THE MARKHAM MOOR PAPILIO: A PICTURESQUE COMMENTARY

Karolina Szynalska

This text offers a commentary on a little-known yet remarkable structure along the UK's A1 road, originally built as a roadside petrol station with a canopy in the form of a hyperbolic paraboloid. The author demonstrates the affinity between the architecture of pavilions on the one hand, and on the other hand, some of the more modest or minor architectural functions that were innovated in the modern period. One of the few 'hypars' left over from post-war Britain, its butterfly-shaped canopy is a reminder of older etymological roots of the term pavilion. It also raises questions in the present-day about the conservation of recent architectural heritage that was perhaps only ever meant to have temporarily alighted on the landscape.

Keywords: pavilion, Sam Scorer, service station, hyperbolic paraboloid, picturesque, ruin.

Karolina Szynalska

Karolina Szynalska (BArch PG Dip MA ARB) is a practising architect and a lecturer in architecture at the University of Lincoln. Since completing her Masters in architectural history at the Bartlett School of Architecture (University College London), Szynalska has continued to develop an interdisciplinary approach to architectural practice, scholarship and teaching. Recent activities include developing her professional practice and creating collaborations across the institutions in which she works.

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DOI: <http://dx.doi.org/10.5456/issn.2050-3679/2013w06ks>

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Abstract

This text offers a commentary on a little-known yet remarkable structure along the UK's A1 road, originally built as a roadside petrol station with a canopy in the form of a hyperbolic paraboloid. The author demonstrates the affinity between the architecture of pavilions on the one hand, and on the other hand, some of the more modest or minor architectural functions that were innovated in the modern period. One of the few 'hypars' left over from post-war Britain, its butterfly-shaped canopy is a reminder of older etymological roots of the term pavilion. It also raises questions in the present-day about the conservation of recent architectural heritage that was perhaps only ever meant to have temporarily alighted on the landscape.

One of the most curious and dramatic roadside structures to have been built in modern Britain is a canopy along the A1 at Markham Moor, in Nottinghamshire. It was built between 1959 and 1960 by the Lincoln architect Sam Scorer and the engineer Dr Kalman Hajnal-Kónyi – a Hungarian émigré based in London.¹ Given that this was a petrol service station, it was designed to be seen from a speeding motorcar. In keeping with a lot of building around this time, similarly oriented around the automobile, it augurs a new experience of landscape and architecture. While its fantastic form shares something with the architecture of pavilions in the twentieth century, it is no longer meant to be viewed and contemplated along perspectival sightlines, as with one of those architectural curiosities in a picturesque garden, but experienced according to the tempo of the mid-twentieth century motorway.

Given the etymological roots of the word pavilion (derived from the Latin *papilio*; *pāpiliō*, *papiliōn-*), and the shape of the Markham Petrol Station resembling a butterfly frozen in flight, it could be said to fall under the typology of the pavilion. Technically speaking, however, this is a hyperbolic paraboloid, or a 'hypar' for short (Scorer, 1961; Booth, 1997). Scorer and Hajnal-Kónyi would also employ the hypar in their design for

¹ Scorer was a member of the Lincoln Car Club and drove a succession of E-Type Jaguars with EVLI on the licence plates. He was remembered by I. Wells (2003) for chairing the East Midlands Victorian Society AGM dressed in motorbike leathers. A RIBA bibliographical archive file notes that he often protested against speeding limits.

Lincoln's St John the Baptist Church in the early 1960s, redefining the place of worship in an ultra-modern architectural language that nonetheless revived the more ancient notion of the pilgrim's tent (Hodgkinson, 2010, n.d.; Church of St. John, Lincoln, 1966).

For all their rigid concrete construction, hypars were actually experimental structures more emblematic of the movement and transience implicit in the word *papilio*. They embodied the ideals of engineering efficiency, and offered an exciting and tangible sense of lightness (Boyd, 1958, p.295). Hypars gave an impression of hovering in space and contradicting the laws of gravity. At Markham Moor, the thin concrete cantilevered shell is 75 mm thick – which is proportionally thinner than the shell of an egg. During a period when the architectural standardisation of petrol stations was occurring, no doubt as an aid to product recognition, Scorer and Hajnal-Kónyi's example is unique by virtue of its technical innovation and individual design.

