LANDSCAPE INHERITANCE
Report of Working Group Number 2:

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The group concerned with Landscape Inheritance did not consider the obvious and widely recognized assemblages related to late Cainozoic climatic changes, with glaciated terrains, with former lakes now abandoned or much reduced, with fields of sand dunes now stabilized by vegetation. We were concerned more with inheritance in the longer time perspective.

The conventional wisdom is, or until recently has been, that the earth's scenery is essentially youthful, much of it being of Pleistocene age. The validity of this assertion was questioned, surfaces and forms of much greater antiquity being cited from several cratonic regions, and also from the older orogens. Exhumed forms, some of them of great age (one inselberg landscape of Archaean age was noted), are more common and extensive than has previously been supposed. Epigene forms of Mesozoic age are increasingly being demonstrated from the world's cratons and orogens. Etch features also are more widely developed than has been realized.

Plains dominate the continental areas. Some are located at or close to present base level. Others stand high in the relief. Many are complex and include exhumed, older epigene and etch components. The world's plainlands are worthy of close examination. Analyses of the denudation chronology of the continents (and plains are surely the end product of long-continued weathering and erosion) complement basin studies, the chronology of deposition. Denudation chronology provides a framework for process studies. The age and nature of surfaces also bears on questions of soil fertility and susceptibility to erosion.

It was recommended that studies of denudation chronology be undertaken, possibly in relation to contrasted cratonic regions. The Westralian, Canadian and Baltic shields were mentioned as possibilities (subsequently it occurred to one of us that the East African Shield might provide a contrasting example of a tectonically active craton). The nature and age range of surfaces that make up the shields ought to be analysed, the processes responsible for shaping the surfaces, and, in the case of the ancient epigene forms, the reasons for their survival.

Once several major areas had been treated in this way (and that in itself would be a major contribution to geomorphological knowledge), it would be possible to analyse the signatures obtained by various satellite sensors in order to ascertain whether the signatures are consistently characteristic and hence whether extrapolation and further mapping by satellite are feasible.