BASS RELIEF IMAGING

2D TO 3D

NOTES ON THE TRANSITION THROUGH TWO CFPR RESEARCH PROJECTS.

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19th Century Continuous Tone Printing Processes

WOODBURYTYPE

PHOTOGRAVURE

COLLOTYPE
Woodburytype: relief mould printing

**Stages in the Production of a Woodburytype Matrix**

1. A cross-section of the exposed gelatine slab
2. Slab placed face down ready for development
3. Slab washed with hot water to dissolve away unexposed areas of gelatine
4. The gelatine is relief dried before being placed on an hydraulic press. A sheet of lead is then placed on top and tons of pressure are exerted to emboss a relief
FIG. 239
Woodburytype press with mold in place.
(International Museum of Photography/George Eastman House)
FIG. 240 Goupil’s Woodburytype printing plant.
(International Museum of Photography/George Eastman House)
Pg
cast in.
Altered Images: Digital Interpretations Inspired by George Cartlidge's Portrait Tiles. Stoke City Museum and Art Gallery 2004

Charlotte Hodes, Untitled

Ivor Abrahams, Mermaid
Photographs used to Model Tiles for J.H. Barratts

Photographs and sketches of President Wilson, Admiral Jellicoe and General Foch from which the portrait tiles were modelled and showing the way graphs were used to obtain the correct tile size with more examples below.
Figure 2. Carlo Baese: Photographic Process for the Reproduction of Plastic Objects, US Patent 774,549: 1904  
(a) bust form to be reproduced; (b) projectors illuminating bust front and rear with graduated light; (c) camera;  
(d) plan section through bust; (e) gelatine sections after expansion reproducing shape of bust; (f) gelatine  
sections on stepped support. Drawings after extracts from the Patent document.
Figure 1a. François Willème, Photosculpture Studio, c. 1863–67. Courtesy George Eastman House. A further illustration showing Willème’s photosculpture process can be found on the Early Visual Media website (Weynants, 2008).

Figure 1b. François Willème, Portrait of a Woman, c. 1860. Oak Maquette composed of profiles made from photographs. Courtesy George Eastman House.
The Rapid Prototype
Research Question

Can rapid prototyping be used purely for the fabrication of an actual bespoke artifact rather than its current function for providing an intermediary prototype to assist the cycle of mass production?
Aim
To theoretically define and practically consolidate routes which can assist in incorporating the creative flexibility of digital 3D rendering with the material and tactile qualities intrinsically associated with art and craft practice. The research will specifically focus on the direct output of finished objects produced through the additive, 3D colour printing process.

Objectives

• To survey the field of industrial and craft use of 3D prototyping in order to map the creative potential from an art and craft perspective including software & hardware.

• To evaluate the strengths & weaknesses of additive 3D printing methods in relation to subtractive methods such as CNC milling.

• To investigate the possibilities for substituting the various powdered materials developed for the present scope of 3D printing with those that may facilitate the production of a permanent original rather than a temporary prototype.

• To pursue the possibility for printing and firing clay bodies to create ceramic artefacts.

• To investigate how permanent colour can be incorporated at the object printing stage – especially in relation to ceramic decoration.