

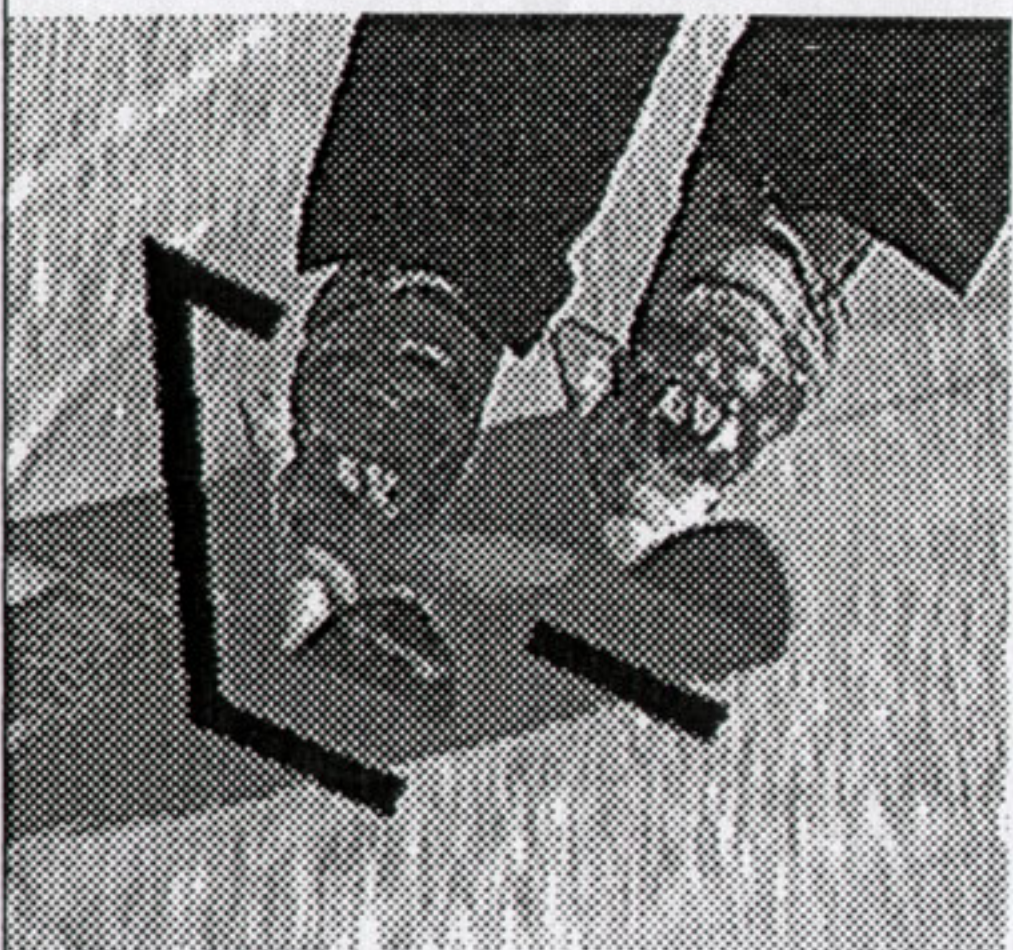
AS EASY DOWN AS UP

Where before skiing was a practical means of transport for people in areas of the world covered by snow, skiing today is mostly a leisure activity. Now, thanks to modern ski lifts, mountains are easily accessible for everyone.

