

Interactive comment on “The era of Infiltration” by Keith Beven

Keith Beven

k.beven@lancaster.ac.uk

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Thanks for the comments Roger. Having looked into Horton's papers, I think he was really interested in the phenomenon and controls on infiltration as a scientist. The unpublished Monograph on Infiltration for example describes his experiments with large cores, his appreciation of the effects of air pressure and discusses the role of macropores in water entry and air escape. There were, of course, other soil physicists working at the time to elaborate how water moves through soils, so the whole development of infiltration theory was being made within that context. But, as you point out, that was not the same as using infiltration theory for practical applications. As I point out in the paper, this was convenient, as well as having a theoretical basis - so very marketable! But I do say that some of the people involved understood that it was not general or universal (the "unknown mix" of surface and subsurface flows) but the result was that it was widely applied where that theoretical basis was incorrect (and the real

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point is that it still is in the form of many models). So while I very much agree that engineering applications that simplify the complexity are required, I wish to push for methodologies that are more realistic in their assumptions.

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