

Counterbalancing

During a brief break in the wet and cold of winter, I was plodding along FM 2933 at the speed limit when on a 45 MPH left-hand sweeper (I was riding at 55 MPH) I was passed on the inside lane by a Harley dresser. The point is not to debate the wisdom of passing on the inside lane of a no-passing zone (it wasn't wise) nor is the point to underscore that I am old and slow (I am). The point is that the modern motorcycle is a very component piece of machinery and few motorcyclists truly outgrow the handling capabilities of their mounts.

Most single vehicle motorcycle accidents are not caused by the rider exceeding the design capabilities of the bike but riding beyond his or her individual skill level for the given situation. Practicing and learning riding techniques that fall well within the capabilities of the motorcycle and allow plenty of skill reserve in an emergency is advantageous. A technique I have been exploring is known in engineering as counterbalancing and the idea is to get the motorcycle to stay upright.

Keeping the bike upright allows the suspension and frame to work more effectively on uneven pavement. Instead of fighting with the motorcycle for control the rider is working with the motorcycle to navigate the turn. Admittedly, the heavier the motorcycle the less effect the rider hanging off the bike has, but, it may not take much to keep those "hard parts" from touching down on a cruiser or Goldwing.

Generally I have found the steps to smooth cornering to be as follows:

1. Ride on or near the balls of the feet while cornering.
2. Position the body with "knee down" on the bike before the turn (body centerline toward the inside of the turn; motorcycle centerline toward the outside of the turn). In addition to counterbalancing the bike, this rider position makes the motorcycle less aerodynamic toward the inside of the turn than the outside of the turn and helps twist the bike in the direction you want to turn.
3. Locate the turn point (beginning of turn).
4. Look through the turn, locate your apex, and if you can, locate the turn's exit point (plan ahead).
5. Push slightly toward the inside of the turn and allow the bike to naturally drop, fall, or lean into the turn.
6. Gently apply power through the turn (keep the speed steady or gradually accelerate through the turn).
7. Push on the outside grip (lean your body further off the motorcycle) to tighten the turn if needed.
8. Bring the body and motorcycle back to a neutral position as you exit the turn

You really can't consider this the natural thing to do. In fact, the "natural" tendency is to lean the bike toward the inside and your body to the outside of the turn putting you, the rider, at odds with physics. The bike is heavily leaned into the turn with less grip on the tires and less suspension compliance.

Additionally, aerodynamics is trying to steer the bike toward the outside of the turn. Toss in a little loose gravel or touching down some “hard parts” and you are getting a closer look at those roadside wildflowers than you will care for.

Paramount to the proper turning of a motorcycle is the efficiency of cornering technique execution and the proximity of setup and follow-through in relation to the turn. It will take practice, but I believe that in the end one will be rewarded with smoother cornering and a more relaxed frame of mind after a romp down the back-roads that motorcyclists like so well. For a good discussion of counterbalancing as a cornering technique, please investigate the book “Total Control” by Lee Parks.

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