

# Extending and retraction

WHAT GOES UP MUST COME DOWN, AND VICE VERSA BY RON LEMASTER

**WHAT WAS TRUE** for Isaac Newton is true for a skier. But as Janica Kostelic shows us in photomontage A, there are some turns where extending in the transition is appropriate, and some where retracting is the thing to do.

In certain turns, one technique is clearly better than the other, but in some turns it's a close call.

The first consideration in determining whether to extend or retract is where you want the *apex* of the next turn to be. This is spot where you want the skis to really engage the snow and start to work at turning you. Here you need real pressure on the skis.



If there is enough space between the turns, as there is between the first two in the sequence of Kostelic, you can extend and get a bit light between the turns, and still come back down in time to hit your chosen apex. Extending has physiological benefits. It relieves important muscles from the isometric and eccentric work that skiing typically requires of them, letting them relax for a moment and flush waste products. It also allows your chest to expand and for you to breathe more deeply. Tactically, you also can use an extension to make a line adjustment.

If, on the other hand, the gates are spaced like the second and third ones in



the sequence, you have to retract to avoid overshooting your targeted apex. Retracting also keeps your skis in closer contact with the snow so you have constant control over your line and can quickly make tactical adjustments. And when a very quick edge change is called for, or the turn ends with a big buildup of pressure, retraction is the clear choice. This being the common situation in slalom, we see lots of turns made this way in that discipline, a good example being the turn made here by Andre Myhrer (photomontage B) while winning the Beaver Creek slalom last year.

The images of Benjamin Raich and Massimiliano Blardone (photomontage C) show that the best skiers often differ in their choice of which approach to use. These images are from the first run of the 2006 World Cup GS finals, where Blardone won the run, beating Raich by a slim 0.07 seconds.

Blardone and Raich make very similar movements in the transition between the second and third gates but differ dramatically in their approach to the transition between the first and second. Where Blardone retracts and



hugs the snow and attacks the second gate with a more direct line, Raich makes an expansive extension and moves his line about a half-meter up the hill. In the end, the placement of their apexes is virtually identical, and neither appears to gain an advantage. **SR**

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