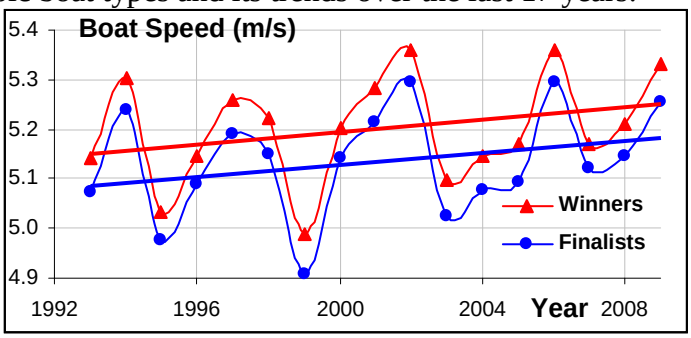
News

Strong tail winds and warm water made the boat speeds fast during the finals of the World Championships, which just finished in Poznan, Poland. The chart below shows the average boat speed for all 14 Olympic boat types and its trends over the last 17 years:



Average speed of the winners was 5.33 m/s, which is the third fastest average after Seville-2002 and Eton-2006 Worlds (both 5.36 m/s). The trend in the speed has grown by 0.12 % per year. However, human factors cause only 8.5 % of variation of the boat speed; the remaining 91.5 % is the effect of the weather.

One world record was set in Poznan in the M1x by Mahe Drysdale, New Zealand, whose time of 6:33.35 beat the previous record by 2.05s. The silver medalist Alan Campbell, Great Britain also beat the previous record by 1.10s.

It is interesting to compare the results of the winners with our prognostic times (RBN 2009/04). The growth of the boat speed in based on data for 17 years.

	Boat	Prog-nostic	Worlds-2009	% Progn. Speed	Growth % per year
1	M2-	6:16.5	6:15.93	100.15%	-0.02%
2	W1x	7:11.5	7:11.78	99.94%	0.10%
3	M1x	6:32.5	6:33.35	99.78%	0.03%
4	LM2x	6:07.2	6:10.62	99.08%	0.28%
5	LW2x	6:47.0	6:51.46	98.92%	0.26%
6	LM4-	5:46.2	5:50.77	98.70%	0.24%
7	M2x	6:02.1	6:07.02	98.66%	-0.06%
8	M4x	5:33.2	5:38.33	98.48%	0.19%
9	M8+	5:18.6	5:24.13	98.29%	0.25%
10	M4-	5:41.0	5:47.28	98.19%	0.02%
11	W2x	6:39.5	6:47.18	98.11%	-0.04%
12	W4x	6:08.5	6:18.41	97.38%	0.11%
13	W2-	6:52.9	7:06.28	96.86%	-0.02%
14	W8+	5:53.1	6:05.34	96.65%	0.30%
	Average			98.51%	0.12%

It is noticeable that small boats were the fastest according to the percentage values. The boats racing on the second day of finals showed very similar speeds at Beijing-2008 and Poznan-2009; curiously, the USA crew (winners in W8+) clocked absolutely the same time 6:05.34! However, small boats were faster this year owing to the weather.

Q & A

Q: We have received a number of questions from coaches like these: "What is the best time of the year to use biomechanical measurements to improve rowing technique?" "Our rowers are young and not technically advanced yet; when do you think we can start using Biomechanics with them?"

A: It is quite a common coaches' mistake to treat Biomechanics as the icing on the cake. When the coach is offered biomechanical testing early in a season, the reply is often: "Oh, we are not ready yet. Firstly, we need to gain some strength, and do some speed work on the water, and only after that we can show you some good rowing technique."

In fact, if the technique is good, the rower does not need biomechanical support. The main purpose of Biomechanics is to detect mistakes in technique and identify areas where it can be improved. If it is not done early, the rower may repeat an incorrect pattern of movement in every stroke, thousands of times. As a result, this habitual pattern of movement becomes so ingrained that it is not possible to change it, unless the rower performs a similar number (thousands!) of strokes in the correct way. Very often mistakes identified and apparently corrected at the last minute re-emerge under competitive stress, when an athlete is fatigued or at a higher stroke rate.

The same is true for teaching younger rowers, but even more so. If taught wrongly, young rowers develop strongly ingrained habits of inefficient technique that create nightmares for coaches working with them in older age-groups.

Obviously, a qualified and experienced coach can see mistakes in technique and correct them effectively. However, "Errare humanum est" as the Romans said, which means "To err is human". Rowing technique is quite complex and sometimes a controversial matter. Trying to improve one thing, a coach could exaggerate or affect negatively other components of technique; e.g. in trying to improve the leg drive, "bum shoving" could be developed; in trying to produce more power with the trunk, one could make the finish of the drive inefficient, etc. Examples are endless. Biomechanics can provide you with objective information and find a correct balance of all components of rowing technique.

The conclusion is simple: **The earlier you start using Biomechanics to diagnose and improve rowing technique, the more correct strokes you will perform and the more stable and efficient technique you can develop.**

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