

# SO NOW YOU WANT TO STEER AN OUTRIGGER CANOE!!!

If you are reading this guide, you have gone beyond merely wanting to paddle outrigger canoe. You have decided you want to find out how a canoe runs and why. You want to learn about reading and using water to better the canoe's advantage. You want to try occupying the most important seat in the canoe. Steering may be an almost entirely thankless role, but it is not without rewards. And steering a canoe properly is an art. More on this later.

## INTRODUCTION:

As steersperson, you are "kin'a da boss o' da kanu" (Nappy Napoleon). You ultimately determine the course, the stroke rate, the change frequency, when to pass another canoe, when to increase or decrease power, when to bail, and what to do in the case of a huli. You more than any other paddler in the canoe will contribute to, or detract from, the progress of the canoe. And while steering is not for everyone, every paddler should learn how to steer.

A perfectly legitimate question is why? Because knowing what the steersperson is doing will give you cues as to what each of you as paddlers must do in return. And because in order to learn how to steer, you have to learn about water and how it affects the canoe. The more each paddler knows about the waters' effect on the canoe, the better each will be as paddlers, whichever seat each occupies in the canoe.

This guide is designed to introduce new steerspeople to the task. It is also designed to better focus the efforts of paddlers who have been steering for some time. It cannot be all things to all paddlers. Take from it what you can use, and what you cannot, set aside for now.

## THE ESSENTIALS OF STEERING AN OUTRIGGER CANOE:

Well, first off, it is far from easy. Don't let anyone tell you it is, including myself. What you want to achieve may seem simple; maximum progress on a given course over time. How to achieve that involves literally dozens of factors, all of which must be taken into consideration from moment to moment. And it is not just the factors themselves which complicate the job of steersperson, but how they interact with each other in either enhancing or impeding the canoe's progress. So, as is always best when doing an analysis, let's break down the task of steering a canoe to its' barest essentials.

Sitting dead in the water and moving the canoe around is not what we will call steering it. To steer a canoe is to direct the canoe while it is "underway". Curiously, any time the water is moving against the canoe, one has to steer. So, whether the canoe is being powered by paddlers (or is gliding after being propelled) or is in a current while not traveling the same speed as the current, the canoe must be steered. If it is sitting still and being moved around, it is only being manoeuvred. Anyone can do this. There is no art in it.

The steerspersons' job is to maximize the canoe's progress over a given course. Put another way, the task of the steersperson is to interfere as little as possible with the progress of the canoe to its destination over the shortest route. "Shortest" in this case means least amount of elapsed time. This is because the shortest distance is not always the fastest route. Wind, wave and current all will affect the route taken. And these factors will have a greater or lesser effect on the canoe depending on the makeup of the crew (including its strength, endurance and weight) and the design of the hull (including height of gunwale, rocker, trim, ama weight and rig, and overall length of the boat).

I describe it in negative terms ("*to interfere as little as possible with the progress of the canoe*") because the very act of steering slows a boat down. Anytime a steersperson puts his or her paddle in the water to steer, drag is created. Of course,

this is precisely why the paddle is inserted into the water. Drag allows the steersperson to direct the canoe. But to do so slows the canoe down.

Also, whenever a canoe is turning, it is presenting a portion of the side of the hull to the water (pushing water sideways). This too creates drag. In fact, once a canoe starts to turn, it will keep slowing and turning in an ever decreasing radius until it comes to a stop, all other factors equal.

*The trick is to steer only when entirely necessary and only when it will either lessen or negate another factor from slowing the canoe's progress to its destination (like when one changes the canoe's course because the boat is headed away from its destination), or when it will set the canoe up to take advantage of a positive factor (like when a steersperson goes hunting waves to surf or another canoe's wake to ride), or when actually changing course (like when doing a buoy turn).*

Now, let's talk about the rules that govern steerspersons.

## THE RULES OF STEERING:

The process of steering a canoe does not make one a steersperson. It is not merely a matter of steering the canoe towards its intended destination more or less in a straight line. Steering involves many kinds of activity on the part of the steersperson, some of which approximate that of the other paddlers in the canoe. In other words, the steersperson can be a motor some of the time. Having said that, *the primary role of the steerer is still to steer the canoe on a course to its destination.*

There are three basic rules to remember when steering;

1. It is always better to understeer than to oversteer.
2. Steer to paddle, don't paddle until you have to steer.
3. Always give back what you take away

These rules are all inextricably linked to each other. However, some aspects of steering an outrigger are easier than others. *Beginning steerspeople should focus on Rule 1 and then Rule 2. Steer first, then paddle. Finally, once you have learned to steer and paddle, add as much as you take away every time you steer (Rule 3).*

We will start with the first basic rule.

