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Article: Measuring Color Change in Photographs (Abstract)

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## **Abstract: Measuring Color Change in Photographs**

**Katherine Sanderson**

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Joint Meeting in Wellington, New Zealand.*

It is possible to broadly predict the lightfastness of a photograph based on the known characteristics of its component materials. However, exposure guidelines developed based on this information alone are general at best. Through the use of color-monitoring equipment such as densitometers, spectrophotometers and, more recently, micro-fading testers, it has become possible to obtain more object-specific predictions of longevity.

This presentation focuses on a two-year project at The Metropolitan Museum of Art measuring color change in photographs over time. The project relies on data collected in 1999 by Mellon Fellow in Photograph Conservation, Dana Hemmenway, using a reflectance spectrophotometer during a baseline survey of a group of over 100 photographs in The Met's collection. The works chosen for the project represent a cross-section of the Museum's photographic holdings, including a wide range of processes and condition states. Additional photographs were included based on their popularity for in-house exhibition or loan. The objective of the current project is to take new readings of these photographs as a means of discovering to what degree they are changing, evaluating the methods used to monitor this color change, and ultimately to use this data to inform focused monitoring and exhibition policies for the future.

Previous studies conducted by Henry Wilhelm, Douglas Severson and John McElhone, among others, have laid important groundwork for color monitoring photographs using densitometry and spectrophotometry. The value of this study is its scope: it includes over thirteen years of data on over twenty different photographic processes. The collected data provides information about the aging characteristics of individual prints, and more general trends are discernible for certain photographic processes. In some cases, the data also reveals aging characteristics of the work of individual artists. Finally, the relationship between spectrophotometric measurements taken over time and micro-fading data will be introduced.

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