

To Win The Worlds eBook created by daveyhearn.com
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Overleaf:

Dieter Welsink and Peter Czupryna, Federal Republic
of Germany, World Champions in 1979.

(Jim Thresher photo)



"A C2 team must undergo a large volume of water training over many years."

Klaus Trummer, five time
World Champion in C2

The doubles events provide interesting and instructive foils. While there are certainly many similarities between C2 and C2M, there is one crucial factor, strength, which separates them. C2Ms have to rely largely on skill, while C2s can place much more emphasis on strength. Largely because of this contrast, I have chosen to treat both doubles events in the same chapter.* I believe that in studying the differences between the two, more can be learned about each event.

I. General Remarks

A. Temperament of the Two Paddlers.

Paddling doubles events is different from other classes because of the teamwork required. In many respects, this is what makes them the most interesting events. Not only do the athletes have to contend with the river and the gates, they have to contend with each other. This requires two very special people.

For a variety of reasons, good K1, C1, and K1W paddlers tend to be great individualists, perhaps even prima donnas. Many doubles partners are also prima donnas, but they will never make good teammates. Teamwork requires constant sacrifices. Work schedules have to be made to coincide so training together is possible. Each paddler has to be willing to give up for the day if the other one has had enough. But most importantly, doubles partners have to be able to deal with each other's different ideas about training. This is what ultimately causes

* Some people have questioned my including C2M in this book because the present standard in the class, they say, is below that of the others and should not be compared to them. In the other classes I have described techniques which I have personally seen and agree with. In C2M, however, there has been only one boat -- Chuck Lyda-Marietta Gilman -- during the last half-decade like this. Thus, whenever, I allude to C-2M here, I am thinking more about the way it should be paddled -- like C2 -- rather than the way it is now being paddled. I hope this will stimulate a revival of C2M, but at a higher standard.

most teams to break up before they've gotten good. Staying together for many years -- four or five -- is the key to winning the Worlds in C2.

Handling the problem of the two paddlers having different ideas about training can be the job of the coach. In this situation, he is a referee or final arbiter. Smart doubles partners do well to see problems developing and take them to the coach before they go very far. It's much better to have the partners upset with the coach rather than with each other! The coach can be a sort of catalyst that makes the two partners work together as a unit. But he must accomplish this by treating each partner as a separate individual and not necessarily treating both of them exactly the same.

Beyond this, I feel that the best doubles partners are the ones that genuinely like and respect each other outside the boat as well as in it. Thus, taking a C2 or C2M partner should be viewed as a lifetime commitment of sorts. Is this someone you



Mike and Steve Garvis, fourth at Spittal in 1977.
(Jim Thresher photo)

will always enjoy meeting in the future, long after racing days are over, to talk to not only about old times but about what each is doing in life? To get good enough in C2 to win the Worlds requires so much time together -- maybe a tenth of your lifetime waking hours -- that you have to feel this way in order to go the distance. If you do have this extraordinary bond of friendship, both partners will make the sacrifices necessary to do well because they will want to win for each other, not just for themselves.

Choosing a C2 partner, then, is not a matter to be taken lightly, someone with whom you will paddle only for a year or two. Chances are that if you want to be an elite C2, you will have to stay with the same partner for your entire racing career.

B. Similarity with C1.

I have found that paddling the modern close-cockpit doubles boat requires many of the same moves that a good C1 paddler uses. This has always been true to some extent, but it is much more so today. With old-style C2s, there was limited value for the bowman trying to copy C1 technique but this has changed with the new boats. Therefore, I would advise anyone who has aspirations in C2 or C2M (women included) to spend a great deal of time in a C1. This is probably the quickest way to learn proper technique and balance, although some adjustments obviously must be made when actually in the doubles boat. This chapter, then, addresses those adjustments rather than viewing doubles events as entirely divorced from C1.

II. Boats and Equipment.

A. Paddles

As in C1, even good doubles paddlers tend to choose paddles that are too long. This causes the same problems as for the C1 paddler. Actually, the length of the paddle shaft should be even shorter for C2 paddles. When determining the proper length, the same procedure used in C1 (see pages 59-60) should be used. The key is ensuring that the top arm can be utilized properly. On land, one rule of thumb for determining whether the paddle is too long is the following:

When the paddler stands on shore, the T-grip of his paddle should come to the middle of his breast bone and no more, even for the sternman. The reason for the shorter length for C2 paddles is that it is easier to steer the C2 because there are two people working on it.

Most C2Ms forget that there is a tremendous strength differential between the man and the woman and they let the woman paddle with the same blade area as the man. I think this is an error and that the woman's blade area should be considerably less than the man's. How much less? That is hard to say. The object is to allow both paddlers to get good, long strokes that stay in the water for the same length of time. If both blades are the same size, the woman has either to take a very short stroke, or if she takes a full length stroke, her partner will be out of the water sooner than she and there will be timing problems.

In general, the woman's paddle should be cut down more than you might think. The C2Ms that won the 1975 and 1977 Worlds and the 1978 Pre-Worlds all had blade comparisons roughly like Fig. 6-1 below:

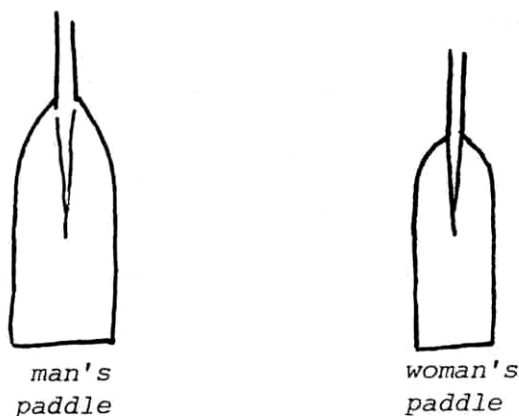


Fig. 6-1. Comparison of Blade Sizes in C2M.

Marietta Gilman's paddle was three quarters the size of Chuck Lyda's.

B. Boats

While there is clearly only one superior C1 design today, the case is less clear for C2. It seems certain that the close-cockpit boats are better than the old end-hole variety, but beyond that, much question remains as to which design is best. Recently David Hearn designed the "Paramax" C2 which is very similar to the "Ultramax" C1 and it appears to be as good.

Doubles boats do, however, have one common problem. They often are not balanced properly when the seats are fitted. According to an old wives' tale in whitewater, the way you balance a C2 is simply to place it in the water and see that there is the same distance between the bow and the water as there is between the stern and the water. I personally do not think this method is worth very much.

It is far better to cut small holes in the deck, use large cans for seats, and paddle the boat on flatwater, moving the cans fore and aft and side to side until you can take the maximum number of forward strokes without steering. When you can do that, you know that the boat is properly balanced. Take a magic marker with you to indicate on the boat where the seats should go.

When determining the amount of offset in the cockpits, I think it is wise to keep essentially the same distance from the paddlers' inside rims to the side of the boat as is found in a C1. Having the cockpit right up against the edge of the C2 inhibits the proper execution of the forward stroke.

