

[Editor's Note: This article is based on a lecture-discussion-demonstration given by Harry Parker at the 1978 NAAO meeting in Syracuse, New York. Although the demonstration is obviously missing, the words alone create an image of the rowing stroke.]

PARKER ON ROWING TECHNIQUE

Harry Parker

For the purposes of our discussion, I'm going to break basic rowing technique into four areas:

- 1) propulsion through the water
- 2) taking the blade out, or release
- 3) return or recovery
- 4) putting the blade in, or squaring and catch.

Propulsion

The basic application of power begins the moment the bottom edge of the blade touches the water. At that moment all movement toward the stern stops and movement toward the bow begins. The beginning is very important because all three of the major muscle groups used in rowing must be engaged at that point. Once the blade drops, the legs, back, and arms all engage simultaneously—not in the sequence of one or two and then the third, but all three at the same instant. As you move off the stretcher you engage the muscles of the lower back and those connecting the lower back to the arms. This does not involve the shoulder particularly, nor is there a bending of the arms; the main effort is to connect the elbow to the lower back (through the latissimus dorsi muscle) so that as the seat moves, the oar comes with it. By engaging all three groups of muscles, one can make the blade move quickly enough to catch up with the water without having a great deal of motion in any body segment.

The sequence of power flow from engagement can be manipulated a great deal. The only thing I stress is that all three groups of muscles must be used in order to realize the potential strength of the body. During the first part of the stroke, once all three major muscle groups are in action, or engaged, the oarsman should begin by concentrating power in the legs. Although the back is engaged and trying to work against the drive of the legs, it doesn't open very much until the legs are pretty well down. As the legs flatten, the boat accelerates, and the only way to get additional speed while keeping force on the oar is to get more movement from the back and then the arms.

It is not a good idea to tell an oarsman that he should start the drive with his legs and leave the back in a passive condition. He has to engage the back and have the feeling that his back is trying to open as the legs go down, even though it

probably won't move very much in relation to his seat until the legs are pretty well flattened (because there ought to be enough resistance from the oar to keep the back from opening up until the boat begins to accelerate). Likewise, I don't think in terms of lifting with the back and shoulders. One should use the back to open a little, but it should remain level, move horizontally, not up and down.

Concerning the arms, the idea is to bend a little as you put the blade in the water, so that the elbow moves slightly and helps to draw the blade against the water. There is a tremendous range of movement in the elbow (see how hard it is to move the handle by bending the elbow down), and bending it too much will cause arm muscles to get tired quickly because they are not nearly as strong as the latissimus dorsi muscle.

Individuals vary considerably in their ability to do things I've described. There will be differences in how much the legs and back are used before adding the arms. It is up to each coach to decide how we can best get the oarsmen to make these things happen. Some approaches work more effectively on some than on others, but if you do it well enough, they will learn to row hard, and that is most important.

Release

Ability to handle the oar determines how well one will be able to square the blade, put it in the water, feather, and get it out of the water. Initially, I start with the blade squared and wrap my hands loosely around the handle. That is the important grip: hands and arms completely relaxed, no squeezing. Whether squared or feathered this is the ideal position. If one squeezes the hand, the wrist gets tight, so avoid squeezing the oar during both the recovery and the pull-through.

The feathering action calls for the fingers of the inside hand to move one way and the thumb the other way, while the outside hand helps support the weight of the oar. The motion is not pulling and feathering with the fingers alone; it involves both feathering the oar and getting it out of the water simultaneously. The top edge of the blade must be raised by light downward pressure on the handle, then twisting away with the thumb on the bottom as the fingers on top twist the oar toward your body completes the release. About using the outside hand at the release: Try to relax after feathering. Some downward pressure should be exerted with the outside hand, but without a great deal of push so that there is a sharing of the load.

Once the push away is started it becomes hard to complete the feathering action; thus feathering must be done quickly, before the push away begins, so the oarsmen can relax fully on the recovery. Relaxing should come easily if the oar fits the oarlock and is of a good design; this will help feathering to take care of itself so the oarsman can feather all the way and relax his arms. (See "Hands and handle" by P. Raymond.)

The actual feathering motion is the same regardless of hand speed out of the bow—fast, slow, a pause, or whatever. Even though it is hard to avoid a little jerk when going from full pressure to feather, the rest of the body is motionless at that time. As the arms draw to the finish, power is on; then suddenly one stops moving, the power is off, and the blade comes out. As much as possible the shoulders should be braced and level, wrists flexible, elbows back.

As the knees and legs flatten, there is some diminishing of strength, but there shouldn't be much. The boat accelerates and as it does one can't maintain the same pressure on the oar. At that time there isn't much movement in the legs, but the back and arms are working at nearly their full capacity.

The blade should be fully buried until ready to feather. The hands should be at whatever height will let the blade stay in the water. Because people are built differently, if you have in your mind that the oar must always come to the bottom of the rib cage, this may cause problems for some oarsmen.

