

A STUDY ON HOW TO APPLY TAI CHI TO ALPINE SKIING

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INTRODUCTION: The Tenets of Tai Chi Chuan are a centuries-old set of high-level principles of posture and movement within which the human body must operate to achieve optimum athleticism. Never before had these principles been effectively applied to skiing technique. In the 2003/04-winter season, I began to experimentally apply these principles to find out how they would affect balance, control, recovery from error, etc.

METHOD: Because some Tai Chi principles would be clearly more effective to skiing technique, I began implementing those principles first. Also, I was a Tai Chi beginner in 2003, so principles that take 10-years to develop (such as Taoist Breathing) would obviously have to come later. The principles I thought to apply primarily were:

1. Waist Turning: Turning the waist drives all movements in Tai Chi.
2. Posture: Tai Chi achieves a more upright stance by using pelvic tilt and a “hollow chest.” It is also critical that the head is straight, the chin is down, and the shoulders and elbows are completely dropped (not lifted).
3. Mind Control: One must remain extremely relaxed, control the body with the mind, and never employ the use of strength.

In the first few days of experimentation, I found turning of the waist immediately usable and beneficial on the flats; but on the steeps, turn initiation came much too fast, causing the skis to skip laterally, gouging deep chatter marks 15-cm apart. I found that weighting the uphill ski resolved the problem; and it had a beneficial side effect: waist turning allowed the downhill ski to advance through the turn, staying parallel and harmonious with the uphill ski. The Tai Chi posture moved my center of gravity down and forward, demanding the need for more flexible boots, more forward lean, and later, omission of heel lift & forward mounting of bindings.

RESULTS: Applying the principles of Tai Chi to alpine skiing, with the modification of weighting the uphill ski, and later, omitting “up and down movement,” created extremely balanced, smooth turns, carved simultaneously on both skis. See Figure 1 below.

DISCUSSION: I coined the term Waist Steering for this type of skiing. I believe Waist Steering can prove to be a superior method of carving if we use kinesiological measurement systems such as those used by M. Brodie of New Zealand’s Massey University.

CONCLUSION: This study certainly suggests that more research should be done on the application of Tai Chi principles to alpine skiing,

especially alpine racing. Merely the implementation of waist turning has a large and beneficial effect on carving, and it blends nicely with any skill level and technique.

REFERENCES

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Figure 1. Slow, 12-meter turn on 186cm GS race skis, on the flat