When building a new boat, I think it is a good idea to repeat this process rather than simply putting the seats in the same locations as in the old boat. The reasons for doing it again are:

1. To check the original determination;
2. Your weight or your partner's weight or paddling style may have changed.
3. The boat may not be exactly the same as your original, particularly if it didn't come from the same mold.

After you get very good, you may find that you want to balance the boat a little differently. This should be done only with the greatest care. Remember that if you have trouble steering your boat, it means it will often not be on the "track" and you will be slow.

If you buy a C2 from someone else, chances are it will not be balanced properly for you and you will have to change the seat location. Unfortunately, it takes a lot of effort to get a new boat balanced correctly but it has to be done. There is nothing worse than a badly balanced C2.

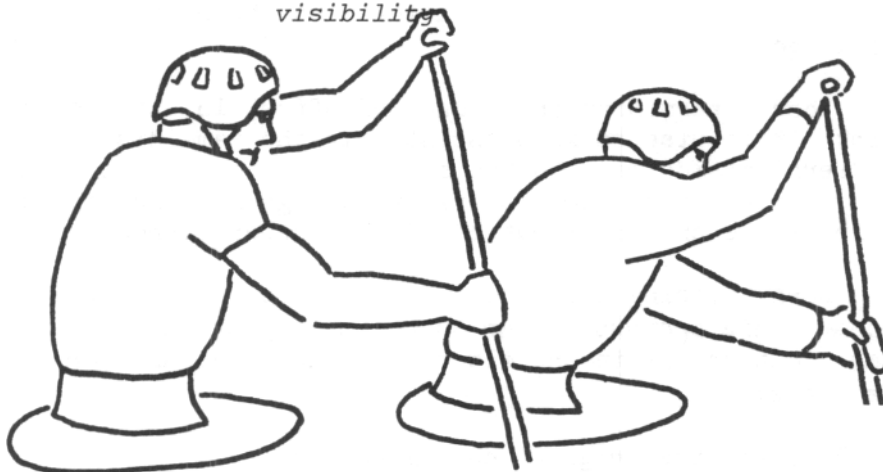
III. Who Should Paddle Where?

A. C2.

If you are advanced racers wishing to become elite, it is probably too late for you to do anything about this -- you've already been together for some time. However, in my experience, the man with the most reach -- probably the taller of the two -- should go in the stern. I think this has always been true, but it is especially true in the modern C2s. There are several reasons. The most obvious is visibility: a short sternman

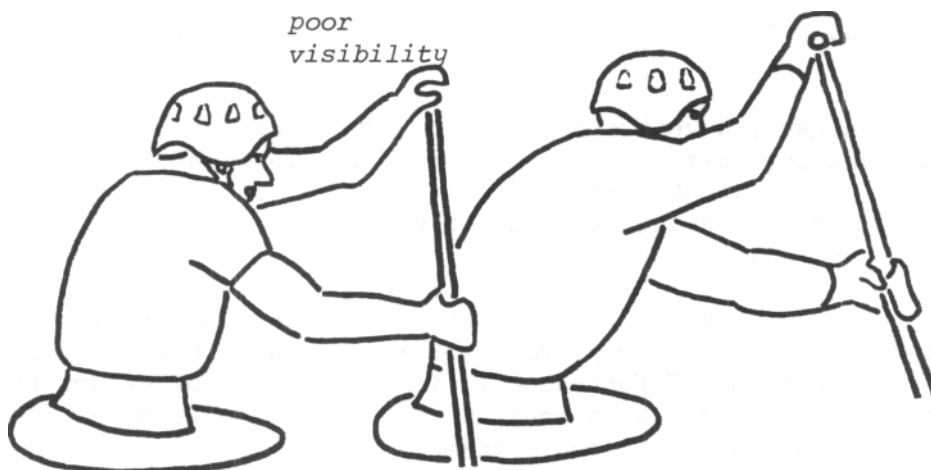
correct

*good
visibility*



paddles parallel

*poor
visibility*



paddles not parallel

incorrect

Who Should Paddle Where.

cannot see through, over, or around a large bowman. Another reason has to do with controlling the sideways motion of the boat, keeping the boat in a straight line. Often the sternman has to lean way out on a draw to hold the boat on course. Thus, it's better to have reach there. But the third reason is even more important. Since the sternman has to do most of the steering, it's easier for him if he can keep his paddle in the water as long as the bowman without having to extend himself forward as much as the bowman does. Having a larger natural reach than the bowman makes timing easier for the sternman. Conversely, having the man with the shortest reach in the stern further cuts down on an already shorter stroke -- and makes timing problems more likely. All other things being equal (and they seldom are) the bowman should be the more aggressive of the two. If you have two individuals of the same size and skill, the stronger and quicker of the two should probably go in the bow.

B. C2M.

The best C2Ms over the years almost invariably have had the man in the bow. I must say that I am not entirely convinced that this is best, due to the dangers of the bowman overpowering the woman in the stern and sending the boat hopelessly out of control, especially with the close-cockpit boats. Also, there is the visibility problem.

It seems to me that potentially the best solution is for the man to be in the stern so that when need be, he can paddle the boat almost like a big C1.

There is, however, one factor which complicates this and that is having the strongest individual in the bow so the team can get good eddy turns. There is another old wives' tale in slalom that in a C2 the strongest man should always be in the bow. To some extent, this is true. But on balance, running the course clean should be the top priority for a C2M and having the man in the stern affords the best opportunity for achieving that, in my opinion.

IV. Strokes.

Since so many of the C2 strokes are similar to C1 strokes, much of what is said in this section refers to the chapter on C1. The greatest difference, of course, is paddling together with your partner. Timing is more important than anything else in C2 and C2M. Two boaters with mediocre technique and strength who do everything simultaneously will probably do better than two boaters with good individual technique but who never paddle together.



Dieter Welsink and Peter Czupryna. (Jim Thresher photo)

I think the best way to achieve good timing is for the bowman to remember always to set a steady, deliberate stroke rate for the sternman to follow. If the bowman speeds up unexpectedly, it will usually result in bad timing. The bowman must remember that the sternman has to do the steering and therefore needs a little extra time between strokes. Having the bowman paddle C1 will quickly teach him this and make him see the proper rhythm.

Part of the bowman's learning to be predictable has to do with adequately telegraphing upcoming moves and strokes to the sternman without talking. Leaning to the onside and dipping the onside shoulder, for example, might tell the sternman to expect a draw stroke next and be ready to do one himself. Paddling together for many years is usually the way a team learns these things, but time can be saved by consciously identifying these little "messages" and talking about them. In any case, many hours of paddling together is required so that all of this can

be practiced. If "as much as possible, time in the boat" applies to any class, it applies to C2.

One overall difference between C2M and C2 is the stroke rate. In C2M it must be very deliberate, slower than in C2, to ensure proper timing. The C2M has to rely on excellent technique to overcome lack of strength. Thus, the bowman must take care to set a pace which is easy to follow.

