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## Appendix: The Process of Search, Evaluate, Execute

Foreword: *The following has been adapted from "The MSF's Guide to Motorcycling Excellence," ©2005 Motorcycle Safety Foundation. While this section was written specifically for motorcyclists, the strategies apply equally as well to operators of any motor vehicle.*

### Search

Search refers to the process of scanning aggressively for potential hazards. Searching provides you with the necessary information in order for you to make good decisions and take proper action. Good searching extends beyond what is immediately in front of you to include everything twelve seconds in the distance, as well as the areas to the sides and behind you. Check your mirrors frequently as part of your search pattern, and use head checks to monitor blind spots (the area to the side and behind that the mirrors do not show). Note: many motorcycles have convex mirrors that allow the rider to see farther to the sides, but these can also distort your sense of how far away an object actually is.

Your search efforts are most effective if you are able to prioritize the elements of the traffic environment. There are three primary categories of information that should be monitored as part of your search activity: 1) traffic control devices and markings; 2) road characteristics and surface conditions; and 3) other highway users. Any one of these three can be more or less important than the others, depending on the situation. Monitor all three of them together, shifting focus as the situation demands, and you will have the information necessary to ride safely.

Remember, the most common area for conflict between yourself and other roadway users is at an intersection. This is where different vehicles cross paths and where communication between roadway users is most critical -- and also, most confusing. A common motorcycle/automobile crash at an intersection is caused when an oncoming vehicle turns left into the path of an approaching motorcycle. Because of this, using the SEE techniques is especially critical at intersections.

As you approach an intersection, search for the following:

- Traffic approaching from behind
- Oncoming traffic that might turn left in front of you
- Traffic from the left



- Traffic from the right

Pay special attention at intersections with limited visibility. Be equally aware of visually "busy" surroundings that could camouflage you and your motorcycle.

## Evaluate

To evaluate is to process the information that you gathered using your search patterns. To evaluate means simply to anticipate potential problems and to make plans in your mind to deal with those problems should they actually come about. Evaluating effectively is a logic puzzle of sorts, a game of figuring out how factors accumulate and interact to create hazards or conflicts.

The fundamental rule of successful evaluation is this: "to get the best results, predict the worst possible outcome." Though this might sound counter-intuitive, predicting a worst-case scenario will help you to best anticipate all possible outcomes. Predict a green traffic light will soon change to red; predict the curve is sharper than it looks; predict that another vehicle will cross into your path.

Evaluate the mix of possible factors that could cause you trouble. Do this by considering potential hazards from three primary categories. These are:

- **Traffic Control Devices and Markings.** Know what your responsibilities are regarding traffic flow as well as what others are supposed to do. But don't count on others being aware of traffic control devices like traffic lights, stop signs, flashing warning lights, etc. Signs and lines help keep traffic separated as well as provide information about lane usage, traffic patterns and pedestrian areas. Get the big picture as you evaluate the situation ahead as well as the space around you.
- **Road Characteristics and Surface Conditions.** Consider the type of roadway, such as whether it is hilly or curvy, is made up of two lanes or four, is a one-way or two-way street, is crowned or banked, or has curbs or shoulder areas with minimal or large areas for escape-route possibilities. Also factor in surface conditions in and around your path of travel such as potholes, guardrails, bridges, poles, signposts, or vegetation. Evaluate areas that have fixed objects near the road because they aren't very forgiving if you hit them.
- **Other Highway Users.** Most other vehicles outweigh you and are moving quickly, so think about how they might affect your speed, lane position or path of travel. Evaluating what might happen well in advance will give you time and space to respond accordingly before you might need emergency reactions. Think too about how pedestrians, bicyclists and animals may affect your path of travel and space cushion.

Don't think of evaluating outcomes as guessing -- think of it as "reading" the situation. Take clues from your surroundings and assemble them into a reasonable scenario like you might assemble random words to create a grammatically correct sentence. Arrange these clues based on the likelihood that they would contribute to a hazard. Ask yourself, "How critical is the hazard? Might it lead to a collision? If so, how probable is that collision? Where would that collision occur? What decisive actions (downshifting, braking, swerving) might I have to take to avoid this sort of collision? What are the potential consequences of this hazard? How might the hazard -- or my efforts to avoid it -- potentially affect myself and other roadway users?" As you can see, your level of riding knowledge and experience is important for this "what if" portion of the SEE process.

This process is called risk management. What risk management really boils down to is successfully managing time and space to create a safety cushion for you and your motorcycle. Categories to consider include: 1) your capabilities and limitations with regard to your skills operating your motorcycle; 2) the capabilities and limitations of your motorcycle; and 3) roadway/traffic conditions. For example, the safety cushion is gone if a required maneuver calls for skills beyond those that you possess or if there is simply not adequate time or space available to complete that maneuver. Your safety cushion evaporates when a situation requires more steering and/or braking than the motorcycle is capable of providing.

## Execute

A skilled rider is a decisive rider. Once you've adequately evaluated a situation and decided on a course of action, execute it. Resist the urge to pause or second-guess. Instead forge ahead with your carefully crafted plan of action. Remember, especially in a critical situation, time and space are at a premium. Act decisively and immediately to maximize your response time and keep your safety cushion as big as possible.

Decisions are executed in three ways:

- **Communication.** Communication between roadway users is usually initiated through the use of lights or horns, as well as eye contact or other body language. Note that communication is the most passive of all the possible actions that you can take, since it depends entirely on the response of someone else. Use any of these methods to communicate with or attract the attention of other motorists, but don't rely on the actions of others (their response) to ensure your safety.
- **Adjust Speed.** Accelerate or slow to avoid a hazard, or, if conditions allow, come to a complete stop.
- **Adjust Position.** Change your lane position or change direction.

The degree to which you are able to adjust your lane position or speed depends on how critical the hazard is and on how much time and space you have to make these adjustments. The more time and space available, the less adjustment is required and the less the risk. This is especially important to remember in areas of high potential risk, such as intersections. Give yourself more space and take steps to reduce the time you need to react when approaching intersections. Remember to cover both brakes and your clutch, and ready your mind with possible escape routes.

Also remember the importance of remaining visible when approaching intersections. One-third of all intersection collisions involve car drivers turning left in front of other drivers. This is especially true with regard to oncoming motorcyclists. The Hurt Study reported, "The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of motorcycle accidents. The driver of the other vehicle involved in a collision with the motorcycle did not see the motorcycle before the collision, or did not see the motorcycle until too late to avoid the collision." Remain extra-alert in these situations.

Learn to SEE better. Commit the SEE acronym to memory, and make this strategy second nature for you so that you unconsciously go through the process every time you ride. Gather good information, process that information properly, and make the best decision to ensure your own safety -- whether it involves oncoming traffic or not. Take steps to actively manage your situation -- don't let yourself fall to the mercy of other roadway users. Understand completely the importance of timing, positioning, and the use of space. Ride defensively. Assume that you are completely invisible to other vehicle operators, and respond accordingly. Control your ride -- don't let your ride control you.