

## Public Perception and Artifact Conservation

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While exploring at the National Museum of American History, I, like everyone else who visits NMAH, felt the need to see the Star-Spangled Banner. If you have seen the flag in person, you know that it is kept away from natural light in a dark room where photography is prohibited. Signs adorn the exhibition making sure all visitors know that photos are not allowed, yet in my 10 minute stay at the exhibit I saw more than 3 different people completely disregard the rule and take photos anyway. In one of these cases, the man taking the illegal photo was asked why he was doing so. His answer boiled down to was that without a picture none of his friends would believe that he saw the Star-Spangled Banner so he had to take the picture. When asked if he was aware that the no photo rule was in place in order to help conserve the artifact, the visitor said he had no idea that light could ruin the flag. He went on to say that the signs should have given a reason for not allowing photographs rather than just saying no. Over the course of my 3 weeks at the Smithsonian, I went back to NMAH 5 more times and sat in the Star-Spangled Banner exhibit for approximately 10 hours collectively. During these visits I sat and watched the visitors and kept track of how many different people tried to take a photo of the Star-Spangled Banner. When caught I would approach the visitor and ask why they choose to take the picture and if they were aware of the possible damage that light can have on the non-colorfast pigments in the flag. Over the course of the 10 hours I caught 217 different people/groups of people. This averages out to approximately 1 photo every 2.75 minutes. When interviewing the rule-breakers I found that the reason for taking the pictures could be placed into 1 of 3 differing categories. The first group, of 103 individuals, gave the reason as the need to have proof that the artifact was seen. Those that fell into this category “needed” to have a picture for social media to prove to others that they were at the Smithsonian. The second group, 93 individuals, took the picture solely for themselves. A reminder of the time they were at the Smithsonian, rather than proof. The final group, which only had 21 members, admitted to taking the photo because there was signage that said photography was prohibited. The majority of all of the rule-breakers knew very little, if anything, about artifact conservation. While they did know things like color will fade over time, most were unaware as to why it would occur. While explaining the science behind UV degradation and phototendering to the average visitor is an unreasonable goal, having the information available and more accessible is a more attainable one.

In an effort to find out how this information could be conveyed to the public, I was able to meet with Lauren Horelick, a conservator at the Stephen F. Udvar-Hazy Center. It was during this discussion that we agreed that the average visitor does not

realize that all 137 million artifacts in the Smithsonian's collections have to be preserved even if they are not displayed. Because so many different artifacts need to be preserved it is important to determine exactly what is being preserved. In other words, how the artifact will be shown to visitors has to be determined before conservation efforts are put into place. In the case of the Star-Spangled Banner, the original national symbol seen by Francis Scott Key is presented. This artifact dates back to 1814 and keeping it available for display for as long as possible is of the utmost importance. This means research in how dyed English wool bunting and cotton degrade was needed. To do this the flag's fibers and the dust from the flag's surface were assessed by conservation and textile specialists. The pH of the flag was taken to enable conservators to assess the amount of deterioration the fibers had withstood as well as their future stability. The pH readings allowed the type of cleaning that could be applied to fabrics to be determined. In addition to pH readings, spectrophotometry was used to collect color reading of the dyes used on the flag. Analyzing the dyes used help conservators to maintain the true colors of the flags. Fiber analysis was also conducted to determine the chronology of the techniques used to make the flag itself. Techniques such as staining, mends and patching can all be placed on the flag's timeline based microscopic and macroscopic visual observations. If instead of having the original piece of history was displayed, a replica or restored version of the flag was displayed photographs would be allowed because degradation would not be a concern as the flag on display could always be refurbished again and again as damaged occurred.

In terms of informing the general public about possible degradation or damage that they could cause the Smithsonian has already taken various measures. In certain museums, such as the Udvar-Hazy Center videos of conservators can be viewed explaining how artifacts are conserved. To reduce photographs and possible damage to displays selfie sticks have been banned from all Smithsonian buildings. To further inform visitors of the conservation efforts I would suggest having signs that explicitly state that photographs are not allowed in order to maximize the artifacts life.