Another common problem with C2M strokes is that the woman is sometimes too timid. She won't paddle hard enough when necessary (getting out of big water upstream gates, for example). Often she won't lean out enough, especially on the reverse sweep, which, when done properly requires her to commit her whole body weight to it. The remedy: she should paddle K1W or, even better, C1W.

A. Forward Stroke.

1. Bowman.

The forward stroke for the bowman and the sternman have differences, some obvious and some subtle. For the bowman, everything is the same as in C1 except, of course, there is no steering component. However, in practice, many bowmen do not bother to twist the torso and lean forward enough to get a good long stroke, thus missing out on a really powerful stroke.

2. Sternman.

The C2 forward stroke for the sternman is similar to the C1 stroke except that at the beginning it is usually not feasible for the sternman to twist the torso and lean forward as much. He doesn't have time to do these things and still keep up with the bowman. This is one reason I suggest that the taller of the two partners should be in the stern, so that his paddle will be in the water as long as the bowman's but without needing the extra reach.

3. Bow and Stern Together.

As suggested throughout this chapter, the forward strokes - like all C2 strokes -- must be taken precisely together. The sternman must become a superb "follower", always keeping an eye on his partner, watching for those little "messages" and able to react in a flash. On the forward stroke, he must take care not to be a bit late inserting his blade in the water at the catch.



Zbigniew Czaja and Jacek Kasprzycki of Poland, 1979 World
Champions in C2 Team: "attack, attack!"
(Jim Thresher photo)

4. Steering.

The role of the bowman in steering is often overlooked, and the steering job all too often falls solely on the shoulders of the sternman. Having the bowman get good at C1 -- and thus learning about steering -- is the remedy.

a. Sternman.

The sternman's job is similar to the C1. The J is infinitely preferable to the stern pry. In C2 and C2M, the penalty for having to do the latter is the probability of not being able to jump back into phase with the bowman and having to miss a stroke.

b. Bowman.

The bowman has to be alert to do little sweep/forward strokes from time to time to obviate the need for the sternman's using a stern pry. Alternately, if a little turn to the bowman's inside is needed, having him do a little J-feather along with the sternman will probably do the trick.

Common mistakes in the Forward Stroke:

- o Bending the lower arm too early on the pull-through and taking the full brunt of the stroke with the biceps instead of the back.
- o Bowman not twisting or leaning the torso and consequently getting too short a stroke, thus making it more difficult for the sternman to keep in phase.
- o Sternman not paying attention and allowing his blade to enter the water a fraction of a second later than the bowman's.
- o Bowman not familiar enough with steering and doesn't know how to help the sternman.
- o Sternman not adept enough at quick J-strokes and consequently having trouble keeping up with the bowman.
- o Bowman has poor sense of rhythm and sets an impossibly erratic stroke rate which the sternman cannot follow.

B. Reverse Strokes.

Being together while reversing in C2 and C2M is as important as being together on the forward stroke. Unfortunately, there are very few doubles boats that can do this, preferring instead to drift through reverse gates and then turning around quickly to paddle forward as soon as possible.

Through testing, I have found that there are times on flatwater when a reverse gate followed quickly by an upstream can be done fastest by simply flying through the reverse gate and continuing to reverse all the way down to the upstream gate, especially if the C2 has a good strong reverse stroke. Remember, a full turn in C2 costs about 2 seconds, so if it can be avoided, by all means do so.



The Calori brothers, Jacques and Pierre, of France, Silver Medalists at Jonquiere. The sternman must constantly keep an eye on the bowman and be ready to complement his strokes. (Bill Cacciolfi photo)

There are other times when reversing is important; for example, the stern-turn situation I described in the beginning of the technique section. This requires great confidence in reverse stroking -- confidence which can be built up by doing upstream gates in reverse, especially in big water. The C2 team should remember, "If you can do it going forward, you can do it in reverse."

There is no question that the compound reverse strokes (see C1 chapter) permit better visibility -- the paddlers get to look in the direction they are going. But again, through testing I have found that the backpaddle moves the boat fastest in C2. The trick is for the bowman to do an adequate job of steering while staying in phase with the sternman. The sternman has to be conscious to set a very deliberate, steady pace.

The reason the backpaddle is strongest in C2 is because there is a paddler on either side of the boat, and steering is not as much of a problem as in C1.

Obviously, backpaddling together takes practice and even if perfected, it is likely to be dangerous around gates. But there are times -- flatwater and little distance between the gates -- when it can be important.

Mistakes in Reverse Strokes.

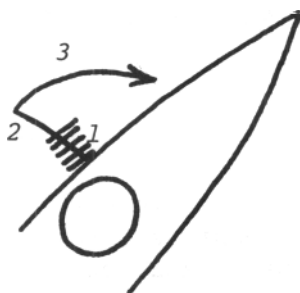
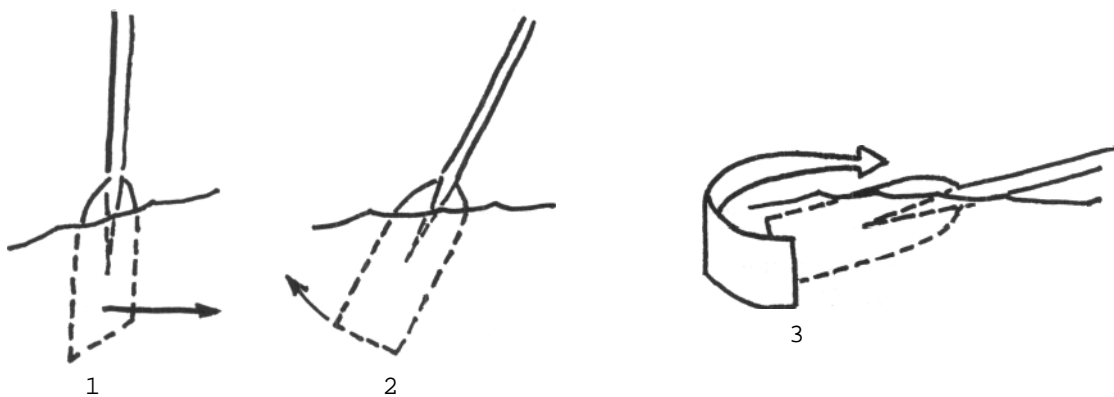
- o On the compound stroke, the paddlers don't have enough flexibility to reach around towards the stern on the pull phase. Consequently, the stroke is weak.
- o The two paddlers don't really reverse at all, preferring simply to drift through the gates.
- o The paddlers don't turn fast enough after reverse gates.
- o The two paddlers do not reverse together.
- o On the backpaddle, the bowman doesn't know how to steer.

C. Draw Turn.

C2 and C2M paddlers often forget to execute their draws as close to the ends of the boat as possible. This has become more of a problem in the close-cockpit boats. The danger is that a draw done right beside the paddler will simply pull the boat sideways rather than really turn it. The bowman has to remember to lock the lower arm out straight while pulling back on the

upper arm -- which has the effect of pushing the blade forward. The sternman has to do the draw behind him. As in C1, the draw turn should be accompanied by both paddlers leaning back, for this raises the bow and speeds the turn. Finally, having the bowman and sternman do all of these things right together will increase the effectiveness of the stroke by about thirty percent.

