

Autonomous digital 3D design research competition

Project proposal by Dr Justin Marshall

Title: Contemporary Decorative Plasterwork

Research questions:

By working in collaboration with an established manufacturer of decorative plasterwork, can an independent designer-maker be instrumental in developing an innovative new range of products or create the potential for new markets/contexts for architectural plasterwork.

Can the integration of CAD/CAM technologies with the traditional skills and processes used in this industry help promote innovation and create the potential for mass customisation.

Context:

Over recent years there are a number of projects which involve artists or craftspeople working within industry¹. However, unlike this proposal, they do not seek to investigate how a collaboration can facilitate innovative new work, or to reflect on the impact on the practice of an independent designer-maker working within a new context.

The decorative plaster industry is predominantly driven by the reproduction of traditional designs and by restoration work. The manufacturing technologies used in this industry have developed little since the 19th century. Amongst others, traditional 'running' techniques are still employed to produce ceiling cornices and other decorative elements. The running process uses 2D profiles which are dragged (run) through setting plaster to produce 'extended' forms. The researcher has recently employed this technique in the production of one-off artworks. However he believes there may be a potential for the development and viable production of larger scale contemporary architectural plasterwork designs, through the introduction of digital technologies into existing manufacturing methods.

Proposal:

Through working in collaboration with an established decorative plasterwork company, and combining the use of CAD/CAM technologies with traditional production techniques, the researcher aims to develop new forms of decorative plasterwork which are appropriate for contemporary architectural spaces. Discussions with the Hayles & Howe concerning the scope of their current business and the range of projects they undertake will be central to the development of this project. The skills and experience of the researcher, both as an independent designer with some knowledge of plasterwork, and as an experienced CAD/CAM user, will be employed in conjunction with those of the staff at Hayles & Howe, in order to produce innovative and possibly commercially viable new products/designs.

As a starting point research will be undertaken into the historic significance of decorative plasterwork and how/why it has been developed and employed through history. The use of repeats, tessellations and different forms of symmetry will also be studied. The researcher is particularly interested in the relationship between the 2D profiles employed in production and 3D forms created, and the use of aperiodic tiling systems to create new forms of tessellated patterning. However the researcher is committed to the development of work through an engagement with materials and processes, therefore the nature of the final designs will arise from the process of undertaking the research and cannot be specified in this proposal.

Outcomes and Dissemination routes:

The intended outcomes of this research will be:

- Documentation of the processes developed.
- Reflection and documentation of the impact of this collaboration on the practice of the researcher.
- A one off site specific plasterwork installation to be used to demonstrate the potentials of a contemporary reinterpretation of decorative plasterwork.

The results of this project could be disseminated in a number of ways:

- The site specific, work will be promoted through public exhibition (if possible)
- Articles in appropriate journals and publications (either to promote the final designs to stimulate interest in commissions and/or orders of plasterwork, or to discuss the nature of the research project and the processes developed)

- Presenting papers at appropriate conferences based on the researcher's experience of the project.

Notes

¹. A number of recent examples include:

The 'Artist-at-Work' project is an ongoing scheme run by Art Work Wales. This scheme funds artist who wish to work in industry in order to develop new work through access to specific facilities, there is no expectation that the industry involved will benefit directly from the scheme.

The 'Hitec-Lotec' project run by the 'Crafts for Now' consortium in 2000, involved the placement of four craftspeople in different industries. The principal aim of this project was to provide craftspeople with access to new materials and technologies in order for them to develop new work. In addition there was an intention that this project should add to the debate concerning the relationship between industry and independent makers and between craft and technology, however there was not an emphasis on collaboration within these projects .

The 'At home with Art' project run by the Tate in conjunction with Homebase in 1999, commissioned nine established contemporary artists to design works for mass production. This resulted in both functional and sculptural objects being mass produced and sold at Homebase. The aim of this project was to heighten peoples awareness of the significance of objects within the domestic space and challenge some of the assumptions made concerning artists and their relationship with society.