applied to the example discussed in these lines, is unknown. In fact it is not clear that there exist sets E for which $H(E)$ is not vacuous. But it is obvious that $H(E)$ is always contained in $K(E)$, where K is the set-function (assumed additive) in terms of which H is defined.

In the example in question it is true that an "accessible" topology can be defined in terms of neighborhoods in such a way that the function Lx_n defined in terms of these neighborhoods is identical with the original function L, and so that the set of all continuous functions is dense on the whole space.

INSTITUTE FOR ADVANCED STUDY

ON (2, 2) PLANAR CORRESPONDENCES

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1. *Introduction.* Most of the existing literature dealing with (2, 2) planar transformation is of the type given by the product of two harmonic homologies. By this I mean that the pairs of points of the plane π (or π'') are in harmonic homology. Papers of this type were given by E. Amson,* T. Kubota,† and P. Visalli.‡ Barraco§ defined an involutorial (2, 2) transformation of the plane by means of an involution between the tangents to a conic from points of the plane.

In this paper I shall consider only periodic (2, 2) transformations of period two. The treatment in each case, except those involving the Bertini involution, will be analytic. A synthetic treatment of some of the cases has been given by Sharpe and Snyder.‖ I shall use the following theorems proved in their paper.

A necessary and sufficient condition that the two images of a point P describe distinct loci as P moves on a curve C is that C touches the branch curve at every non-fundamental point they have in common.

* Erlangen Dissertations, vol. 130 (1903–04).

† Science Reports, Tôhoku, vol. 6 (1918), and vol. 14 (1925).

‡ Circolo Matematico di Palermo, Rendiconti, vol. 3 (1889), pp. 165.

§ Giornale di Matematiche, vols. 53–54 (1915–16).

‖ Transactions of this Society, vol. 18 (1918), pp. 409.