Sometimes one draw stroke doesn't quite bring the boat around far enough, and there is a little trick which I have found useful for bowmen in this situation. It is the bow reverse sweep. After doing a draw, and feathering the blade out to the side away from you, flip it over without taking it out of the water and turn the stroke into a reverse sweep which starts out far from the side of the boat but arcs into the side as it travels towards the bow. Then, if more is needed, it is easy to convert this stroke into another draw. All of this can be done lightning-quick.



A fairly advanced bowman who knows about the bow reverse sweep will sometimes rely on it at inappropriate times to draw the boat around. For example, when approaching a reverse gate, instead of doing a real draw, the bowman does a reverse sweep and fails to turn the boat sufficiently, thus hitting the gate.

Mistakes in the Draw Stroke:

- o The two paddlers do not do their draw strokes together and the turn is too slow.
- o One or both paddlers do not do their draw strokes far enough towards the ends of the boat.
- o Bowman uses the reverse sweep when he should initiate the turn with a good draw.

D. Cross Draw.

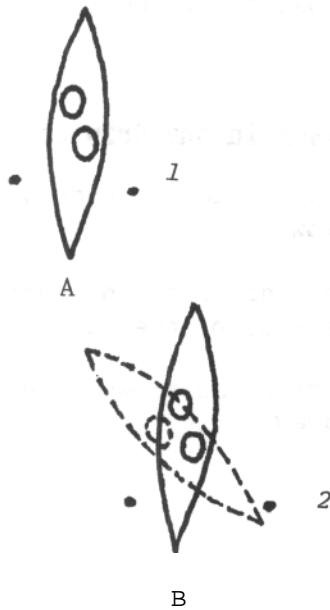
In the old end-hole boats, the bow cross draw was best used only occasionally, but I feel that in the close-cockpit boat, it should be used almost exclusively in place of the pry. I would refer bowmen to the passage on the cross draw for C1s in Chapter 5, since it is exactly the same. This is yet another reason doubles partners can profit from paddling C1, for, in general, doubles partners often lack the necessary confidence for really effective cross drawing.

Mistakes on the Cross Draw:

- o See pages 72-75
- o The bowman uses pry strokes instead of strong cross draws and his turns are too slow as a result.

E. Sculling Strokes.

The ability to move the boat sideways is very helpful in C2 and it is the sign of an accomplished team. After lining up for a gate, the team may find that a small sideways adjustment is necessary or else the boat will hit the gate. A C1 and kayak can do a draw or a sweep to set things right and these are not hard moves to learn. But what does the C2 do? Let's look at a specific example:



In this case, if the team did draw/forward strokes after gate 1, hoping to get the mid point of the boat over in line with gate 2, they could find themselves hitting the red pole while trying to sneak the bow under it on the way into the gate (broken line above). It would be safer, although slower, to simply move the boat sideways from point A to point B. This is accomplished in the following way:

Sternman:

The sternman does a sculling pry. Always rubbing his paddle shaft against the side of the boat, he takes a little forward stroke with the inward edge of the blade angled towards the stern, as shown in C below. He follows this immediately with a quick little backpaddle stroke with the, inward edge of the blade angled towards the bow, as shown in D below. He may have to do the entire sequence three or four times, very quickly.



C



D

Bowman:

The bowman does a sculling draw. Reaching out into the draw position so that the paddle is perfectly vertical, but doing it opposite his body rather than out in front of him, he uses his wrists to scull the blade. He takes a little forward stroke with the inward edge of the blade facing towards the bow (E below). Immediately afterwards, he opens his wrist to do a draw while pushing the blade forward with the paddle vertical and with the inward edge of the blade pointed towards the stern (F below). He may do this combination three or four times quickly and in concert with the sternman.



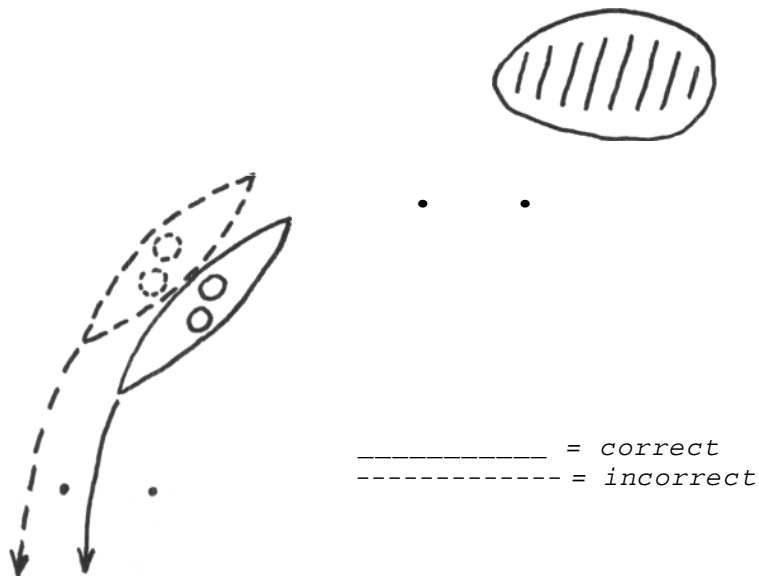
E



F

If the cockpits were offset the other way, the bowman would simply follow the procedure prescribed for the sternman and vice versa.

Another common situation requiring the scull stroke is the upstream peel-out followed by a downstream gate:



In this example, the boat needs to be over to river left a little more and sculling strokes will do the trick. Needless to say, however, any time sculling strokes are used it indicates that a mistake has been made and a correction needed. In other words, the boat has "fallen off the track" and lost time is the result. It is better to learn to stay on the track to begin with, but in a jam, sculling strokes can save the day.

F. Sneaking in Doubles Boats -- It takes two.

A common fault among doubles partners is that they do not realize both paddlers must lean in unison to sneak a pole. The tendency is for only one partner, the one nearest the gate, to do all the sneaking himself. Often this is not enough and the boat will hit the pole. In the bow sneak, the sternman has to be alert to when the bowman starts his lean so that both paddlers can lean together. Coming out of an upstream, the bowman has to remember to lean back with the sternman.

Oversneaking is a problem that many C2s have. They do not differentiate between the need for a real sneak and the need for no sneak at all. As a result, they always plunge the stern way under the water when turning for a reverse gate. This slows down the turn unnecessarily. Both partners should decide not only whether they need to sneak a gate but also by how much. Since both the bowman and the sternman have roles in sneaking,

they both have to agree in advance exactly how much they are going to sneak each gate.

VI. Running Gates.

A. Upstream Gates.

Many of the comments made in Chapter 5 apply here, but there are some variations, which are mostly exaggerations of what is applicable in C1.

1. Careful in -- Fast Out.

This is equally good advice for C2s, but an important difference is that C2s should pick up the stroke rate for two or three strokes after turning into the gate. In other words, emphasizing the "fast out" part of the maxim. This puts tremendous pressure on the sternman, for he has to keep up with the bowman while doing some tricky steering. For C2M in upstream gates, I would add only that it isn't necessary for the team to sneak the gate coming in or going out unless the poles are extremely high: stay away from the high risk, low gain situation. The situation to be avoided at all costs, however, is hitting the eddy so low that it takes 20-30 seconds to claw your way back up.

