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Jonah B Gaster* (jbgaster@gmail.com), University of Illinois at Chicago, 322 Science and Engineering Offices (M/C 249), 851 S. Morgan Street, Chicago, IL 60607-7045. *A family of non-injective skinning maps with critical points.*

Following Thurston, certain classes of 3-manifolds yield holomorphic maps on the Teichmüller spaces of their boundary components. Inspired by numerical evidence of Kent and Dumas, we present a negative result about these maps. Namely, we construct a path of deformations of the hyperbolic structure on a genus-2 handlebody with two rank-1 cusps. We exploit an orientation-reversing isometry to conclude that the skinning map sends a specified path to itself, and use estimates on extremal length functions to show non-monotonicity and the existence of a critical point. Time permitting, we will indicate some surprising unexplained symmetry that comes out of our calculations. (Received September 16, 2013)