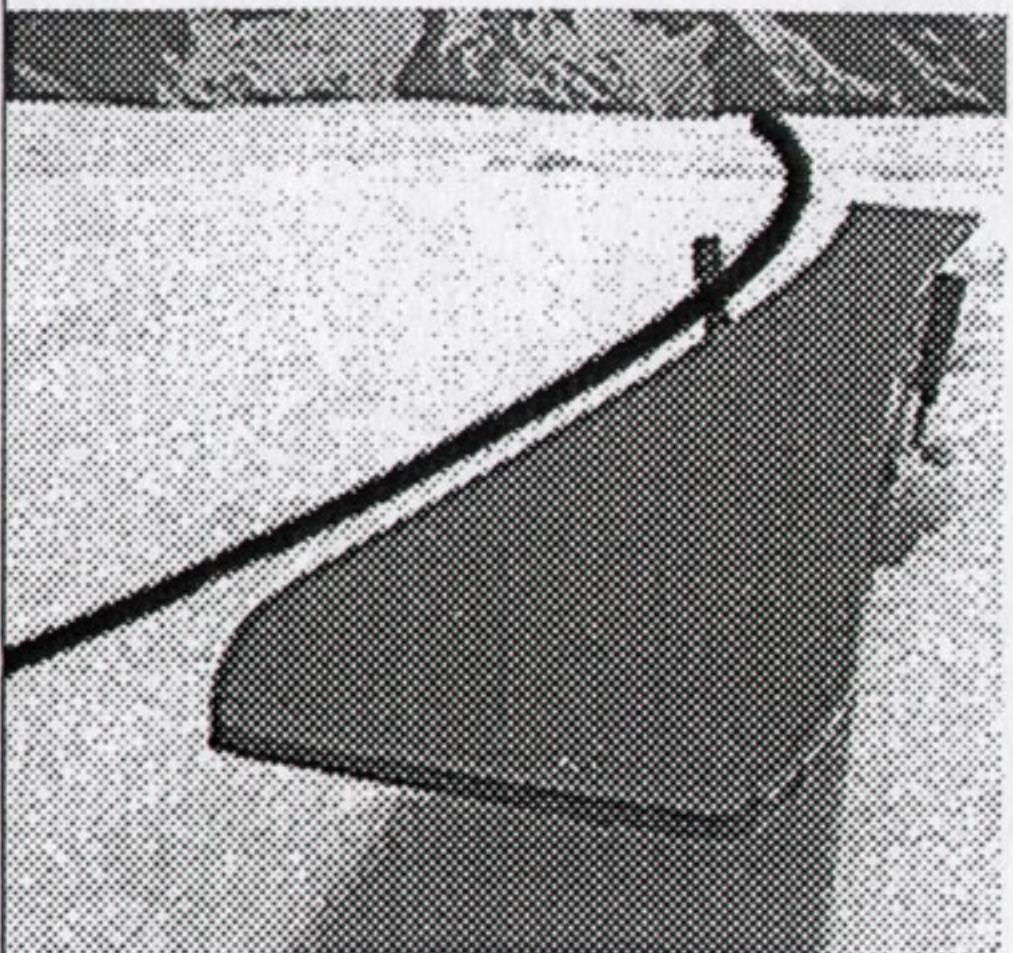
At the same time, new materials and modern innovations related to the design of skis have made it much easier for the skier to ski down mountains. Modern carving skis have made it safer and less tiring to ski effectively and elegantly and the possibilities for having fun in the mountains have never been better. This book, together with the CD-Rom and our web site, will provide the basis for you as a skier, to get the best experiences on the mountain.



Lengthwise flexibility



Torsional stiffness



Side cut

The book contains a series of in-depth explanations and tips on how to improve your skiing skills in a number of specific situations. Before we introduce the actual exercises, we will briefly describe some of the basic conditions that are essential to alpine skiing.

FLEXIBLE SKIS WITH AN HOUR-GLASS SHAPE

Controlled skiing means making turns. With the development of the carving ski, it has become much easier to make turns than was the case just a few years ago. A short description of the skis and their design can help you understand how they work.

Modern skis are flexible lengthwise. For example, if you place the skis between two chairs, you find that you can press down on the skis with relative ease, making them bend. This lengthwise flexibility allows the skis to keep continual contact with the snow, even on the most uneven terrain. This is useful because the more contact you have with the snow, the better chance you have of controlling your skis and, hence, your direction and speed.

Modern skis are also torsionally stiff. This ensures that the ski keeps the same angle to the snow along the entire length of the edge. Older skis tend to be soft across the width, making them flatten out in the tip and tail, thereby limiting their grip in the snow. This increases sideways skidding.

