Sport-Confidence and Competitive Orientation:
An Addendum on Scoring Procedures
and Gender Differences

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In an earlier study, an approach to the study of self-confidence was introduced in which the constructs *sport-confidence* and *competitive orientation* were conceptualized (Vealey, 1986). Sport-confidence was defined as the belief or degree of certainty individuals possess about their ability to be successful in sport. Competitive orientation was conceptualized to account for differences in how individuals define success and may be defined as a tendency for them to base their satisfaction and feelings of competence either on winning (outcome orientation) or performing well (performance orientation).

Based on the distinction between personality traits and states, sport-confidence was separated into two constructs: a dispositional construct termed trait sport-confidence (SC-trait) and a state construct termed state sport-confidence (SC-state). To operationalize the constructs in this model, three instruments were developed: the Trait Sport-Confidence Inventory (TSCI), the State Sport-Confidence Inventory (SSCI), and the Competitive Orientation Inventory (COI). Through five phases of data collection, evidence of internal consistency, item discrimination, test–retest reliability (trait scales only), concurrent validity, and construct validity was accumulated for these instruments as valid operationalizations of the constructs within the conceptual model (Vealey, 1986).

As an addendum to the original article (Vealey, 1986), this paper has two purposes. First, the intricate scoring procedures for the COI are clarified, a new procedure for computing a composite competitive orientation score is outlined, and norms for the new composite score are presented. Second, the analyses from the original study are extended to examine gender differences in the personality dispositions of SC-trait and competitive orientation based on the level of sport structure.

**Computing the COI Score**

Since the COI was introduced (Vealey, 1986), questions have been raised about the procedures involved in scoring the inventory. The original scoring
method yielded two scores—a performance orientation score (COI-performance) and an outcome orientation score (COI-outcome). Initially, both scores were included in instrument validation and hypotheses testing based on the model of sport-confidence, but that has proven to be unwieldy and even unnecessary based on their strong interrelationship ($r = -0.82$ to $-0.88$ in various samples collected by the author). Also, the distinguishing feature of the COI is that it requires subjects to weigh both performance and outcome simultaneously so that the scoring format is based on a continuum with performance orientation on one end and outcome orientation on the other. This format is different from Gill's (1986) Competitiveness Inventory in which goal and win orientations are separate constructs. For these reasons, the scoring procedures are clarified and computation procedures for the COI composite score are outlined.

The COI uses a matrix format that contains 16 cells representing different situations in sport (see Vealey, 1986). Each cell represents a situation that combines a certain level of performance with a certain outcome. This matrix format forces subjects to weigh the value of both goals simultaneously. Subjects complete the inventory by assigning a number from 0 to 10 for each cell that represents how satisfied they would feel in that situation. Scoring the COI involves computing the proportion of variance that is based on different outcomes (outcome score) and the proportion of variance that is based on differences in performance (performance score). Thus, the outcome score represents how much athletes' feelings of satisfaction vary based on whether they win or lose, and the performance score represents how much athletes' feelings of satisfaction vary based on whether they perform well or poorly.

To aid researchers, the scoring procedures for the COI are outlined in the Appendix. These procedures may be easily formatted into data transformation statements in computer statistical packages (SPSS-X, SAS, etc.). In Step 1 the format for setting up the data is explained. In Step 2 the substeps involved in computing the performance score are explained. This requires (a) summing the values for each row, (b) plugging each athlete's COI responses into the basic sum of squares formula found in any statistics text, and (c) and (d) dividing the performance sum of squares by the total sum of squares so the performance score represents a proportion of the total variance. In Step 3 the substeps involved in computing the outcome score are explained. These substeps include the same procedures as in Step 2 except that the values are summed for each column.

In Step 4, substeps for computing the composite competitive orientation score are explained. As discussed previously, this step has been included to simplify data analyses and interpretation based on a performance-outcome orientation continuum. That is, two scores are unnecessary when one score adequately operationalizes the competitive orientation construct. Because of the nature of the COI format in which subjects weigh performance and outcomes simultaneously, the performance score can also be thought of as the inverse of the outcome score (Substep 4a). Thus, the performance score and the inverse of the outcome score are averaged (Substep 4b) to provide a composite competitive orientation score that represents performance orientation. Because the composite score represents variance, it will range from 0 to 1.0.

This composite score reflects a more accurate measure of competitive orientation as it accounts for performance score in relation to outcome score for each