

The multiplier as amplitwist:

If a Möbius transformation M has two fixed points ξ_+ and ξ_- , then the multiplier $m_+ = M'(\xi_+)$ and the multiplier $m_- = M'(\xi_-)$. Since these derivatives are the amplitwists of M at its fixed points, then the geometric effect of M in the vicinity of its two fixed points is an amplitwist equal to the multiplier associated with that fixed point. Whether the amplitwist is a pure rotation, pure expansion or a composition of the two, determines the character of this local geometric effect and determines whether we call M elliptic, hyperbolic or loxodromic.

Vasco, Forum, Jan 24, 2017, <<http://vcaneedham.freeforums.net/thread/221/exercise-21-chapter-6?page=1&scrollTo=889>>.