Furthermore, an important aspect about carving skis is their shape. These modern skis are shaped like an hour-glass; they are sidecut: that is, they are wide at their ends, while narrow at the middle. This shape ensures that they actually turn when you put pressure on the edges. The more extreme an hour-glass shape your skis have, the sharper the turn it is possible to make.

EXTERNAL FORCES

On the slopes, there are some simple physical conditions that have an influence on your skiing. The two most important ones are the force of gravity and the centrifugal force.

Gravity pulls you in towards the centre of the Earth. The force with which it pulls you is constant. However, when the slopes become steeper, you ski faster as the force of gravity pulls you down the slope. On steep runs, the relative pull of gravity dragging you towards the bottom of the mountain will increase. When you turn on steep ski runs, you need to use more strength at the end of the turns to avoid sliding or skidding down the slope.

Centrifugal force also affects your skiing but only during a turn. When you begin turning, centrifugal force works out of the turn. At times, it will feel as though something is "pulling" you sideways. If you don't react against it you slide sideways out of the turn and downwards. The sharper the turn, the greater the force.

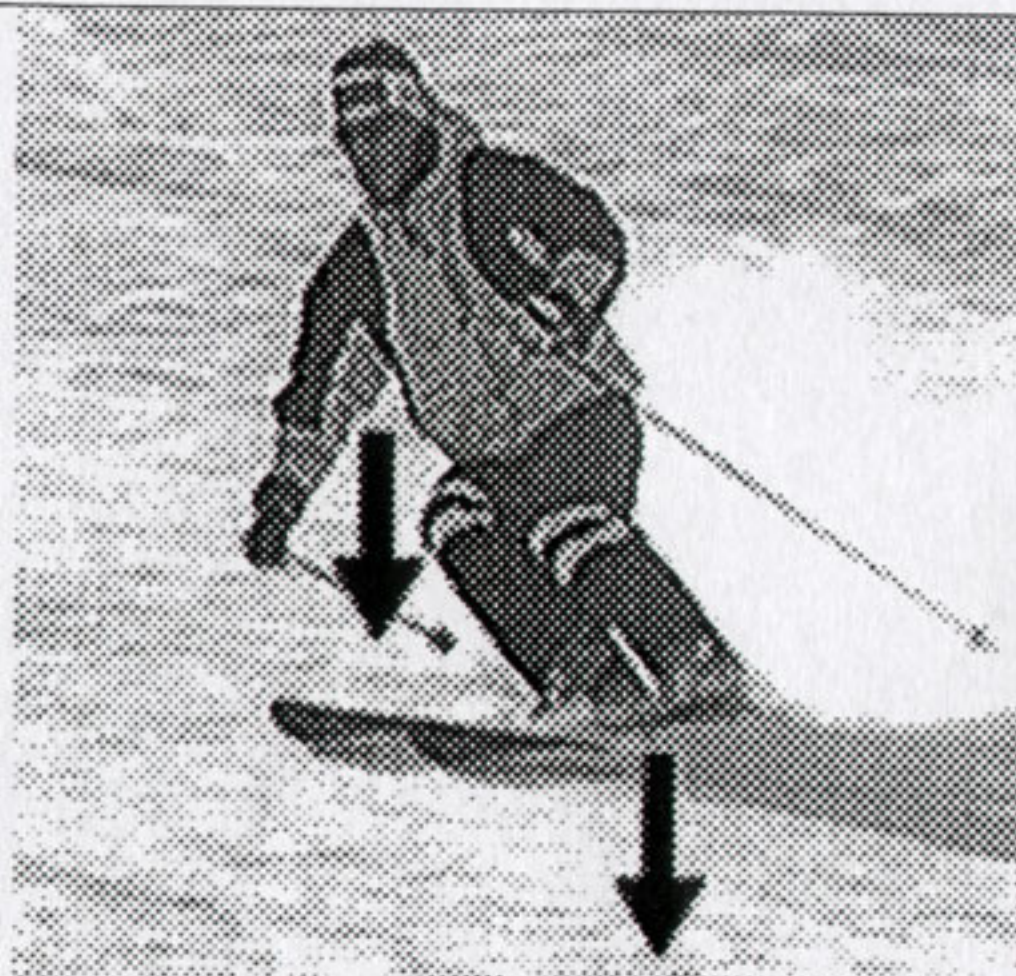
If you feel your skis sliding under you while you are turning, then you are experiencing centrifugal force.

