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A general systems approach to mountain geomorphology

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On this 60th. anniversary of Chorley's paradigm changing paper on geomorphology and general systems theory, the application of his ideas specifically to mountain geomorphology is briefly reviewed. Five kinds of general systems are recognized: (i) morphological systems; (ii) spatio-temporal systems; (iii) water, solute and sediment cascading systems; (iv) mountain process-response systems; and (v) so-called mountain control systems that are actually "out-of-control" systems because of policy and planning failures following intensification of land use and climate change during the Anthropocene epoch. Two examples of research questions under systems categories (iii) and (v) illustrate the value of a general systems approach. The first question concerns the relation between disconnectivity and connectivity and discusses reasons for the comparative neglect of disconnectivity in the recent geomorphological literature. The second question concerns the geomorphological effects of human use of land and associated climate change and discusses reasons for the failure of many policy and planning analysts to recognize the links between human use of land, climate change and environmental degradation.