In post-war Britain, concrete shell technology was widely used as a method of roofing over even comparatively routine buildings, i.e., more pedestrian structures lacking in the expressive flamboyancy of the Markham Moor structure (Saint, 1991). This was because steel was only available through a rationing system devised by the government. A concrete shell used less steel than its alternative steel truss. The engineer Robert D. Anchor – author of a comprehensive 1996 review of this building method from 1945–65 – thought that 'fashion also played a part in design, and no self-respecting architect at this time would be without a shell roof job' (Anchor, 1996, p.381). Even so, concrete butterfly roofs are a rare species, and Markham Moor is one of few extant hyperbolic paraboloid shell structures from the 1950s and 1960s.

The fashion for hyperbolic paraboloids can be attributed in part to the popularity of Felix Candela's experimental buildings in Mexico (Faber, 1963). The mathematical principles of their geometry were understood years before, but advances in *in situ* shell concrete structures made it more exploitable. Their construction calculations were relatively comprehensible. The double curved surface is generated by straight lines. This property makes it fairly easy to construct with a formwork of straight planks. Hypars transferred the emphasis of architecture to the surface. The shape is a continuous plane developing from a parabolic arch in one direction to a similar, but inverted, parabola in the other. The main idea is that these structures behave as two systems of arches, one in compression and one in tension.

Figure 5.1 and Figure 5.2: Sam Scorer and Kalman Hajnal-Kónyi, Markham Moor Petrol Station, 1959-60. Published in *The Times*, 9 April 2003. Reproduced with permission from Paul Scorer.

Robin Boyd, an Australian architect and critic, hoped that these types of structure might have marked 'the beginning of warmer collaboration between architecture and engineering' (p.295). At the end of his 1958 article, 'Engineering of Excitement,' which celebrated new advancements in concrete shell structures, Boyd wrote: '[t]he exciting buildings are in fact most significant because they are not expressions of mass-production techniques, they are anti-universal' (p.306). Even so, as others observed, they were 'economical to erect, flexible in use and sculpturally exciting' ('Pioneer Architect', 1969). Functionality and economy were the buzzwords of post-war architectural discourse. Perhaps it is somewhat ironic that such an ordinary thing as a service station came to adopt this kind of structure, which might seem a lot more frivolous than pragmatic; but it is testament to the arbitrary beginnings of architectural types.

By 1965, when structural steel had become more readily available, 'architectural fashion had moved on' (Anchor, 1996, p.389). Hardly mentioned in the literature on post-war architect in Britain, the Markham Moor service station never entered the canon of concrete shell buildings. Incidentally, it is less well-known than those contemporary rudimentary American petrol stations documented in Ed Ruscha's photographic work, *Twenty-Six Gasoline Stations* (1962), which exhibits the above-mentioned standardisation of this roadside architecture type. Nor does it feature in Paul Graham's seminal photo-essay, *A1 – The Great North Road* (1983), which features images of standard petrol stations and standard Little Chefs along the A1, but quite remarkably leaves out the Markham Moor building. Perhaps it was not emotionless or monotonous enough?

Since the 1980s, the building has housed the ungainly addition of a square-shaped Little Chef restaurant. When in 2003 this was scheduled for demolition by the Highway Agency, the Twentieth-Century Society stepped in, and with the help of campaigners from across the country, proposed that it be a listed building – 'Britain's only architecturally important Little Chef' (Wainwright, 2004, n.p.). In 2012, just after the restaurant boarded up the premises, English Heritage gave it Grade II status. Fortunately, the canopy and four structural supports remain intact and uncompromised by the building added beneath; yet this eccentric shelter is slowly deteriorating, not unlike the melancholic ruins amidst greener landscapes. At Markham Moor, it

is as if the pavilion type, having migrated into everyday architecture of the kind seen in Ruscha photographs, allowed for a degree of experimentation that is normally at odds with such banality, only to have the banality of dereliction and vandalism overtake it in the end.

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