Gravity and centrifugal force will of course always have an influence on your skiing. The trick is to know how these forces work in order to be able to make adjustments to your technique, allowing you to make the nice round turns you have always dreamt of.

RHYTHM, TURNS AND PATIENCE

Throughout the years, ski instructors have often experienced skiers in great shape, with good balance and the proper equipment, who still have difficulties in reaching a level where the skis do exactly what they are asked to do. There are many reasons for this.

We find that a lack of understanding of the fundamen-



Forces of gravity



Centrifugal force



Good balance



Downhill skiing



Short turns



Accelerating turn after turn

tal principles of alpine skiing is a good explanation. Let us look at these principles in more detail.

STRAIGHT DOWN OR TURNING?

There are two approaches to skiing.

The first approach is based on downhill skiing. You put on your skis and ski straight down the mountain. When you pick up too much speed, you try to gain control by turning the skis forcefully to one side. When you have your speed under control, you point the tips of the skis downhill, and start the procedure all over again. This form of skiing can be very entertaining. However, the disadvantage is that it is a very tiring method and the chances of falling are greatly increased.

The second approach, which is based on the slalom method, is the approach that we concentrate on in this book. Using this method, you attempt to control your speed from the start by making interconnected turns. As opposed to the downhill approach, where the main goal is to get down the mountain as fast as possible, the aim of the slalom approach is to make controlled turns. This is absolutely the best way to get from the top of the mountain to the bottom alive, while preserving your strength. After only the first two or three turns, you will have reached the speed that matches your technical ability and temperament. If, after two or three turns, you find that your skis are accelerating undesirably, you should adjust your turn radius so that it better suits the gradient of the slope and the snow condition.

You may be familiar with the following scenario: you set off and the first turn goes very well. After two or three turns, you begin to pick up speed, and around the fourth or fifth turn the skis are going faster than you planned. By the time you reach the seventh or eighth turn, your skis are going much too fast and you need to

stop them. It is at this point, you probably cry out something along the lines of; "There must be something wrong with these skis!". Unfortunately it is seldom the fault of the skis themselves! It is more likely that each turn is never fully completed. Therefore you need to change the radius of your turn and to ski with a constant speed remaining longer in the same arc of the turn in order to complete your turn.

THINK OF TURNS AS CIRCLES

A good piece of advice is to think of the turns as circles and think of the circle as a clock. Imagine that the start of the turn is at twelve o'clock, while the end of the turn occurs between six o'clock and eight o'clock depending on how sharp a turn you make. When you have come half way around the turn, at about three o'clock, your skis should point downhill. It is at this point that you have the greatest need to control your speed. Unfortunately, this is difficult to do as long as your skis are pointing directly down the slope. Only after you have passed the point where the skis are pointing straight downhill, is it possible to work on controlling your speed again. You are in a no-control zone, between about two o'clock to four o'clock.

Tip 1: Control the speed of your skis at both the start and the end of the turn - never right in the middle of the turn!

You have probably experienced a similar situation when for example; you drive a car in slippery conditions. When slowing the car down, there is a natural tendency to brake hard. However the exact opposite happens. The brakes lock, and the car begins to skid without you having any control over the direction or speed. The same thing happens when skiing. If you try to brake by forcefully pushing the skis across the no-control zone around three o'clock, external forces will continue to pull you



