

## Why LH bends are 10x more dangerous than RH bends

Statistics show that 60% of biker accidents occur when no other vehicle is involved. By far the most frequent accident causing either death or a life changing injury is caused by loss of rider control negotiating bends – left hand bends in particular. This article discusses the different issues facing the rider when cornering based on typical country road conditions.

There are two basic principles that apply to motorcycle riding in particular. These principles are applied automatically by the rider's brain unconsciously:-

1. motorcycle speed is adjusted according to the distance ahead seen to be clear.
2. a motorcycle will go where the rider is looking. The corollary – look where you want to go – see later.

With this understanding of how bike and rider function, let us first look at the right hand bend (the safer of the two types being discussed). Figure 1 shows a typical country road, drawn to scale with radius 18.5 m and width enough for two cars to pass.

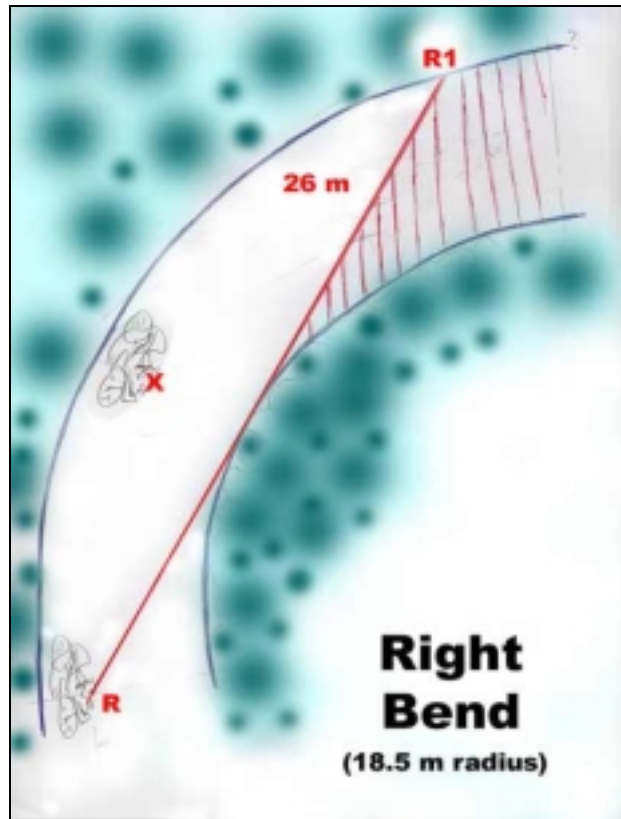


Figure 1

Experience tells us that the rider should adopt a left-of-road position so as to maximize the line of sight through the bend. Leaning into the bend the rider will see from point R to R1 – a distance of 26 meters. Around the bend and all to the right of line of sight (the red line) is frequently obscured by hedgerows, trees, walls or whatever. Within the hatched area any kind of obstacle or hazard may lurk.

The average rider with average attitude and experience seeing 26 meters ahead may automatically ride at (say for example) 50 mph. Assume there is an immovable object just to the right of point R1. Reaction (thinking) time is said to be 0.7 of a second – covers a distance of 15 meters to point X. From point X to the hazard, the rider has 11 meters to alter line and to brake. The riders eyes are looking right into the bend – probably frozen on the hazard (cow dung, rock, pothole or vehicle), and therefore principle 2 above works in favour of the rider. The rider is drawn away from the curb and round the curve.

## Hidden dangers in a left hand bend

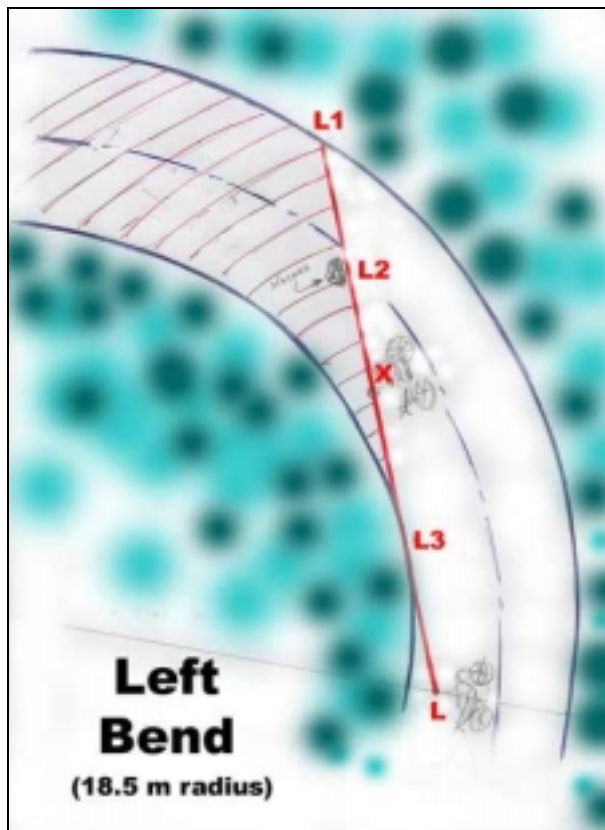


Figure 2

Using the same 18.5 meter radius bend we have shown there to be a white line, broken or otherwise, with maybe cats eyes. The rider position is as far right as possible, without crossing the centerline, in order to get maximum visibility through the bend. Again visibility is obscured by hedgerows.

At the starting position and leaned into the bend the rider will see from point **L** to **L1** a distance of 19.5 meters. There are schools of thought that suggest the rider should observe the vanishing point (**L1**) to watch whether the vanishing point is receding away or coming in closer to the rider. Indeed some advanced riders suggest "chasing the vanishing point" and using it as a basis for adjusting throttle and speed.

If the focus point is **L1**, and applying principle 1 for former discussion, then the rider's brain might adjust speed pro rata to 37 mph based on 19.5 meters clear line of sight. Now, is 37 mph safe for this bend? Remember, focusing on **L1** is not good since it does not draw the bike around the bend. Conversely it is dead ahead and exactly not where the bike should go under any circumstance.

As before, assume there to be a hazard on the riding line at about point **L2**. At 37 mph and with the same thinking time of 0.7 seconds the rider will traverse 11 meters to point **X**. However the distance from **L** to **L2** is only 15 meters.

At 37 mph the time taken to travel from point **L** to **L1** is 0.95 seconds. Consuming 0.7 seconds thinking time the rider is left with insufficient time or distance to achieve a safe solution. Spotting the hazard, the rider's eyes will be dead ahead, and that is where the bike will go – across the line and into trees, a barrier or the path of oncoming traffic.

To navigate any lefthander with obscured visibility the rider must constantly adjust focus point. Focusing on point **X** will draw the bike around the bend yet lead to a slow speed; focusing on point **L2** will automatically promote safe speed. Obsession with point **L1** will lead to disaster.

Where possible, in the approach to any bend, sit up straight, look over the hedgerows and through the bend, watch for oncoming or stationary vehicles, clues to where the bend will lead like lines of telegraph poles, etc. Stones and gravel wash out of embankments, especially with heavy rain. Think – Ride Safe.

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Look where you want to go.....

Yukio Kagazama – Suzuki Yamaha GSXR 1000

Looking where he wants to go.....



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