

I came across the following article some time ago on the “Interactive Motorcycle Website” which is no longer active. Much has been written about managing the hazards of riding. In my opinion, this article really focuses on the main requirements for protecting oneself when on the road. In future articles, I will address each of these areas (mental skills, physical skills, and protective gear).

Three Degrees of Separation

by Patrick J. Hahn

ON YOUR MOTORCYCLE, there are three things that separate you from the ground: your mental skills, your physical skills, and your protective gear, in that order. (After that, it's just you and the pavement.) By themselves, each of these things can protect you. Combined, they create a strong defense against the potential hazards involved with motorcycling.

Mental skills make up 90% of everyday riding. This is your first degree of separation. Once you've mastered the mechanical controls and become used to your bike, normal operation becomes almost automatic. As you gain more and more riding experience, you become comfortable and confident. But this doesn't make you a better rider. It only frees up your brain from the distraction of the controls. *This* allows you to develop your first line of defense: a mental strategy.

There are several formal driving strategies; each is an organized system to process information, each attempts to identify and avoid hazards, and each is fairly simple to use. Most skilled riders have adapted one (or more) of them to their own riding style and their own needs. Riding a motorcycle into traffic without a game plan is ignorant at best, suicide at worst. A continuous mental process of absorbing information, analyzing it, and preemptively using it to avoid mistakes is crucial to a rider's survival.

Attitude also plays a part. Taking responsibility for your own actions is easy, but because you, the motorcyclist, will more likely suffer bodily harm in the event of a crash, then you, the motorcyclist, must take responsibility for everyone *else's* actions as well. This means being tuned into not only your self, your bike, and your environment, but also being aware of other drivers, correctly anticipating their behavior, and effectively avoiding hazards before they place you at risk. Ideally, a skilled rider avoids hazards before they even *become* hazards. This level of ability doesn't come easily or naturally. It needs to be learned and aggressively practiced.

Because your brain is your first (and best) defense, being aware of its limitations is necessary for a complete riding strategy. Factors such as fatigue, stress, emotion, and body temperature can enhance or reduce your decision-making ability. Food, caffeine, alcohol, and medications can seriously impair your senses. Your body works on natural daily rhythms; some days are better than others, some times of the day are better than others. Ask yourself this: are you more alert at 6 a.m. or 10 a.m.? Is your concentration better, or worse, when you're hungry? How focused on riding are you when you pull out into traffic after a long day of work? How focused on *driving* are other people when *they* pull out into traffic after a long day of work? The same limitations that you have apply to other road users as well--and while you can't control what others do, you *can* control what *you* do, and learn to recognize times of higher risk and adjust your strategy. That's

what's so great about the mental challenge of riding: it's always there, it changes constantly, and there's always room for improvement. Plus, it keeps things interesting. Physical skills make up only a small percentage of everyday riding, but when you really need them, they instantly become 90% of your survival. This is your second degree of separation. When something breaks through your mental barrier (as any hazard worth its weight is prone to do), instinct, self-preservation, and adrenaline have to take over. At these moments, if your physical response isn't the correct one, you'll immediately need to rely on your third line of defense. But it doesn't have to *get* that far.

Controlled swerving or hard braking seem easy enough when you've got lots of room and lots of time, but when the pressure's on, do you really know how they're done? And do you know the relationship *between* the two? Most people don't, although they *think* they do.

It's almost impossible to turn a bike without leaning it, and a swerve is really just two quick, consecutive turns. While it is possible (although slow and highly inefficient) to lean a motorcycle by leaning your body, to lean it *quickly* requires countersteering: forward pressure on the handgrip in the direction you want to go. Example: if you want to swerve to the right, you press forward on the right handgrip. You actually (initially) point the front tire *away* from the direction of the swerve. This seems backwards to most people, and rightfully so. But like a mental strategy, it's a skill that can save your biscuit, so it needs to be *learned* and *practiced*.

The same holds true for braking. How many people really know how to use their brakes? Many riders avoid the front brake for fear of flipping over. This is an irrational, uninformed, and dangerous mistake. Under extreme braking, the front brake accounts for 85-90% of the bike's stopping ability, and does so with mind-boggling authority. As the brake lever is squeezed, weight is transferred to the front tire, which increases traction and stopping power, which allows the rider to squeeze still further. As more weight is transferred forward, more traction is available, allowing the rider *more* braking power. As the motorcycle slows, the weight begins to shift toward the back tire, allowing the rider more grip from the rear. But by now the bike's stopped, and you're in first gear, ready to scoot out of the way of the car approaching rapidly from behind. You knew about *that* because of your mental strategy--you were aware of who was behind you, how far back they were, and how attentive they were. That and you can hear the screeching tires. (Here, we see the first and second degrees overlap. To successfully complete this entire maneuver, you need both lines of defense.) Like swerving, this isn't something you can read about and then execute whenever you need to. It, also, needs to be *learned* and *practiced*.

An additional note on swerving and braking: they absolutely *must* be separated from one another--they cannot happen simultaneously. You can either swerve *or* brake, but not both at the same time. Each maneuver uses tremendous amounts of traction, and the traction available on a motorcycle is limited. When you push your motorcycle beyond that limit, the result is usually a crash. Here your mental skills again come into play: you must decide beforehand whether you will swerve or brake, or if you need to do both, *when* you will swerve and *when* you will brake, and how you will separate them to maintain control of your motorcycle.

Protective gear is your backup in case your first two lines of defense crumble. When all else fails and something finds its way past your first two barriers, what you're wearing is

all you have left. This is your third degree of separation. It's technically a combination of the first and second degrees. Mentally, it falls under preparation. Physically, it protects you not only from the ravages of the pavement but also from elements such as heat, wind, and cold that can affect your ability to concentrate and operate the bike (this third line of defense implicitly complements the first two). High quality protective equipment that's designed specifically for motorcycling not only creates a layer of armor between you and the ground; it makes the first and second degrees of separation easier to manage, as well. In theory, a properly executed mental strategy can protect you from everything. For those times when your brain can't save you, your physical skills and ability to control your motorcycle are your backup. What your mind and skills can't protect you from, your riding gear has to. After that, all you're left with is blind luck, which is actually somewhat underrated--you'll find as you develop your riding strategy and physical skills that the more you practice, the luckier you get.

Each degree of separation can stand on its own, but is far more potent when combined with the others. Individually, each can bail you out of a bad situation, but together they create a formidable barrier to the risks associated with motorcycling. Each can be achieved through learning and practice, but they need to be *learned* and they need to be *practiced*. No matter how long you've been riding, no matter how many near misses you've had, no matter how many miles you've traveled without crashing, there's still more to know.