2. Boat Positioning.

The approach and the pocket theories are even more crucial in C2 because failure to follow them creates problems which are more time consuming to correct in C2 than in C.

3. Strokes for C2 On-Side Upstream -- Ideal Entry.

When speaking of on-side or off-side in C2, I am referring to the bowman. Before reading this passage, the reader should review pages 29-33 concerning the three groups of variables which govern the treatment of upstreams. What follows should be read in conjunction with Fig. 6-2.

Overall, the entry and exit positions of the C2 are similar to the C1 except that there is another stage between the entry and exit phases (at point D in Fig. 6-2) where the C2 must pick up the stroke rate and actually paddle up through the gate. In general, besides this additional phase, the bowman's strokes are similar to the C1's on the entry and the sternman's are similar to the C1's on the exit.

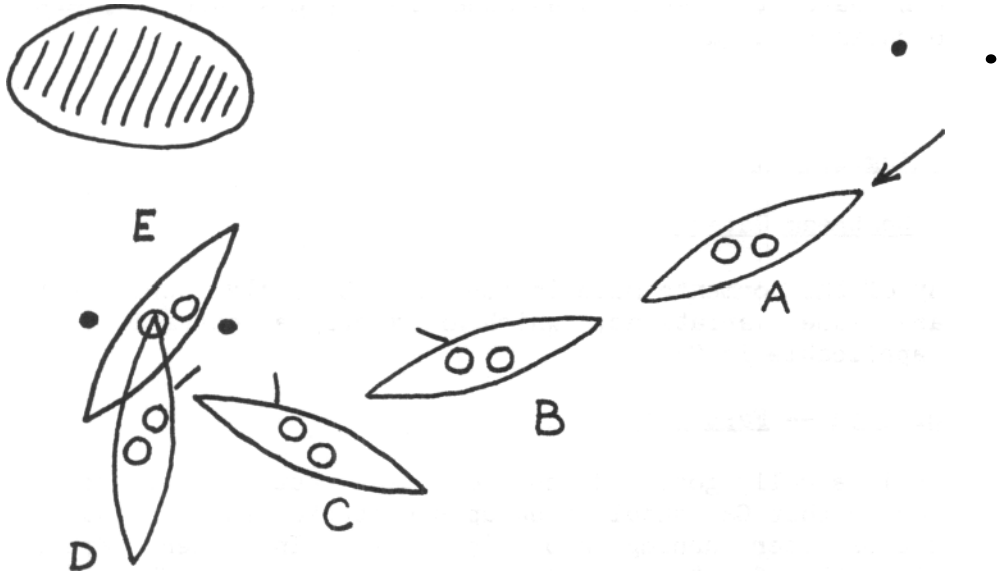
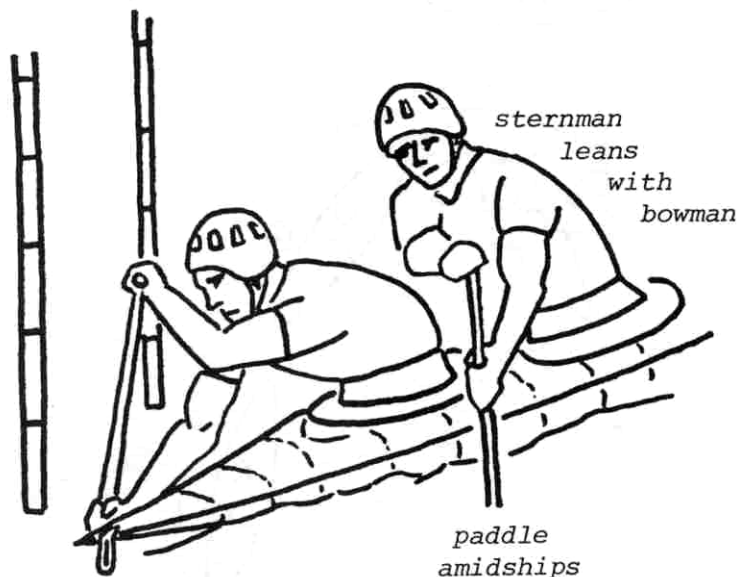


Fig. 6-2. Strokes for C2 On-Side Upstream -- Ideal Entry.

If there is a sharp eddy line, thus making this an ideal upstream, the C2 should use the following procedure for the ideal on-side entry. At position B in the above diagram, the bowman starts his draw while the sternman starts doing a sweep/forward stroke to help initiate the turning momentum of the boat. However, the sternman has to be careful not to overdo this and thereby cut down on the ability of the C2 to punch into the pocket. He has to think about "paddling into the pocket" even more than the C1 does. At point D, if it is a good sharp eddy, little effort is needed unless it proves necessary to undercut the outside pole (with both partners leaning in unison). The major effort should be concentrated on accelerating the boat up and out of the gate -- both paddlers should think "attack, attack." To accomplish this, after lining up the boat and hurtling through the gate (point E), the sternman should exit the gate by doing a forward sweep in unison with the bowman's draw. This will keep momentum up.

If the eddy is not sharp and conditions therefore less than ideal, there will be a problem in snapping the boat into the pocket position and undercutting the outside pole. In this case, the midships pry should be used. Starting at point C, the sternman should do a pry in front of him in the middle of the boat in unison with the bowman's draw. At the same time this is going on, the two paddlers should lean forward to undercut the outside pole. Timing is very important because if the two

strokes and the leans are not right together, the bow may rise prematurely and hit the outside pole, or the boat might not really get into the pocket. The midships pry helps the bow to undercut the pole and helps snap the boat into the upstream position faster. It is also a move where the sternman really earns his pay because he has to do it so skillfully and quickly that he can quickly get back in phase with the increased stroke rate of the bowman (points D- E).



While all of this is going on, the team has to try to lean the boat ever so slightly to the outside of the turn in order to catch the edge a bit and speed the turn even more.

4. Strokes for C2 On-Side Upstream -- Ideal Exit.

For the bowman, the entry and exit phases are similar to C1. The big difference is that between the entry and exit phases, the bowman will have to pick up the stroke rate for two or three strokes to get the boat up through the gate (point E in Fig. 6-3).

