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Abstract: Every matrix has a canonical Jordan form associated to it. The simple and striking result of Gelfand – Ponomarev of 1969 stopped the attempts to classify a pair of commuting matrices by showing that the direct classification is impossible. This result was in a sense a germ of quiver theory, by now an established branch of Algebra, with applications as far as String Theory.

I will present the result and make a conjecture as to the implications for the geometry of manifolds.

Some familiarity with basic Linear Algebra is helpful.