One o'clock



Three o'clock - the no-control zone



Five o'clock

1 THE PHILOSOPHY OF SKIING

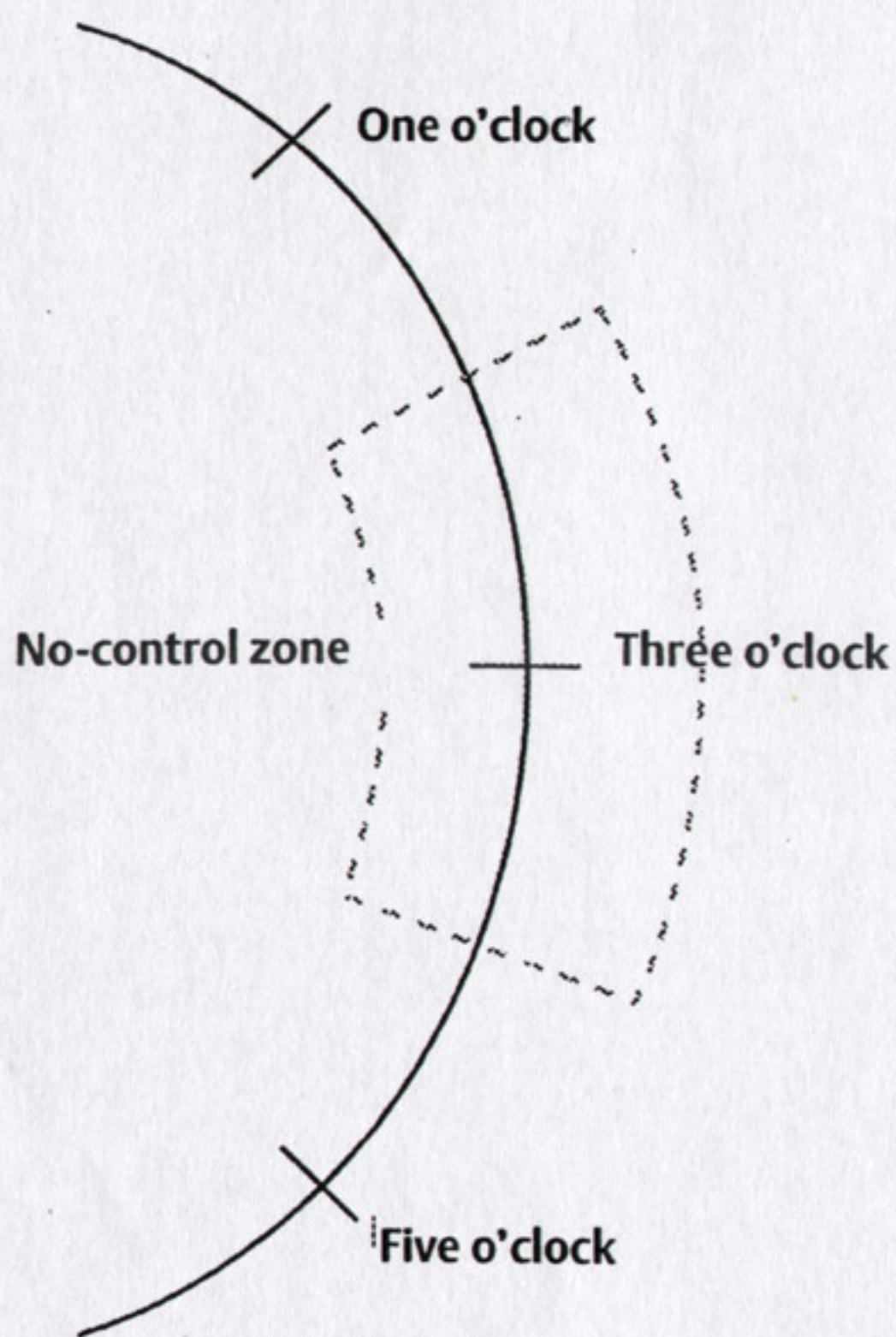


Turning up-hill to reduce the speed

down the slope, resulting in bad balance, or in the worst case, a fall.

The best solution to this dilemma is to have patience. When you are in the no-control zone, stay calm and continue the arc of the turn that you have already started. When you calmly continue the arc of the turn, you end up skiing across the slope or even slightly uphill. This will reduce your speed and give you better balance.

Tip 2: Have patience. Reduce your speed by continuing the turn until you begin to ski up the hill!



SUMMARY: THE PHILOSOPHY OF SKIING

Tip 1: Control the speed at both the start and end of the turn - never right in the middle of the turn.

Tip 2: Have patience. Reduce your speed by continuing the turn until you begin to ski up the hill.



The beginning of a turn



Continue the arc to reduce the speed