Digital Infilling on Japanese Prints

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INTRODUCTION
When a paper infill is located in a minimally-designed area, infilling is a fairly routine procedure of selecting the proper paper, and color-toning. However, difficulties arise when the infill is located in a heavily-designed and/or heavily-surface-textured area, and where a color-toned infill is insufficient for providing visual coherency. This poster describes the treatment of a Chubunfish print, “A Chubun Fish on the Sumida River Under Ryogoku Bridge”, one of which there are two impressions in the Museum of Fine Arts, Boston's collection, one which was documented with high resolution digital photographs, and the other of which there are two impressions in the Museum of Fine Arts, Boston. Below is an example of how one can use a camera and digital modifications (such as Adobe Photoshop) to capture the texture, design, and color of the desired infill, thus eliminating the time-consuming steps of hand-drawn design compensation, and surface-texture recreation plus paper toning, the latter two of which are done through often tedious paper selection and modification.

TYPICAL JAPANESE PRINT TREATMENT
As with the conservation of typical Japanese prints, treatment of this pentaptych consisted of surface cleaning with kneadable erasers, chamois cloths and minimal aqueous treatment as necessary, followed by removal of old lining papers, and lastly, humidification and drying under weights. Smaller losses, located in minimally-designed areas, were infilled using a Japanese paper of appropriate thickness and texture, adhered with minimal wheat starch paste, and toned with Winsor and Newton watercolors to match the surrounding area.

MAKING THE DIGITAL REPRODUCTION
Because the support losses were in heavily-designed areas, a toned infill would not sufficiently visually cohere the image, thus the decision was made to use digitally-printed infills to compensate for the losses. Several, Japanese papers were selected and printed on an Epson 9900 printer with Epson's Ultrachrome HDR ink set. However, because these papers were uncoated and unsuitable for printing, the resulting images were fuzzy. After consultation with the MFA Boston's Digital Systems Manager, a Japanese paper of appropriate thickness and texture, adhered with minimal wheat starch paste, and toned with Winsor and Newton watercolors to match the surrounding area. The author would like to thank Museum of Fine Arts, Boston staff Joan Wright, Bettina Burr Conservator, Asian Conservation Studio, for their invaluable assistance in making this project possible. Thanks also to the Buffalo State College Art Conservation Department for making my third-year internship, during which this project was completed, possible.

CONCLUSION
This poster presents one example of how a high resolution photograph (capturing a print’s surface texture, tone, and color), and digital manipulation programs such as Adobe Photoshop, combined with conservation suitable digitally prepared printing papers and inks, can be utilized for recreating large and heavily-designed infills that may commonly be unachievable solely with the traditional techniques of selecting a compatible paper (with attention to surface texture, tone, image design, etc.) plus inpainting. However, this process precludes the unique skills of the conservator, including detailed considerations of paper and ink suitability for conservation use, inpainting, and exhibition conditions, all of which are just as important for ensuring a post-treatment visually coherent work of art.

PAPER ANALYSIS
Oddy Test
The digitally printed paper passed the Oddy Test as carried out by MFA Boston’s preventive conservation department.

Water Sensitivity
The digitally printed paper was placed in a bath of filtered water and no ink migration nor color change was noted over a thirty minute immersion.

Spectral Color Matching
The infilled and inpainted prints were observed under both typical office fluorescent and artificial daylight - CIE D50 (503 K) lighting for reflectance and metamerism. The color and appearance of the original print and digital paper were visually coherent under both lighting conditions.