## 1. IT IS ALWAYS BETTER TO UNDERSTEER THAN TO OVERSTEER:

If you liken steering a canoe to steering an automobile, this rule will be readily apparent. When we are travelling down a highway, we don't swing the steering wheel back and forth to maintain our position on the road. We gently nudge the vehicle with the steering wheel once we begin to go off our intended course. We are essentially reactive to the automobile except when we are actively turning the vehicle. The same is true for the canoe.

And it is even more important in a canoe because your "engine" is not without limits. Canoes and cars both "track" quite well if left alone. Steering a car will slow it down. So does steering a canoe. But in a canoe, it isn't just a matter of pushing down on the accelerator to speed back up. Every time you slow the boat down, it has to be accelerated again. The canoe is accelerated by human effort. Human effort is limited by fatigue, both mental and physical. Mental fatigue occurs with physical effort over time and moreso when encountering additional (and unnecessary) resistance. Physical fatigue is increased with resistance.

The bottom line is this; *do not make your paddlers work harder than they have to. Minimize their effort over a given course by minimizing your interference with the run of the boat. You can achieve this by steering only as much as you absolutely have to in order to maintain your chosen course. Steer a little and see what you have done. Steer again until you achieve the desired result. Don't overdo it. Be subtle.*

## 2. STEER TO PADDLE; DON'T PADDLE UNTIL YOU HAVE TO STEER:

This really follows on the heels of the last rule. The primary role of the steersperson is to give the canoe a good course and to interfere as little as he or she can with the canoe's progress in maintaining the chosen course. Once that has been achieved (as it will be from moment to moment as the canoe heads towards its intended destination), paddle forward to help propel the boat. Do not paddle forward until you have to steer.

This is subtle point. *If you paddle until you have to steer to correct, you take away everything you have given the boat by paddling. And there is tendency for a steerer to take that one last power stroke that throws the boat completely off course causing the steersperson to have to steer radically to get back on course.* This will make your crew mad at you. And it will show up in your results. Do not do it.

## 3. ALWAYS GIVE BACK WHAT YOU TAKE AWAY:

This is a very simple principle. As mentioned above, it is fatiguing to your crew for the steersperson to be constantly steering and then countersteering to correct. If the steersperson does this, he or she cannot also propel the boat forward.

Now, it is important to continue to recognise that the steerspersons' primary function is to steer. But he or she should also add as much to the progress of the boat as possible. So the secondary function is to be a motor, and that means to paddle. First steer, and then when this has been achieved, paddle.

It has been suggested that a steersperson should try to limit the time the steering paddle is in the water to the equivalent of three strokes of the crew. Obviously, if the canoe is on a huge wave and the steersperson is trying to prevent the boat from running off on an angle or even experiencing a huli, this may not be possible. But, in most conditions, it is possible to limit steering input to three strokes of the crew.

*I would add that once you have achieved a level of proficiency as a steersperson that permits you to steer without thinking, and to paddle more or less when you want to, you should try to give three strokes back for every three strokes that are steered. In other words, give back the speed you took from the canoe and help your crew accelerate the boat back up to its cruising or racing speed. Do not ever leave your crew in a speed deficit. It is entirely unfair to them and will be both fatiguing and demoralising. You are there to help, not hinder them.*

There is a lot of material to cover so we should move on. Let's just briefly discuss positioning in the boat.

## THE POSITIONING OF THE STEERSPERSON IN THE CANOE:

There are all kinds of ideas about where to position oneself in the canoe. We know some things about outriggers that should give some clues however. The ama is on the left. When you huli, it is almost always to the right. (Occasionally, in big water, the ama will go right under the hull, but very rarely.) The boat is never tippy to the left.

I suggest that the steersperson locate themselves statically in a centre left position in the canoe. I frequently keep my left thigh against the gunwale to offset the possibility of a huli. I paddle 100% of the time on the left, but steer both sides. Most steerspersons will paddle at least 75% of the time on the left.

It is not wrong to paddle both sides. Nor is it wrong to locate oneself centrally in the boat. But if the steersperson wants to negate any possibility of causing a huli, and wants to have a good shot at preventing a huli caused by the conditions or other paddlers, take my advice and be on the left of the canoe. Remember, a huli will cause a boat to lose a minimum of 4-5 minutes' progress. It can break the boat. If the water is rough, it may be next to impossible to right the canoe; and even if you do, impossible to bail it dry. Don't be the steersgoat. Safety first. 'Nuf said.

Before we talk further about how to steer, maybe we should identify what the steering strokes are.

## THE STEERING STROKES:

There are four basic steering strokes and countless variations or combinations of the four. They are as follows:

- 1) *the poke*
- 2) *the pry*
- 3) *the draw*
- 4) *the rudder*

Each has a specific purpose and all can be put to very good use. Careful application of these strokes interspersed with power strokes will help you and your canoe along its way.

## THE POKE STROKE:

This is the basic steering stroke you will utilise more than any other. Not only is it the easiest to learn, but it is the most effective 90% of the time. And, from it you learn how to pry and to rudder. So, it is the foundation of two of the three other strokes as well. Well, what is it?

