Tandem Canoe Stroke Technique Summary

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General

- **Power Face/Non-Power Face:** The power face of the paddle applies pressure to the water during a stroke; the non-power face does not. These are temporary designations sure to change during the flow of strokes.
- **The Catch:** This refers to the moment when the paddle enters the water and is loaded to begin a stroke.
- **On Side:** This is the side on which the paddler is currently paddling.
- **Off Side:** The side currently away from the paddle. Remember, however, that there is an entire family of off-side strokes that requires the paddler to briefly switch to the off side without changing hand positions on the paddle.
- **The paddler’s sphere of influence:** Tandem partners have control limited to their own half (front-to-back) of the canoe with the pivot point being under the center thwart (the actual pivot point varies according to travel speed)
- **Newton’s 3rd. law of motion:** For every action, there is an equal and opposite reaction. Applied in this context, we can state that: for every action of the power face against the water, the paddler’s end of the canoe will move in the opposite direction, with an acceleration commensurate to the magnitude of the applied force.
- **Stroke away from the canoe’s pivot point when turning:** When the paddler wants to move her/his end of the canoe to contribute to a turning maneuver, she/he should apply the strokes as far from the boat’s pivot point as possible. The bow paddler reaches as far forward, and the stern paddler as far back, as is practical when turning. In principle, this increases the magnitude of the torque (turning effect of the stroke); however, overzealous application of this idea can make the stroke physically awkward, thereby reducing its effectiveness. The idea then, is to apply turning strokes as far as possible from the pivot point without reducing the biomechanical efficiency of the stroke.
- **Stroke close to the canoe’s pivot point (keel line) when not turning:** Ideally, we would cut lengthwise paddle slots in the center of the hull to allow us to apply force right through the canoe’s centerline, thus eliminating the need for corrective strokes. The next best thing is to carry the top hand well outboard, in an attempt to actually pass the blade under the hull somewhat. This, by the way, is an essential principle of solo cruising technique.
- **Keep the Power Face of the paddle perpendicular to the paddle’s line of travel:** This promotes effective force transfer. We hedge on this principle when combining strokes.
• **Pure turning strokes should pass through a path perpendicular to the keel line:** This produces maximum turning effect, or torque (maximum perpendicular distance from the pivot point). We back off on this principle when combining strokes.

• **Partners paddle on opposite sides and in time with one another:** This practice produces a stable platform from which to work, and produces more effective stroke outcomes. The one temporary exception occurs when off-side strokes are employed by the bow paddler.

**Remember to do your “perpendiculars” well!**

- During the forward stroke, the shaft should be within a few degrees of perpendicular when viewed from the side!
- During the forward stroke, the shaft should be within a few degrees of perpendicular when viewed from the front!
- During pure strokes, the blade should be perpendicular to the line of travel!
- During pure turning strokes, the paddle should travel through a path that is perpendicular to the keel line!

**Forward Stroke**

- Hands should be shoulder width apart.
- Keep the arms comfortably straight throughout.
- During the stroke, keep the paddle shaft as close to vertical as possible (as viewed from the side).
- Power the stroke with torso rotation.
- Reach as far forward to “the catch” as possible without “rowing” with the torso. (Torso rotate as far as possible with the shoulders level, then open the chest to the off side to move the catch further forward for better power generation)
- The power stroke stops at the knees.
- Stroke as close to the keel-line as possible (Top hand outboard over the bottom hand).
- Relax during the recovery. Relax the wrists to allow the blade to feather (blade parallel to the water; leading edge slightly elevated), and swing the paddle forward in a natural arc, and as close to the water’s surface as possible.

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