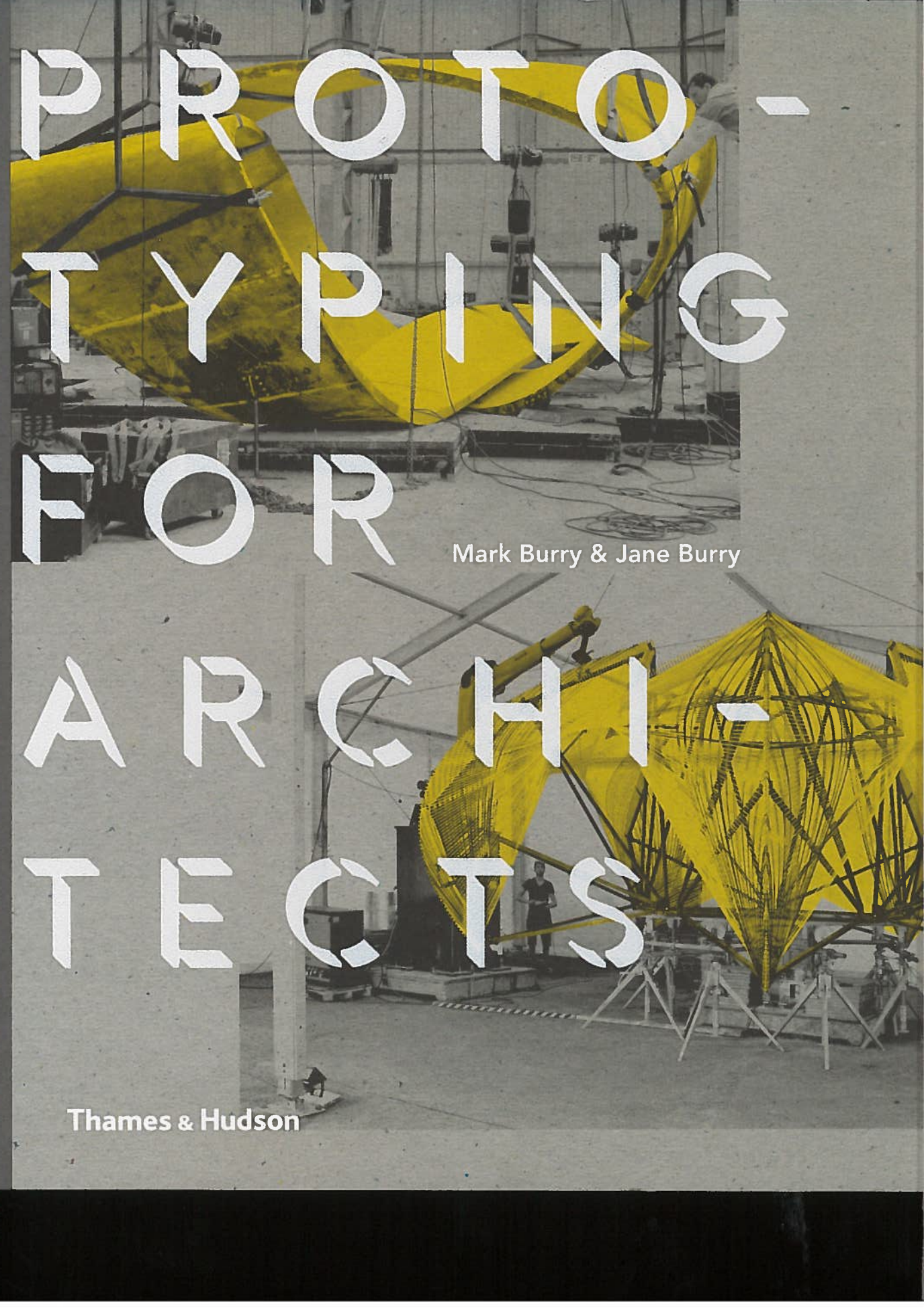

PROTO-TYPING FOR ARCHI-TECTS

Mark Burry & Jane Burry

Thames & Hudson

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Franken\Architekten

Protoype as manifestation of data

German architectural practice Franken\Architekten sees data as being at the core of any project. Even the architectural geometry is a data set, one that holds the key to the design and may lead to multiple derivations. A prototype is a piece of one such derivation that is used to test and validate assumptions. These assumptions might relate to the structural performance of the design, its optical properties or even its behaviour.

One Franken\Architekten project to which optics were central was Home Couture (2005), the first flagship store for the exclusive tiles, fittings and bathroom accessories produced by building-materials company Raab Karcher. A special type of glass was developed for the street façade, incorporating a series of optical effects similar to looking at something on the bottom of a swimming pool. As one walks past the store and looks through the windows, the changing optics produce distortions of the objects within. These effects were prototyped using digital simulations, as well as physical samples of the milled acrylic glass. The design celebrates a kind of *flâneur* approach to the relationship between store and street.