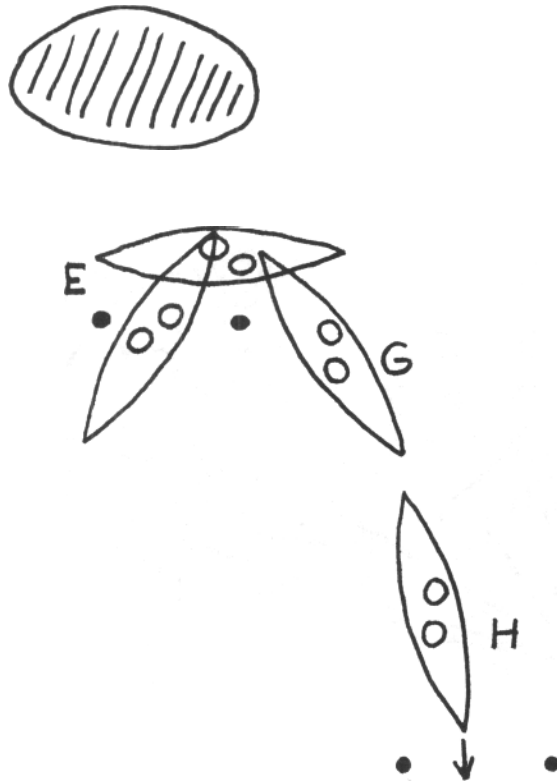


Fig. 6-3. Strokes for C2 On-Side Upstream -- Ideal Exit.

For the sternman, after staying with the accelerated stroke rate for two to three strokes, the exit is similar to that of the off-side C1, except, of course, the sternman does not cross draw after leaving the gate.

In exiting the gate, it is important that both paddlers throw their weight back (starting at point E), both to sneak the outside pole (red one here) and to keep the bow high for better control after leaving the gate.

It is also important that the team not let up a bit at positions G and H. Instead, to accelerate the boat, they must still be thinking "attack, attack", for this period right after leaving the gate is where some time can be made up.

4. Strokes for C2 Off-Side Upstream -- Ideal Entry.

See Fig. 6-4 below.

For the bowman, once again, there is great similarity to the off-side C1 entry. The major difference is that the entry and exit phase are separated by another phase of increased stroke rate.

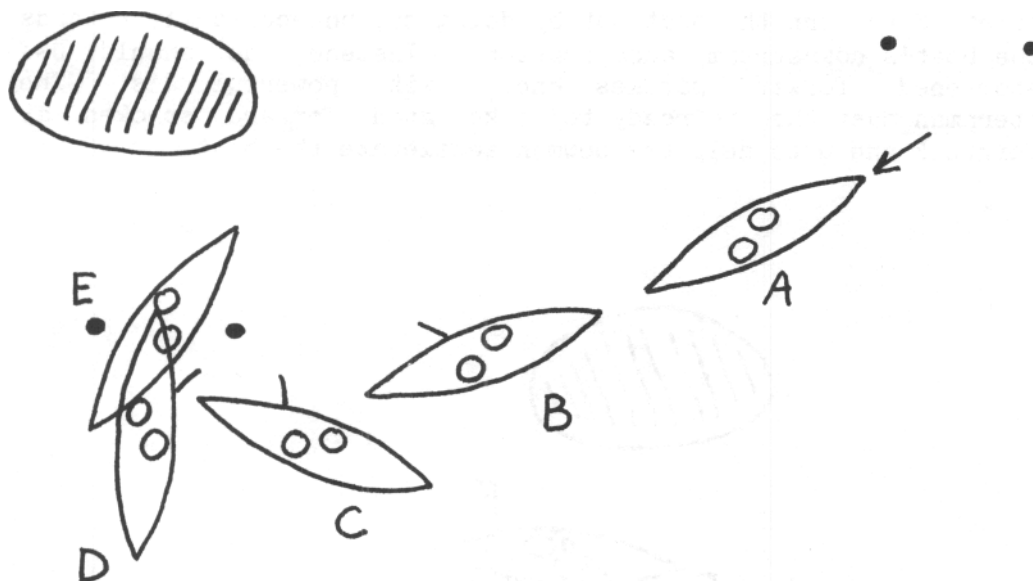


Fig. 6-4. Strokes for C2 Off-Side Upstream -- Ideal entry.

At point A, the bowman does a small sweep stroke to initiate the turning momentum. At point B, he goes onto the cross draw, much as the C1 does, sneaking the outside pole if desired by using waist torque. At point D, he goes off the cross draw and takes some quick, shorter on-side strokes to accelerate up through the gate.

The sternman's role is tricky. In turning the boat at points B and C, he must be sure not to stop its forward momentum too much. The tendency is to want to use reverse sweeps to turn the boat but instead, shortened forward strokes ending in J-strokes are better. At point C, the sternman should use a strong draw, placing his paddle as close as possible to the bowman's (which is still on the cross-draw at this point). Doing this causes the boat's pivot point to be further forward than usual, thus speeding the turn and helping to undercut the outside pole (red one here). Essentially, the sternman should be responsible for holding the boat high in the eddy and letting

the bowman make the intricate turning moves. Once in the eddy, it is quite easy for the sternman to control the angle of the boat on the off-side entry through the use of draw strokes (the most likely problem will be for the boat to continue turning bow towards the current).

6. Strokes for C2 Off-side Upstream -- Ideal Exit.

See Fig. 6-5.

The exit for the bowman is the same as for the off-side C1. The sternman, after hurtling up through the gate, has the same problem as with the entry -- he wants to use reverse sweeps at point E to turn the boat but by doing so, unnecessarily retards the boat's downstream acceleration. Instead, he should use shortened forward strokes ending with powerful J's. The sternman must then be ready to take good forward strokes at points F and G to help the bowman accelerate the boat.

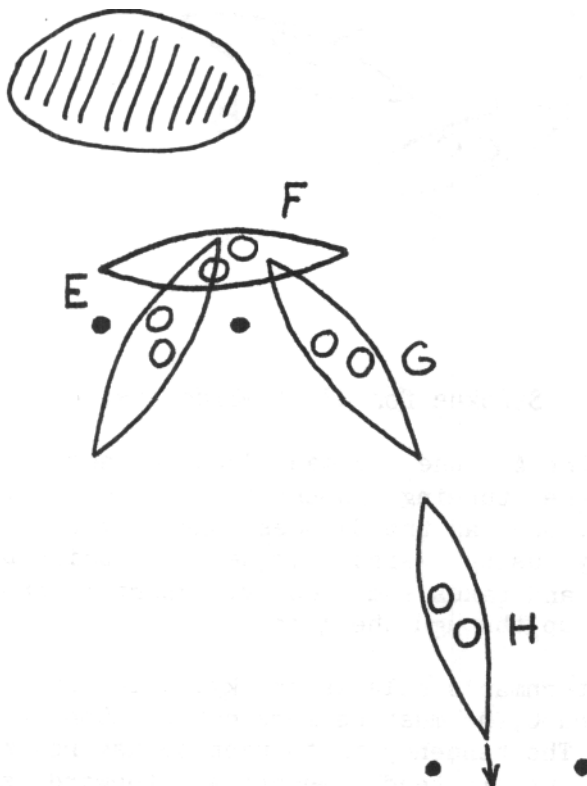
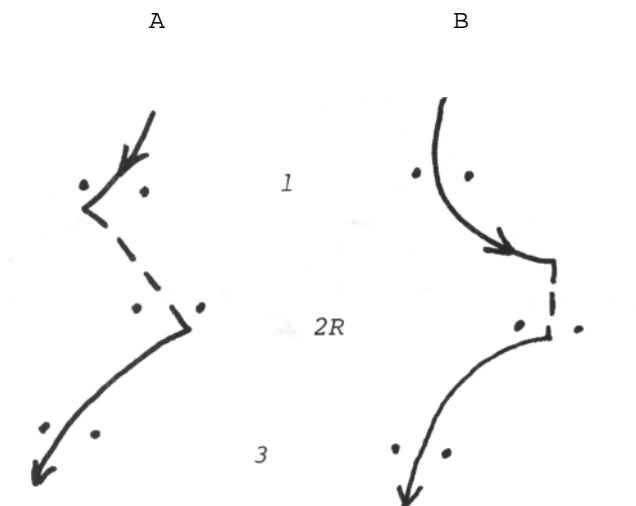


Fig. 6-5. Strokes for C2 Off-Side Upstream -- Ideal Exit.

