

Skiing Simplified: Momentum, Gravity and Terrain

Momentum, Gravity and Terrain

The purpose of this document is to define three forces useful in understanding or simplifying skiing. I believe they are fundamental strategic entities. Strategic entities are the things that must be understood before working on goals and objectives. In other words, 80% of a solution is the problem definition. Plus, that problem definition is used again to define the solution. For example: a strategy defines three things: 1) Strengths and Weaknesses (character, confidence and motivation); 2) Environment; and 3) Goals and Objectives. In skiing, ski racing and everything else; the definitions in the first two of these are used to define the third. Skiing simplified is all about using rather than fighting forces. Using forces means sensing and balancing on the forces. Because of too much focus on the skis, the problem with skiing is that it doesn't look like it feels. Hopefully understanding (identifying, defining and sensing) these three forces will show how they are used as tools with the ski tool to help rather than hinder a skier's balance.

Terrain

The three forces are momentum, gravity and terrain. Because they are straight lines, the first two are very useful tools. Terrain is a curved line and many times it is a variable or unpredictable curve. In skiing, ski racing, and everything else; when faced with curves and their variability we are forced to assume linear or straight line relationships in the short term and be prepared to make adjustments. In other words, in skiing you have to anticipate a specific terrain force and adjust to the changes in that force. So, now that we know all there is to know about terrain let's assume the mountain is smooth, the perfect steepness for our confidence level, and move on to the other two tools of force.

Momentum and Gravity

Momentum and Gravity are straight lines, and never the same straight line. Gravity is a straight line down through the terrain towards the center of the earth, and momentum is a straight line of force in the direction you are moving across the terrain (earth). Skiing simplified is all about using rather than fighting forces. Momentum is never or almost never the direction your skis are pointed. Gravity associated with terrain is the fall line, or the direction water or a ball would roll down the hill. But as stated before, the straight line of gravity is through the terrain. Using forces means sensing and balancing on the forces. When you ski you can sense momentum, sense gravity and sense terrain.

Tools for Skiing

Once we understand and begin to sense these three force lines, we can use them with our skis like tools. In other words, we can balance on them and use them to help us move to more efficiently use our skis as tools. For example: when moving into position to either slow down or speed up in a turn, we make the move to begin using our edges without changing our line of momentum. At the same time we also balance on and use

Skiing Simplified: Momentum, Gravity and Terrain

the line of gravity to help us make that move. At the same time we also balance on and use the line of terrain to help us make that move. The purpose of this document is to add to the focus on skis, the focus on the other three tools available. If you do I think you will find them independent. So, I believe you will want to work with each of them separately. Therefore, the finer you sense the line, the easier it is to balance.

Summary: Momentum, Gravity and Terrain

The purpose of this document is to define three forces useful in understanding or simplifying skiing. I believe they are fundamental strategic entities. Strategic entities are the things that must be understood before working on goals and objectives. In other words, 80% of a solution is the problem definition. Plus, that problem definition is used again to define the solution. For example: a strategy defines three things: 1) Strengths and Weaknesses (character, confidence and motivation); 2) Environment; and 3) Goals and Objectives. In skiing, ski racing and everything else; the definitions in the first two of these are used to define the third. Skiing simplified is all about using rather than fighting forces. Using forces means sensing and balancing on the forces. Because of too much focus on the skis, the problem with skiing is that it doesn't look like it feels. Hopefully understanding (identifying, defining and sensing) these three forces will show how they are used as tools with the ski tool to help rather than hinder a skier's balance.