1015-01-76 **David Lindsay Roberts*** (droberts@usna.edu), 12226 Valerie Lane, Laurel, MD 20708. *"A Peculiar Fascination": A Brief History of Linkages as Objects of Practice, Theory, and Pedagogy.* Preliminary report.

Mathematical interest in linkages, systems of rods or bars connected by hinges or pivots, has followed an erratic pattern over the last 200 years. Initially emerging from the eighteenth-century machine design problem of converting rotary to straight-line motion, the topic attracted such nineteenth-century mathematicians as Chebyshev, Sylvester, and Kempe. Research activity declined after a flurry of publications in the 1870s, but several enthusiasts in the first half of the twentieth century proposed using linkages for pedagogical purposes, with limited success. The late twentieth and early twenty-first centuries have seen a revival of linkages from a more abstract point of view, one consequence being the reformulation of some of the theoretical results of the nineteenth century, with more rigorous proofs. (Received January 25, 2006)