B. Reverse Gates.

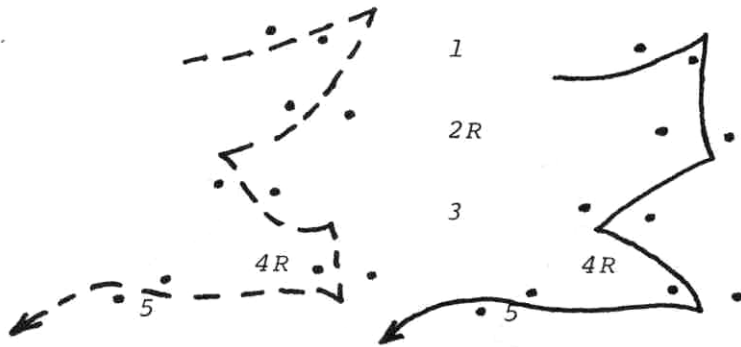
In C2, since there is a paddler on both sides of the boat, there are not as many off-side/on-side problems as in C1. Consequently, running direct (i.e. with a minimum of turning and/or paddling out and around to set up a turn) should be the prime consideration. Often, however, C2s do not do this. Take the following sequence.



On flatwater, or whitewater with no peculiarities, method A is always faster. I have timed it over and over again and it does not matter whether you are bow right or bow left.

However, there are times when there is an on-side/off-side difference on reverse gates, not so much because of the forward-reverse-forward sequence, such as shown above, but because of the approach to and exit from it.

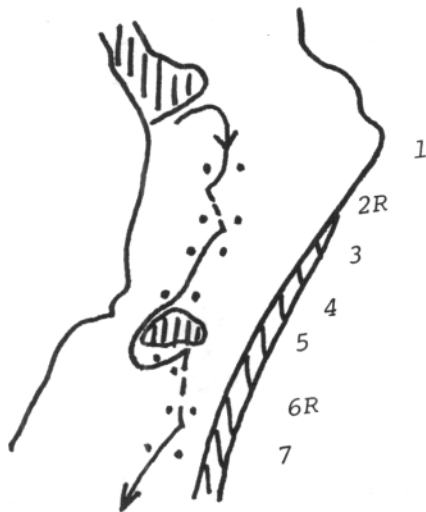
An example of where off-side and on-side C2s had their best times by turning different directions is the following:



Just looking at the sequence and remembering "always go direct", one would probably choose the solid line path. Tests proved, however, that it was impossible to get the proper angle through 2R in order to go direct: 2R was too much directly below 1. If 2R had been over to the right more, the solid line path would have been the fastest for both the bow right and bow left C2. We tested this later and found it to be true.

From 4R to 5 up, again it would seem that the solid line path would be faster because it would avoid the turning at 4R. But it wasn't. The bow-right C2 was able to fly through 3 right up to 4R, do a quick cross-draw, turn about 180 degrees and use a bow sweep to sneak 4R and set the boat up nicely for 5 up. The bow left C2, on the other hand, had to stop momentum in 3 to do a stern-turn for 4R and then had to draw the bow out of 4R which was a bit slower. The moral of the story: watch your approach to and exit from a normal forward-reverse-forward sequence or a reverse-forward-reverse one because on-side/off-side can make a difference there.

Another factor in deciding which way to turn, of course, is the water. Perhaps the best way to illustrate this is by relating a little anecdote concerning the East German team of Klaus Trummer and Juergen Kretschmer (bow right) and how they handled the top part of the 1971 World Championship course. The first few gates looked like this:



Trummer and Kretschmer found a little eddy on river right between gates 1 and 2R and used it to facilitate a stern turn from 1 to 2R. Having turned this way set them up beautifully to go through 3 at an angle driving for 4. No one else tried the move. In that race, Trummer and Kretschmer won the C2 class by 14 seconds and would have placed tenth in the K1 class. Their score was 268.68 and the winning K1 was 241.40.

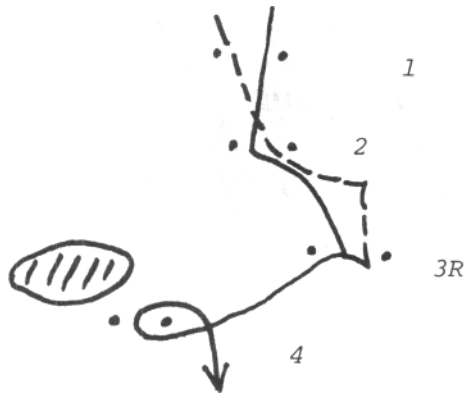
All the other C2s, even the ones who paddled bow right, turned bow towards river left, probably because they could watch the gate longer.

C. Stern Turn.

Clearly, if a C2 or C2M runs most moves directly, there will be times when they will have to let the stern peel off into the current, which is what I call the "stern turn" or "stern dive." There is a natural aversion to the stern turn, especially in doubles boats because it does not permit the paddlers to watch the gates as long. While more dangerous, it also happens to be faster, which means that if you can get comfortable with it, you're going to beat someone who insists on paddling over in front of the gate so he can watch it forever before he finally has to turn. I think the best way to get comfortable with the stern turn is to do it a lot in practice as well as do a lot of

reverse upstreams to build up your confidence and skill in paddling across the current in reverse. Once you have the confidence to do this move aggressively, you've got a real advantage.

I believe that if the C2M is sufficiently skilled in the backferry -- and it should be -- there are many times when it is safe to use the stern turn in C2M, too. For example, take the following sequence:



There are two ways of doing the move, the safer way indicated by the broken line. However, a skilled C2M could do it faster by being a bit slow and cautious through 1 and 2, holding the boat in the backferry momentarily right after 2 to get the boat sufficiently over to river left for gate 3R, then letting the stern peel off and drop right into 3R. While going through 3R, both paddlers should again think about slowing the boat down -- by paddling forwards, perhaps -- so as to be sure to have proper boat positioning for 4 upstream.

