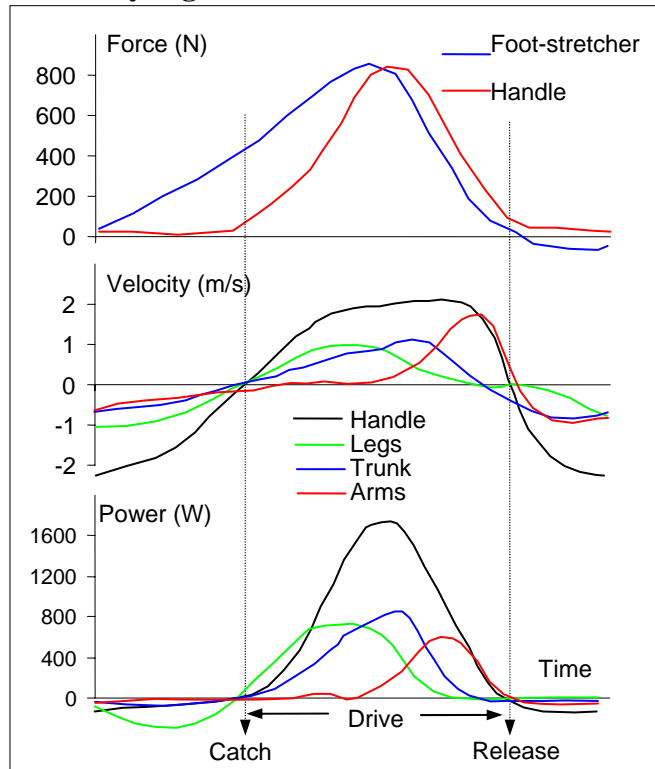


Facts. Did you know that...

✓ ...when comparing stationary ergo rowing to on-water, the biomechanics of the action differ some what?

Force, velocity and power during rowing on stationary ergo.



As mentioned in RBN 4/2001, the on-water foot-stretcher's peak force is ~30% higher than that of handle force, whilst on ergo they are nearly equal. This is more info revealed. A rower performed a 6 min test on a Concept-II stationary ergo and in a single scull recorded the following differences:

✓ ...foot-stretcher force develop much earlier on an ergo. The increase starts after the mid phase of recovery. This is a consequence of higher inertia forces, which the rower has to overcome to change direction of body mass movement. During on-water rowing these forces develop almost simultaneously;

✓ ...handle force on the ergo has a higher peak and develops later. On water, it's more a rectangular aspect and can be increased quicker;

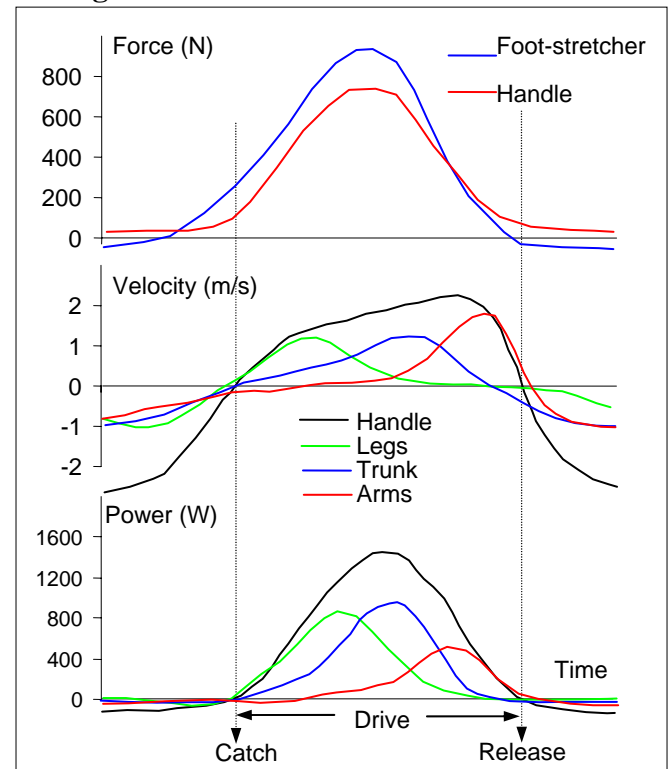
✓ ...ergo handle velocity longer increase after catch, but remains almost constant through the middle of the drive. On water, there is shorter increase at the catch and more acceleration during the drive;

✓ maximal legs velocity is higher on-water. In conjunction with higher foot-stretcher force this leads to higher proportion of the legs power, which

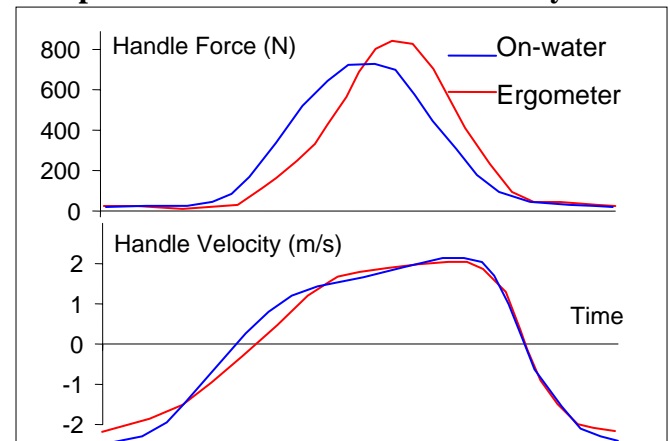
is 37%:41%:22% (legs:trunk:arms) on stationary ergo, and 45%:37%:18% during on-water rowing.

✓ ...a good thing about the ergo is that they allow to achieve 3-5% longer stroke and better legs compression;

Force, velocity and power during on-water rowing.



Comparison of handle force and velocity curves



In concluding, a comparison of various rowers' profiles show that the power production differs between ergo and on-water. Rowers with fast legs produce more power on-water, while athletes with slower legs and stronger upper body have relatively higher ergo scores.

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