

Economic and social factors might have had some influence on the decision of a few English painters to turn to relief making in the 1950's but this does not explain the localised manifestation of relief making. Why was it happening in Britain at that particular time? Gorin and Domela had already begun constructing reliefs in France many years earlier. Henryk Staszewski in Poland and Baljeu in Holland were using the relief form. Gorin and Domela's work would have been known in England in the 1950's because it appeared in Biederman's book *Art as the Evolution of Visual Knowledge* which was published in 1948.

The 1950's saw a period of expansion and reformation of British art schools and art education which lasted throughout the 1960's. The English artists experimenting with relief construction were mostly teaching in art schools and did not live by selling reliefs. The old art exam structure was not phased out until c1961 but the liberalisation of the art school syllabus was gaining momentum throughout the previous decade. This in effect meant that 'abstract artists' were at least tolerated in the schools and could earn a living even if they were not encouraged to teach abstract art, which was generally viewed with suspicion by the more conservative minded.

The fact that Victor Pasmore abandoned his successful post impressionist style and allowed himself to be influenced briefly by Nicholson and Biederman made a certain kind of relief making respectable with the London art establishment and in particular with some members of the Arts Council. Even the Tate Gallery set aside a small room with abstract works by Pasmore, Ernest Hill, Wise, and the Martins. It would be wrong to overstate Biederman's influence but Biederman himself had been a painter not a sculptor and he addressed his theories to artists from the experience of a working artist. His interpretation of art history was provocative and forcefully stated. The fact that *ATEOVK* was published in English made it accessible to us. He undoubtedly gave impetus to the relief making phenomenon in England even though his ideas were seldom accepted in toto.

Although there were others who had earlier experimented with reliefs the principal English relief makers were different because they emphasised the logical rather than the perceptual. They had their roots in European rationalism. They interested themselves in the doings of science, mathematics and technology. Mary Martin especially tried to purge her work of arbitrary and decorative elements. Unlike Biederman the English did not deny the importance of Dada and Surrealism and they rejected what they regarded as Biederman's Nature mysticism. The magazine *Structure* edited by Joost Baljeu allowed the makers of reliefs a forum for their ideas. These activities were however generally dismissed by the art world as a reaffirmation of Constructivism and de Stijl. To the practitioners themselves there was a conviction that this was a continuation which pointed to further exciting development. They looked more to Europe than to America. Even Biederman's ideas seemed to emanate as much from Europe as America.

Whereas other more blatant reaffirmations of Constructivism, Dada and Surrealism flourished and were apparently immune to criticism, even the most innovative constructions of Hill or the Martins were quite often ignored or else dismissed as clinical, cold, etc.

The Neo Constructivist works of say Caro, King and others were not associated in the public mind with any Russian or European antecedents and were seen as new and original. Conversely those artists who publically acknowledged their debts to the past acquired a less favourable image.

Since cubism many painters were interested in the development of methods of composition made possible by collage. For me this was an intermediate step from painting to relief. The availability of industrial sheet material and laminates of every sort coincided with the development of small power tools. This fueled the British passion for DIY or what the French call 'bricolage'. Traditional sculpture techniques demand space and expensive equipment to practice whereas small scale relief constructions could be made on the kitchen table. This was new and exciting for painters like myself who had little practical knowledge or experience of making things. Mary Martin made her first relief in plaster, cast in a baking dish. According to Kenneth Martin this was at the suggestion of Paolozzi. Kenneth Martin's first mobiles were soldered together on the kitchen gas stove. Mary reported how bits of solder got into the toast. It was unusual for artists then to have large studios or access to well equipt workshops. Relief making was then a cottage industry. Until the mid 1950's and the influence of the New York School, paintings seldom exceeded a meter in any direction.

I saw the layer upon layer construction of my reliefs as a more substantial form of collage which was made from wood instead of paper and therefore an extension of painting. Whereas the thickness of paper could be more or less ignored, the thickness of sheet material demanded to be taken into account. Reliefs were obviously not all of this type, some were virtually small constructions or sculptures fixed to a base plane and displayed on a wall. The base functioned as a presentation device rather like a plinth. Much of Biederman's work took that form. I sought to minimise what I regard as superfluous elements and tried to make everything interdependent and I aimed to avoid any dualistic perception of my works implied by the dichotomy of base and elements. My approach requires the superstructures and substructures to be as integrated as possible. This demanded exact measurement and precision in making.

The recent perceptual experiments of Structural Information Theory seem to lend support to some of the compositional ideas of Jay Hambidge who's book Dynamic Symmetry was carefully studied during the 1950's and 1960's especially by the Martin's and their students. I studied Hambidge's ideas on proportion and used the knowledge to co-ordinate the components in my work. Hambidge's discussion of the properties of the root rectangles was especially important. The fact, for instance, that a root 2 rectangle could be bisected into two smaller root rectangles was as much a visual as a mathematical property. If form was a component of art it seemed necessary to study it. The literature on this subject is extensive and although Hambidge was not the only writer on the topic, his book was the first to stimulate my interest.

Such interest was premised upon the belief that art is based on principles and that these principles could be studied. It seemed clear that while some of these

principles changed there were others which remained inalterable. While the former are subject to the comparatively rapid forces of socioeconomic change, the latter are, for example, directly related to perceptual mechanisms in the human brain. Thus the way in which we perceive forms at a structural level evolves infitessirnilly slowly over millions of years.

Socio-economic change has altered our evaluation of Impressionism since 1875. On the other hand the ability that enables us to fuse two dimensional dots of colour into meaningful entities corresponding to objects in a three dimensional world has remained virtually unchanged.

The cognitive associations of certain shapes change but the basic physiological process of seeing those shapes remains fixed.