

## Back to basics

📖 The **RACE STRATEGY** is defined as the total distribution of crew effort during a race. It can be expressed as a sequence of four numbers representing the ratio (%) of boat speed during each 500m section to the average boat speed over 2000m for the crew. See RBN 10/2001, 10/2002 and (1) for more details on the race strategy.

📖 **RACE TACTICS** are defined as a distribution of crew efforts relative to other competitors in the race, and can be determined using two methods:

- Relative to the average speed of all competitors in the race, where ratios of individual boat speed to the average of the race are produced for each section;
- Relative to the closest competitor. Five pairs of place-takers were defined (1<sup>st</sup>-2<sup>nd</sup>, 2<sup>nd</sup>-3<sup>rd</sup>, ...5<sup>th</sup>-6<sup>th</sup>) and ratios of their boat speed were produced for each section of the race.

In both methods, sequential numbers of the fastest and slowest section relative to other competitors were defined. Twelve possible combinations were composed, called “matrix of race tactics” (1). For example, tactic “1-4” means the first 500m section of the race was the most successful and the last section was the slowest relative to other competitors.

We analyzed race tactics of 14 Olympic boat types during the last 10 years. Some results are below.

## Facts. Did you know that...

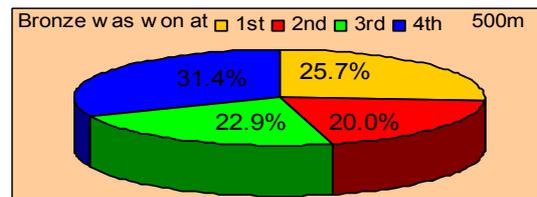
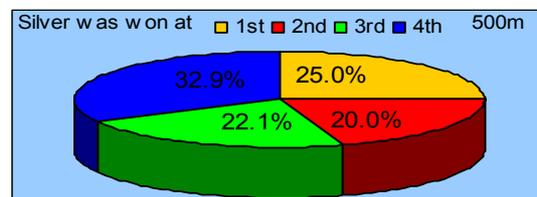
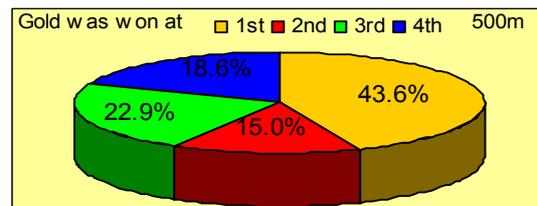
✓ ...the most popular race tactics found were 4-1 (135 of 837 cases, 16.1%) and 1-4 (14.6%).

| Tactics | Place           |                 |                 |                 |                 |                 | Total |
|---------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
|         | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 5 <sup>th</sup> | 6 <sup>th</sup> |       |
| 1-2     | 4               | 6               | 10              | 17              | 8               | 4               | 49    |
| 1-3     | 8               | 9               | 12              | 12              | 14              | 7               | 62    |
| 1-4     | 24              | 8               | 7               | 9               | 27              | 47              | 122   |
| 2-1     | 4               | 9               | 14              | 5               | 11              | 9               | 52    |
| 2-3     | 4               | 6               | 4               | 4               | 3               | 9               | 30    |
| 2-4     | 14              | 8               | 6               | 10              | 20              | 28              | 86    |
| 3-1     | 11              | 16              | 10              | 13              | 12              | 7               | 69    |
| 3-2     | 11              | 3               | 5               | 4               | 8               | 2               | 33    |
| 3-4     | 19              | 9               | 6               | 7               | 9               | 3               | 53    |
| 4-1     | 20              | 38              | 33              | 26              | 13              | 5               | 135   |
| 4-2     | 15              | 21              | 17              | 20              | 8               | 10              | 91    |
| 4-3     | 6               | 7               | 16              | 13              | 7               | 6               | 55    |

It is interesting that the tactic 1-4 was the most popular in 1<sup>st</sup> (24 of 140 cases, 17.1%), 5<sup>th</sup> (19.3%) and 6<sup>th</sup> (34.3%) place. In contrast, the 4-1 tactic was

the most popular in silver (27.1%) and bronze (23.6%) medalists. In other words, **if a crew put all efforts in the first 500m of the race, then the tactic would be “win or die”. If a crew saves energy for the last 500m, then they have more chances to win a medal, but fewer chances to win a gold medal.**

✓ ...this finding was confirmed by the analysis in the pairs of competitors. In 61 cases (43.6%) the winners took the maximal advantage over the silver medalists during the first 500m section of the race:



In contrast, nearly one third of silver and bronze medalists had beaten their competitors at the final 500m section of the race.

✓ ...the majority of German (33.6%), British (30.2%) and Romanian (31.7%) crews emphasized the first section of the race. 38.6% of Australians, 38.7% of Americans and 59.2% of French crews put all efforts into the final section. Italians (32.2%) and Canadians (30.4%) emphasized the second section. This correlates with the percentage of gold medals won by these countries (RBN 8/2001).

## References

📖 1. Kleshnev V. 2001. Racing strategy in Rowing during Sydney Olympics. Australian Rowing. 24(1), 20-23.

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