Gearing Outside English

billiards.colostate.edu

Effects of different amounts of sidespin:

Drill: test aim first with fast-speed draw/follow (less throw); then vary speed and draw/follow/stun to see changes in throw; then experiment with slow stun (max throw) and various amounts of sidespin.

40% Rule – System for visualizing the “gearing” amount of outside english:

The tip offset (x) is 40% of distance (L) to the line-of-centers point. 

**Alternative to using gearing outside english (e.g., when shot calls for different english):**

Adjust aim for throw (before adjusting for squirt/swerve, for example with BHE/FHE), understanding:
- Maximum throw is about 1 inch per foot of OB travel, which is about 5 degrees.
- Maximum CIT occurs with a slow-speed stun shot at about a 1/2-ball hit.
- Maximum SIT, for a straight shot, occurs with slow speed, stun, and about 50% english.
- Throw is less with faster speed and with topspin or bottom spin (unless drag, then more throw).