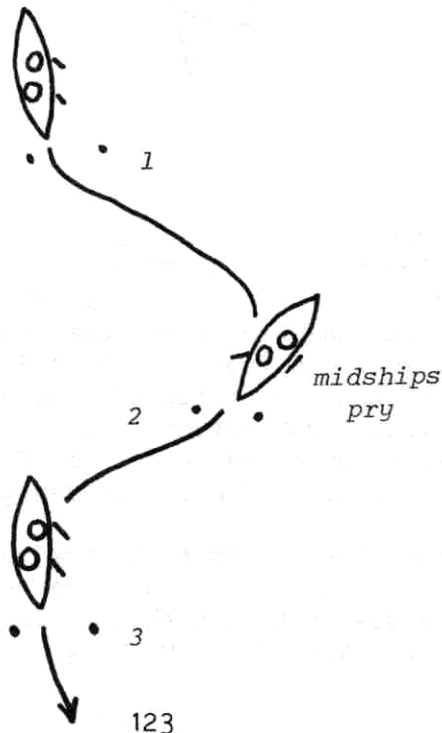
For purposes of contrast, I shall describe the C2 strategy. The C2 would move through 1 very fast. Before going through 2, the boat would be snapped into a sideways position so that the stern would sneak the red pole on 2. The paddlers would backpaddle over to 3R and sneak the bow under the red pole in order to set up for 4 upstream. Besides the sneaking, the C2 would not backferry after 2, it would simply backpaddle across the current for gate 3R.

D. Offset Gates.

The doubles boats should follow the same basic principles laid out in pages 49-50 concerning the need to turn above offset gates and not in them. The bowman's role is exactly the same as in the C1's, both off-side and on-side (see pages 88-90). See gates 1 and 3 in the diagram below. When appropriate, the bowman should go over to the cross draw before going through gate 2 and if necessary, stay on the cross draw while actually passing through the gate. He may have to take forward strokes while still on the cross draw. This will greatly facilitate proper boat positioning, although it requires considerable skill for the bowman -- skill which he can quickly learn in C1, however.

If, instead of the cross draw, the bowman merely did sweeps, the boat would turn sideways too much and would have to be straightened out to get through gate 3 -- assuming the team succeeds in getting the boat over to 3. It is more likely that the boat would broadside 3 and a penalty would result. The cross draw eliminates all of these problems. However, the bowman should remember that while the cross draw is safer, it is slower than sweeping. Thus, if it is possible to do the offsets by sweeping -- for example if they are really spread out -- then do it. If they are tight, however, the cross draw will have to be used.

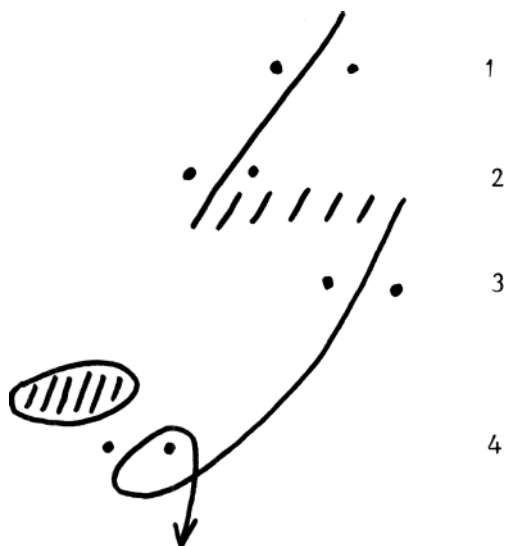
Essentially, the sternman's job is to keep the stern from slipping too far sideways between the gates and incurring a penalty. This is easy enough to do on the sternman's on-side, as in gate 1 and 3 in the sequence below where the sternman is on the left side.



Here the sternman simply holds onto a draw. But in gate 2 he is going to have problems because he has to stop the boat's sideways motion by using a midships pry or angled forward strokes against the gunwale. It takes a lot of practice to be able to execute these moves aggressively.

In C2M, the lack of strength sometimes makes it impossible to shoot an offset sequence directly: the paddlers just can't accelerate the boat quickly enough and drive it across the current soon enough to set up for the next gate.

Therefore, backferrying may be advisable for C2Ms in some offset situations. It is far better to avoid the penalties than it is to be fast here. Take the following sequence:



By backferrying from 2 to 3, the C2M can increase its chances of cleaning all the gates and getting a good, high turn for the upstream at gate 4. If the C2M is able to shoot the offsets without the backferry, chances are that it would still have problems getting a good turn into 4. Thus, the backferry here might be even faster for C2M, depending on the current and how much the gates are offset. In some extreme cases, the backferry might even be better for K1s and C2s, although, it would then be the sign of a poorly designed course.

In general, then, C2Ms must pay particular attention to alternate possibilities. Just because a move looks impossible to do directly does not mean that it cannot be done indirectly. On the whole, however, a C2M wishing to become elite must aspire

to do almost all moves just like a good C2. According to Chuck Lyda:

The biggest mistake in C2M is regarding yourself as inferior to C2s. Be aggressive and attack the course instead of just surviving it. A C2M can't get good unless it regards itself as a C2 and competes against other C2s.

C2M paddlers -- and even C2s -- should, practice the backferry by trying to sit on a wave as long as possible and trying to go from side to side, all the while keeping the boat under perfect control. At first, neither partner will dare lean out or look around for fear of tipping over. Instead, they will want to look at the deck of the boat. But after lots of practice they will develop the "feel" of the boat in reverse and then not only will be able to look at the gates, but will also be able to plan the next move while holding the boat in the backferry. Essentially, mastering the backferry is a matter of feeling at an early stage when the stern is slipping out of control and catching it before it gets very far. Practice will acquaint the paddler with this feel.

Practicing the backferry does not mean that doubles boats should plan to use it frequently in races; that would be too slow. However, there are emergency situations where control in reverse is critical and practicing the backferry in big waves is one good way to get that control.

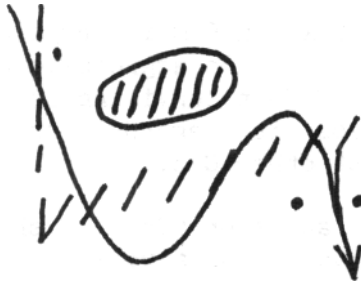
E. S-Turns.

Doubles boats experience many of the same problems that C1s do in handling the S-turn combination and I refer the reader to pages 90 through 92 where I discuss these.

In general, while the S-turn is similar to the upstream gate, there are important differences -- such as not aiming for the pocket -- which the C2 must observe. For the specifics, consult the C1 section.

In C2M, it is probably safer, though of course slower, to approach the S-turn more like a regular upstream, i.e., not hitting the eddy too high, and letting the boat turn more upstream before the exit so as not to have too tight an angle on the gate and get a penalty.

There is an alternate way of doing the S-turn combination formed by two gates, separated by a boulder, such as was found in the Skopje 1975 World Championship course:



On practice runs all boats except Trummer-Kretschmer did this combination by doing a full eddy-out between 24 and 25 (solid line above) Trummer-Kretschmer dropped through 24, slammed on the brakes and backpaddled across the eddy with the bow still pointed downstream and dropped right into 25 (broken line above). On race runs, most of the other C2s tried the move but were not as good at it as Trummer-Kretschmer, and Trummer-Kretschmer won the race by a little more than one second, probably in large measure because they did these two gates better than anyone else.