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Andy D. Martin* (andrew.martin@kysu.edu), Carver Hall 113 B, Kentucky State University, Frankfort, KY 40601. *Claims Become Theorems, but Who Decides?* Preliminary report.

How do claims of proofs become theorems and join the patchwork tapestry of mathematics we admire and try to describe to our students? Who actually decides for us when a very difficult proof is correct? Surely something like a vote occurs, with acknowledged experts the electors. Is my telling my students the Poincare Conjecture is settled more like a newscast or the Emperor's New Clothes (where I stand at the roadside as the naked ruler passes and assert that I, too, see his beautiful garments)? How can I KNOW that it is true?

Reuben Hersh's view of mathematics as a socio-cultural construct certainly seems to describe this aspect of the mathematical world well. What then is the wisest attitude to have when hearing unverifiable claims? Surely not naive acceptance. What attitude should we foster in our students? (Received September 22, 2010)