Another example of the practice's approach to prototyping – in which data is manifest in a very physical way – is Kleine Rittergasse 11 (2014), a three-storey property in Frankfurt. The project is part of the renewal of the city's old quarter, Alt-Sachsenhausen, the unique character of which developers are attempting to both preserve and reflect through a combination of housing and small-scale commerce. Franken\Architekten was commissioned to create a mixed-use space incorporating a photo

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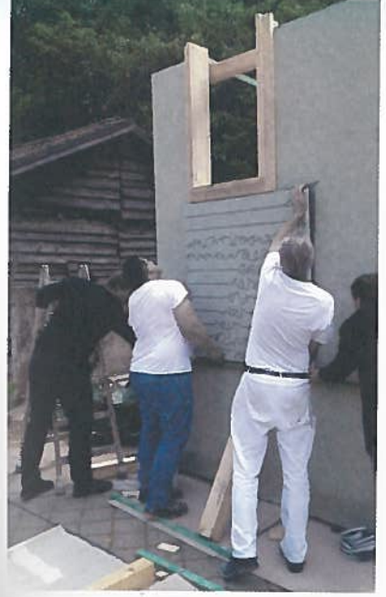
studio, office and apartments. Although the original, war-damaged house on the site had to be demolished, the practice looked for a way of commemorating what had gone before in the new building.

The design of the building adopts the three-storey, gabled-roofed profile of the traditional, half-timbered houses in the area. The base of the property has been covered in natural stone, while the plastered upper stories have been finished with a sheet material, a type of stone foam. The timber framing of the original house has been invoked by means of a pattern milled into the sheet material where the frame would have once been visible. The milling follows a randomized path or 'jitter', generated and controlled algorithmically to create a subtle evocation of the original timber frame, as seen at different times of the day.

Iterative physical prototyping was key to refining the form of the jitter, the depth of the milling head and the effect of seeing the jitter in different lighting conditions. The milling machine used for the project was owned by the client, thereby facilitating a collaborative approach towards iterative testing.



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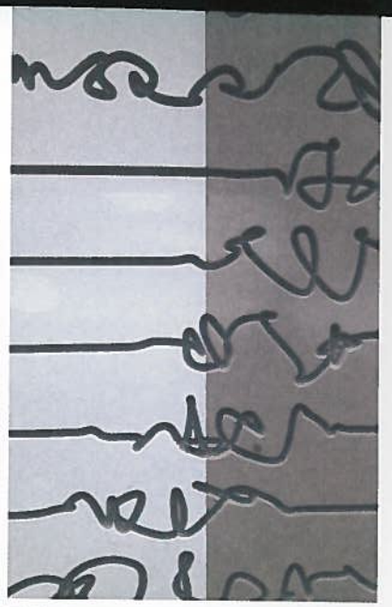

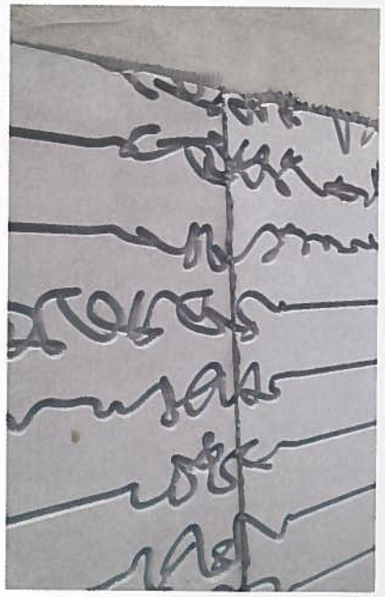

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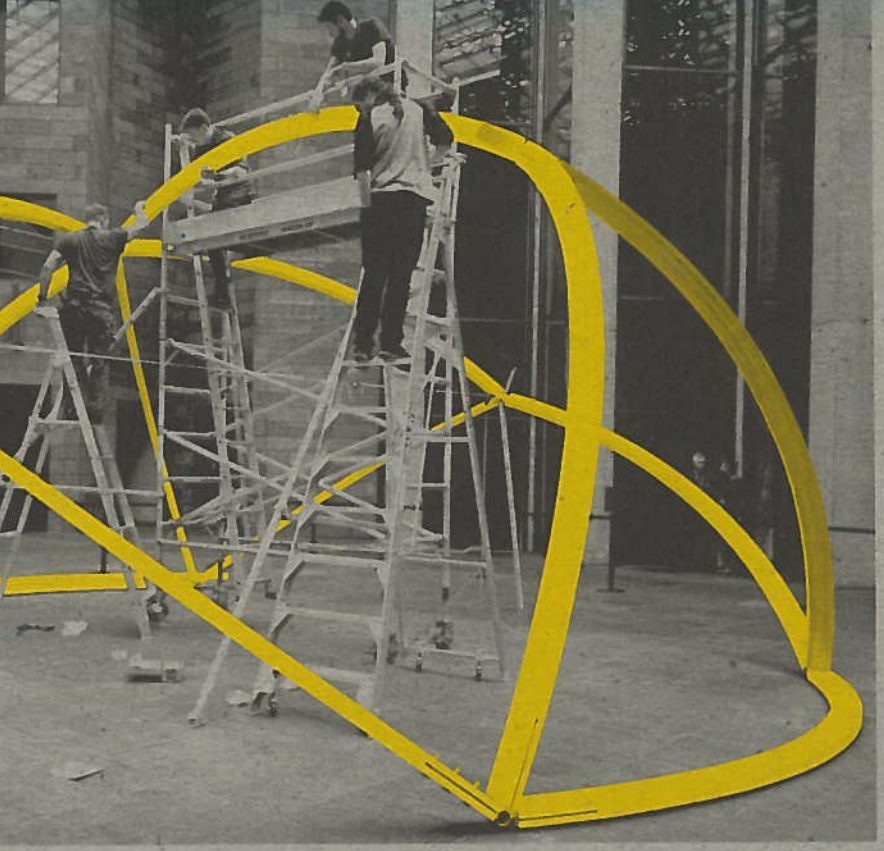
8–13. Kleine Rittergasse 11: Prototypes and trial assembly of the façade.



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