

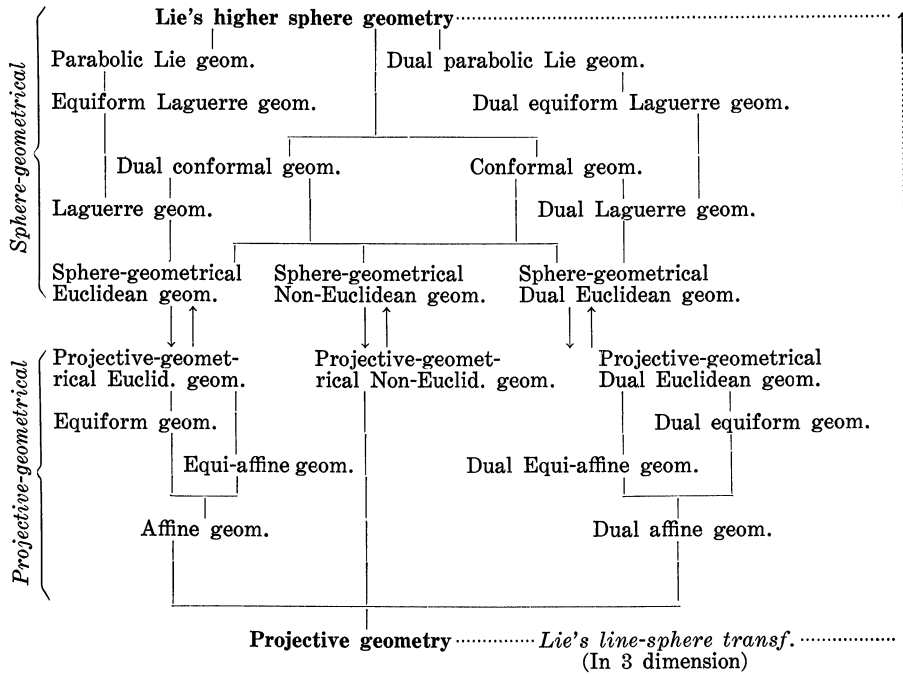
### 34. Duality in the Linear Connections in the Large

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The present author has extended all the branches of the following table by extending respective group parameters to appropriate functions of coordinates, respective invariants being retained, and enabled us to realize all the geometries so extended in the differentiable manifolds ([1]-[14]):



He has established [10] a theory of linear connections in the large considering principal fibre bundles with structure groups extended in the manner as was stated above.

In this note it is aimed at to establish a duality in the linear connections in the large taking the case of the extended affine connections, it being possible to treat all the other cases similarly. A detailed exposition will be done in "The Tensor".

1. **A System of Profitable Hypercomplex Units.** For subsequent use, we will introduce a system of profitable hypercomplex units  $\gamma_\nu$  by the conditions: