1042-20-76   **Gilbert Baumslag*** (`gilbert.baumslag@gmail.com`), Department of Computer Science, The City College of New York, 160 Convent Avenue, New York, NY NY 10031. *A useful odd finitely presented group.*

A long time ago Chuck Miller and I constructed a surprisingly odd example of an infinite finitely presented group O with a quotient isomorphic to its direct square. Al Thaler remarked one day that if a paper is not read by anyone, it cannot be of much interest. I disagree. We believe that our group O is interesting although perhaps no-one has read our paper. So I have chosen to talk about O and then show how it can be used to securely transmit information. This cryptographic byproduct arose in conversation with Ben Fine and Douglas Troeger. (Received August 09, 2008)

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