings.

We can now say that these days are behind us. We strive for photography that is standardized, with color and sharpness that can be substantiated scientifically. We photograph art by using all the knowledge at our disposal. That is where our strength lies. This approach guarantees quality, enabling us to make a contribution to a scientific application of photographic techniques.

Our future as heritage photography professionals is becoming increasingly interwoven with the knowledge and expertise regarding photographic technology. In addition to incorporating this knowledge into our daily workflow of photographing fine art and heritage collections, it is, as custodians of collections, our professional duty to provide objective, standardized and accurate information about the objects in our care. These objects collections span the range from art to insects, warships and bridges and everything in between. Finally we must also implement a standardized workflow for the sake of science.

### Standardization

Agreements should be made regarding all digitalization projects – whether they are performed internally or contracted out – to allow for verification of standardization compliance regarding the comprehensiveness and quality of the final result. With regard to the comprehensiveness, it is important to verify that the complete digitalization process has been followed. This requires a standardization of workflow. Standardizing quality and workflow also contributes to a strategy of ongoing preservation and accessibility of faithful reproductions of collection items.

A standards-based workflow will not only ensure quality, but will promote a more efficient throughput, enabling us better to address large-scale digitization of collections.

Checking for (uniform) **quality** can only take place when agreements are made regarding verifiable values. These values are color, sharpness, lighting, use of background, position of the object and file format. There is general consensus regarding the use of the Metamorfoze guidelines ([metamorfoze.nl](http://metamorfoze.nl)) and the Fadgi guidelines ([digitizationguidelines.gov](http://digitizationguidelines.gov)) for images of paintings and works on paper. Regardless, these guidelines are still not implemented universally.

Currently there are no generally approved photography protocols for 3D objects. One set of standards does exist: the MIMO Digitization Standard. It is the international definition of scanning properties and recommendations for photographing musical instruments (see [mimo-international.com/digitisation.html](http://mimo-international.com/digitisation.html)). In general, most museums attempt to be consistent with each other. In this case, the curator, who is responsible for the partial collection, determines how the standard is applied. Everyone who works with heritage collections is in agreement about the need for a neutral background.

## Science

Standardization is not only important for controlling the quality and the workflow. Photography and photographic techniques have an increasingly more significant place in science and research.

In the near future, it will be possible to examine collections from all corners of the world while sitting at your own desk. The use of comparison software will make it possible to locate similar objects in other collections. The condition to accomplish this, however, is that these objects have to be captured in the same way, according to standardized photography protocol.

In addition to being able to compare objects that are found by using this method, accompanied by the image's metadata, it is also possible to reconstruct objects or groups thereof. Heritage organizations with archaeological collections and nature-historical collections are the predominant ones that use this method. They have an undisputed head start with regard to implementing new techniques such as 3D mesh, virtual reality, and augmented reality.

## Research

The currently available techniques enable us to make images that are of such high quality that researchers and curators can examine the most minute details of objects. Photographic techniques also constantly provide the basis for the development of new research techniques, which are mainly implemented in the field of art conservation.

It is crucial for this specialization that the stored information on the image can also be reconstructed in the future. The presence of information about color and sharpness of images is undisputable. This is currently possible through use of scientific digital techniques. Information can be formally validated and is no longer simply based on the notes made by an individual conservator. Here we see again that the condition for formal validation depends on a standardized photography protocol.

## Software applications

Digital photography is also used in all sorts of new software applications that allow one to zoom in to details of an object with precision and to view the object from all sides. These applications are important for scientific investigations and are attractive additions that appeal to website visitors. There is also software that is capable of combining digital files of objects or paintings from different collections. This way paintings can be layered and objects compared and studied. Once again, the condition necessary to accomplish this requires an internationally agreed upon standard photography protocol.

## The future

We are entering a time when more and more new technology is being introduced that is based on photographic techniques. The technical industry has discovered heritage organizations. The 3D developers are competitively elbowing each other and art conservatory studios are bombarded with the most innovative research possibilities. The most obvious dynamic here is the notion that developments are the developers goal, whereas new technology intended for heritage organizations are merely a means to achieving that goal. You can also say that heritage organizations have the need, and the photography industry has the money. Our challenge lies how we get the photography industry to develop new techniques that are aligned with our desires and needs. Achieving this would then mean that we no longer have to catch up with any new developments that appear, but rather that we have the developments created based on the conditions crucial to our profession.

## Manifest

Over the past two days we have shared many current photographic practices, and we have had a peek at some future possibilities. The importance of standardized photography protocols and the role photography will play in heritage organizations, science, and public applications has been focused on extensively.

For the first time ever, with so many of us assembled here, we can now collectively come forward with a manifest of principles which we formulate that can be implemented for the sake of promoting our own projects, and for the improvement of quality that our profession demands. The industry that is overwhelming us with new technology would then get a strong message that they need to set their compass in our direction when they set out to achieve their goals for new developments.

This is a dynamic document. Techniques are changing constantly and we will have to adapt to these changes.

## The Amsterdam Principles

### Principle 1 – Implementation

The principles of the Amsterdam charter are valid whenever digital photography is applied to 2D and 3D objects of digital heritage.

### Principle 2 – Current Aims and Methods

All object photography is standardized

- The use of Fadgi or Metamorfoze guidelines are the preferred choice photographing 2D objects
- A neutral background, consensual positioning and lighting are used for photographing 3D objects

### Principle 3 – Research Sources

In order to ensure the intellectual integrity and scientific value of digital photographic files, relevant documentation of photographic files as research sources should be identified and evaluated in a structured and documented way.

### Principle 4 – Sustainability

Strategies should be planned and implemented to ensure the long-term sustainability of digital photography of cultural heritage collections and documentation, in order to avoid loss of this growing part of human intellectual, social, economic and cultural heritage. Institutions should strive to store their digital assets in a certified or trusted digital repository. Use open, well documented file formats for long term storage.

### Principle 5 – Access

The creation of digital photography of cultural heritage collections and documentation should be planned in such a way as to ensure that maximum possible benefits are achieved for the study, understanding, interpretation, preservation and management of cultural heritage. IPTC Information Metadata Standard (Embedded Metadata Manifesto) should be applied to allow digital photographic files to be understood and evaluated in relation to the contexts and purposes for which they are deployed.

## **Future Aims and Methods**

### **New techniques – points of discussion**

- New software has to be available in open access
- New software has to be compatible (no stand-alone applications)
- Research the possibility to formulate international guidelines for photographing 3D objects. This could be separate guidelines or, maybe better, as an addition to the Metamorfoze and Fadgi guidelines.