A new method for measuring sun exposure   72

The methods for measuring exposure to the sun usually applied up to now all have the defect of recording only the conditions corresponding to a specific day and time; and moreover in certain cases the results may be marred by errors.

The new method described by the writers of the article supposes the observer in the axis of a vertical cylinder placed on the horizontal plane and on which is projected the sun's course as seen by the observer; in this way a series of graphs restricted by those corresponding to the longer and shorter days, is obtained for the whole year. Then again, all the objects which may intervene between the sun and the observer (mountains, trees, houses etc.) are projected on the cylinder so that once it is developed it gives an exact image of the conditions of exposure at the point under consideration for each day and each hour.

The application of the method consists in transferring on to a network of horizontal and vertical lines, an extension of the imaginary cylinder, by means of curves representing the sun's course, all objects tending to conceal the sun from the observer. These graphs of conditions prevalent at Berne have been prepared in advance, but their use in other regions of Switzerland does not result in any visible error.

Several examples illustrate the application of this procedure in studying the sun exposure of buildings in the mountains as well as in towns, and also in the examination of interior conditions.

This method makes it possible to record, for any given point, the influence of the hour and the season and also of the configuration of the land and of other constructions, existing as well as projected.

Mathematical Thought in Present-day Art   86

by Max Bill

We are not here concerned with the measurements and calculations employed in all the arts – perspective being the most generalized case, but with the method which has made the most important contribution to the transformation of the work of art from an intrinsic image into a would-be copy of reality. Impressionism and cubism have begun to bring art back to its essential elements, and, as early as 1912, Kandinsky, in his book "On the Spiritual in Art" postulated the premises – he himself did not at that time forsee how far-reaching the results would be – of an art in which gratuitous imagination would be replaced by mathematical thought. At that time, however, non-figurative experiments as a whole had not made this problem explicit. Brancusi and Klee suggest figures which retain some connection with the essence of the thing itself, those of Kandinsky might be among the realities of another world, and, finally, Mondrian, who has gone further than anyone else in this field, creates rhythms which in spite of their severity, have a purely emotional origin. After him there are only two alternatives, a return to traditional art or a continuation of these latest advances. A "return" is, by definition, problematic, even if one were to envisage it in the sense of a social art, "under contract", a formula only to be accepted with reserve. On the contrary we feel that there are great possibilities to be sought in an art based on mathematical thought. It does in fact seem that formal investigations have, for the moment, been pursued as far as possible, and that living art demands a renewal of content. Even if the role of feeling is indisputable, one forgets all too easily that art requires feeling *and* thought, that, for example, the music of Bach is a brilliant testimony to the value of a wholly mathematical conception. For mathematics, which is among other things a science of propor-

tions, calls for symbolic representation (c.f. Poincaré museum in Paris) which certainly has an aesthetic value, and whose discovery by artists may be compared with that of negro sculpture by the cubists. A further point of interest is that these visual impressions are used to help thought especially in modern mathematical research which has superceded that which was representable according to tradition. But mathematical thought in art is by no means mathematical science as such. It is a "preliminary investigation" of rhythms, ratios and laws having their source in the mind of the individual. And in the same way as Euclidian geometry has today only a relative value from the scientific point of view, the same thing is true on the artistic plane. For example the "finite infinite" notion applied in the mathematical or physical sciences may also be of use in the formal researches of mathematical thought in art as we conceive it here, thought which tends to create new symbols apt to translate in an adequate manner present-day sensitivity. Speaking generally, the ideas of modern mathematics bring to art a new content. Far from being represented by formalism, they are on the contrary thought that has become form, for this form is a manifestation of the fundamental elements of the world – an image and not a copy. Does that mean that this art constitutes a branch of philosophy? That would be forgetting that the latter needs the interpretation of words, that thought has not been able to manifest itself in a direct manner up to now, unless it has had recourse to the direct intuitions of art. The more precision thought has, the more cohesion the fundamental idea will have, and the more its expression in art will be direct and universal. This art will then be composed at the same time of certitude and of the unknown, and its very strictness may lead the mind to the borders of the inexplicable.

My Painting   92

by Max Beckmann

Lecture delivered in London in 1938

For Max Beckmann there is a clear division between the world of politics and the world of the mind. He himself has never lived in any but the latter in an attempt to achieve through his art the rendering visible of the invisible by reality. For Beckmann, art is in fact an instrument of knowledge. There is no question of painting a philosophy, which would be vain, dull and ridiculous. Beckmann attempts rather, by the continuous discovery of space, which he calls God, to illustrate the fundamental law of the world, and, in the contemplation of the mystery of being, to attain a "self". Painting is for him the only means possible of coming to the supreme faculty: imagination, which was also the doctrine of Henri Rousseau and William Blake.

Self-portrait   96

by Alfred H. Pellegrini

Shakespeare says that the eye cannot see itself. An ideal self-portrait of an artist should be composed only of the elements visible to him, without a mirror, but as it were, by induction. Whatever may be the reasons that persuade painters to produce their own effigy – need for self-knowledge, pride, melancholy or, quite simply, the convenience of an ever-present model, the fact remains that Pellegrini has very often taken his own person as a subject, even going so far as to show himself stretched out lifeless on a bier. One of his dreams would have been a self-portrait based on an X-ray photograph, a project he was compelled to abandon because it was impossible to distinguish the right from the left.