Recovery

Once feathered, the rhythm of the recovery is continuous. First, the hands move toward the knees. Whether they move fast or slow depends on how you coach your team. As the hands move toward the knees, the oar must stay feathered, and it's not easy to do! Take a normal position with the thumb wrapped around, wrist pretty well flexed, blade off the water; it is hard to hold this position, unless the boat is rigged high, because the oarsman must find some way to keep his wrist off his thigh. Alternatively, some oarsmen start to square the blade a little. Disliking either alternative, I try to get people to relax their grip, allowing the thumbs to slide out from under the handle a little, thereby taking all the strain out of the wrist and leaving the blade fully feathered. It is not necessary to keep the hand down; it's simply a matter of letting go—once the thumb slips, all the tension is out of the arm. It helps to have the oarsman think of pushing the oar away with pressure on top of the handle, beneath the first knuckles, rather than trying to push from behind the handle with the wrist. It is not easy to get people to do this, but if you can, their arms and hands will be much more relaxed on the recovery.

I use the same release for both sculling and sweeps, although the lack of support from the outside hand makes the sculling action a little harder. Most good scullers have a little more motion toward the bow as they feather, their hands moving more in the same plane. They can't stop the way I can at the release; their elbows must keep going. (The same rowing technique is used for both men and women unless I mention otherwise.)

Now the hands are over the knees and the grip is relaxed. The recovery sequence consists of the body coming into motion as the hands move over the knees, and when the hands are past the knees, the slide starting to move. This should be a smooth transition without much lag, then a smooth continuation of the

three moving throughout the recovery. I'm empathetic about this. I don't like the idea of arms extending all the way, then body all the way; its not a natural movement and not a good way of rowing.

So it is hands, body, slide. The arms extend continuously until almost straight, and the body and slide should continue in motion after the arms are extended. The idea is to get all three muscle groups in motion so that none have to move particularly fast, and to get them moving soon enough so that all available recovery time can be used to get ready for the catch and the next stroke. Keeping the muscles in motion allows the oarsmen to continue reaching and stretching as he comes up the slide, and they should remain in motion until he's ready to lift the handle. As soon as the lift is initiated, all three parts of the body go in motion the other way. Thus the oarsman avoids taking the catch with one set of muscles. He shouldn't sit and wait for the oar to go in, but should be in constant motion as he loops around the catch.

In answer to a question about breathing: I don't tell me oarsman to think about breathing—the most important thing for them to think about is rowing. Because of the muscles used during the stroke, there are only a few breathing rhythms that work; the body will find a natural way of breathing to fit the rhythm of rowing.

Squaring and the Catch

When the hands get somewhere over the toes one begins squaring. Thumb pressure is released, but the thumb is still touching the handle. The roll-up is the same thing as the feather: a twisting action into the palm, not just a push. Eighty percent of oarsmen push too much, too far, too hard: as a result, the blade goes up when it should be going down toward the water. The thumb must be underneath, and the arms are not working to move the oar at this point. The best motion is a twisting to square up, not push up, the blade. Squaring involves using the fingers to bring the handle into the heel of the hand, then the wrist rises, and the thumb slides underneath. The motion is a little jerky at first, but dexterity will develop. There is no twisting with the outside hand at all.

The outside hand pulls the oar around, helps maintain control, and during squaring, establishes and maintains the correct rhythm of recovery. This rhythm should allow the oarsman to come forward without rushing, and the motion of pushing the hands away establishes this rhythm. One should get to the front stops as the handle is being lifted. No time is spent there.

The second half of squaring involves putting the blade in. At the time of dropping the blade in, there is an extension and lifting. It is not just the hands, but rather a pivot of the whole arm from the shoulder—not straight out, arms tight, shoulders tight, and rocking hips. It's this motion: drop the blade in "blunk"; simple, without tightness, but hard to do. It is hard to do because one tends to tighten the

shoulders when squaring the blade, so the oarsman must relax his shoulders until the blade touches the water. The catch is a circular motion; no stops. The handle starts to go up while still moving forward, the blade goes in, and you start back. Back muscles engage and you move off the stretcher.

Moving off the stretcher, the oarsmen will push off the balls of the feet. You don't get power off your heels; very few people have much strength from there. The Pocock stretcher makes it possible to drive off your heels, but this brings up the whole question of rigging and right now we are talking about technique and what to do with the body.

An oarsman who is constantly missing water at the catch can be helped by being taught to reach around the turn with the blade square. To do this he must square early (near his knees), and after a period of time, move to squaring later in the stroke.

So to summarize, in the early part of the drive you won't see much motion in the back but the oarsmen should feel compression all the time. On the recovery, feel the hands moving and think in terms of making the oar move at an even rate forward, letting the body follow. Ideally, the oar establishes this motion and pulls the body forward. It is a continuing sequence of arms becoming more fully extended before the back, back before the legs, then slide. This sequence flows through the recovery, with each movement overlapping the preceding one into the catch. Squaring is the reverse of feathering and starts while the slide is still rolling; the blade begins to enter the water as the slide reverses direction. Finally, three major muscle groups engage instantaneously for the drive.