

# SMARANDACHE COUNTER-PROJECTIVE GEOMETRY

by

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## Abstract:

All three axioms of the projective geometry are denied in this new geometry.

Key Words: Projective Geometry, Smarandache Geometries, Geometrical Model

## Introduction:

This type of geometry has been constructed by F.Smarandache[4] in 1969.

Let  $P$ ,  $L$  be two sets, and  $r$  a relation included in  $P \times L$ . The elements of  $P$  are called points, and those of  $L$  lines. When  $(p, l)$  belongs to  $r$ , we say that the line  $l$  contains the point  $p$ .

For these, one imposes the following COUNTER-AXIOMS:

- (I) There exist: either at least two lines, or no line, that contains two given distinct points.
- (II) Let  $p_1, p_2, p_3$  be three non-collinear points, and  $q_1, q_2$  two distinct points. Suppose that  $\{p_1, q_1, p_3\}$  and  $\{p_2, q_2, p_3\}$  are collinear triples. Then the line containing  $p_1, p_2$ , and the line containing  $q_1, q_2$  do not intersect.
- (III) Every line contains at most two distinct points.

We consider that in a discontinuous space one can construct a model to this geometry.

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