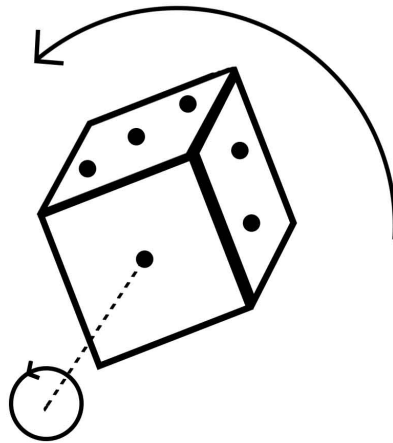


## Handout: The Little Technique

Try rolling your die so that it ONLY spins around the axis through the 1-face:



Let's explore what happens when we use this technique to roll a standard six-sided die:

1. Do you get less 1's? Just try a bunch of rolls!
2. Does it change the average roll? Go on try rolling a bunch of die this way!
3. What if 1 were opposite 2, do you think using our technique would change the average roll? If so, what would you expect the new average to be?
4. How would this technique change the results with the original non-transitive die:
  - (a) if only you knew about it?
  - (b) if both you and the person you were playing against knew about it?

[First just play the game this way, then try figuring out what we should expect.]