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Thomas D Morley* (calcprof@gmail.com), School of Mathematics // Georgia Tech, 686
Cherry St // Skiles Building, Atlanta, GA 30332. *Feynman's Funny Pictures*. Preliminary report.

“They were funny-looking pictures. And I did think consciously: Wouldn’t it be funny if this turns out to be useful and the Physical Review would be all full of those funny looking pictures. It would be very amusing.” – Richard Feynman
In this talk we cover briefly several ways of looking at one of the most important new notations of the twentieth century – the Feynman diagram. Feynman Diagrams were originally invented to keep track of terms in a perturbation series (Wick’s expansion of a Dyson series) of the scattering matrix of a physical process with interaction(s). Yet they seem to say much more.

“The Feynman graphs and rules of calculation summarize quantum field theory in a form in close contact with the experimental numbers one wants to understand.” - Bjorken, J. D.; Drell, S. D. (1965). ”Relativistic Quantum Fields”. New York: McGraw-Hill

We briefly look at the original use of Feynman diagrams, what they say seem to say mathematically and physically, and talk about some examples of how the notation has influenced physics and mathematics. (Received August 22, 2018)