As most of you know, the steersperson occupies six seat. The canoe can actually be steered from almost any seat, but six seat is most effective. There you interfere with the stroke and rhythm of the boat the least. The whole crew can be observed from that one seat. The course of the canoe (using the whole boat as a pointer) can be checked from moment to moment. And you are at one of the ends of the canoe permitting the canoe to be pivoted from its balance point (its "centre") with the most mechanical advantage and therefore the least amount of effort.

Canoes, setting aside the ama for now, are symmetrical down the length of the hull. That means that water running along the side and underneath of the boat encounters the same surface to act on the whole length of the canoe. If one were to suddenly add a new restriction to one or other side of the canoe's hull while underway, that side of the canoe would slow relative to the other. This is the principle of the poke stroke. The paddle is inserted into the water on the side of the canoe the steersperson wants to slow down in order to redirect the canoe. If you poke on the left, the bow of the canoe will swing left, and if on the right, the bow of the canoe will turn right.

Now, as you might imagine from considering what one little paddle all of 10 inches across might do to the progress of a 1500 pound canoe over 43 feet in length, the poke stroke is not a radical turning stroke. It is subtle. And it is therefore one of the most important tools a steersperson has. Remember, understeer rather than oversteer, and give back what you take away. If you poke, you are starting with the least effective turning stroke (it does the least) and taking away very little from the run of the boat.

So what is it? How do you poke steer? Dead simple really. Sitting in your seat, you raise the paddle out of the water and turn your upper body a little to face the paddle. Your upper body should turn maybe 30 - 45 degrees. Now drop your top hand down the shaft and grip it just above your bottom hand which is still in the normal grip position. Turn the paddle shaft with your wrists 90 degrees in the direction you are facing (turn it counterclockwise or to the left if on the left and clockwise or to the right if on the right) so the power face of the blade is facing the hull of the boat. The shaft should still be virtually vertical; directly up and down.

Next, insert the paddle alongside your thigh into the water by sliding it down along the side of the hull. The power face of the blade should be facing the hull and the portion of the blade which is just under the surface of the water should be in contact with the hull. You will have to push the shaft away from you a little to get the desired angle against the hull. The paddle should stick against the hull without the necessity of the steersperson holding it there if the poke is done correctly.



Now, most steering blades have a pronounced dihedral or spine down the centre of the power face. The leading edge of the blade should be against the hull. If the blade has a dihedral, then the trailing edge will be away from the boat and will create a mild ruddering effect. (For more on ruddering, see below.) If there is no dihedral, there will be no rudder effect and the poke will have less of an overall steering effect. Also, the blade will not stick to the hull as well. In this case, the steersperson may have to actually turn the trailing face of the blade away from the boat by rotating the shaft back towards neutral. Turn the shaft with your wrists. This will create a mild rudder and make the paddle stick to the hull at the same time.

By inserting the paddle into the water, the side of the canoe upon which the blade is located will slow down. Poke on the left to steer left and poke on the right to steer right. For a greater effect, insert the blade deeper into the water. For a milder effect, just insert the tip.

Keep your hands open and only grip the shaft when you absolutely must to keep hold of the paddle. Do this like a surgeon might making an incision. Be subtle and precise. Feel the boat under you and watch the bow carefully. Once the boat begins to come around, remove the paddle. Watch to see if the boat continues to come around after you have removed the paddle. See if you have steered enough. If not, repeat it again. If so, maybe you can take a few power strokes.

When do you utilise this steering technique? When the canoe needs to be nudged back onto the desired course. Or when initiating (beginning) a full turn. Or if there is a wind acting on the hull requiring a static but not overly aggressive steering effect. For example, if the wind is blowing on the beam of the canoe, one may have to place a poke on one side or other to maintain the course. If blowing from the left, the steersperson will have to hold a poke on the right and vice versa. Again, only what is absolutely necessary.

It is not wrong to leave the top hand on the handle of the paddle, but it puts the steersperson in an awkward spot. It is hard to move quickly (for example, if one has to change sides rapidly) if one has one's hand way up in the air. And it is hard to be

subtle with the top hand if one has that much leverage. I find one has far better feel with both hands down low on the shaft.

Also, if one is steering on the right, there is always an increased chance of a huli. This is particularly so if the poke turns into a pry stroke (see below). And, it is hard to keep one's centre of gravity biased to the left as one should if the left hand is on the t-handle over to the right side of the boat.

Do not do any kind of cross-stern stroke unless you are very gifted and have a flair for the outrageous. Cross-canoe strokes are done for strength and leverage. There is absolutely no benefit to doing this type of stroke when steering.

When I steer on the right, I will often put my left hand on the left gunwale and lean left or away from the paddle while steering with my right hand only. This also minimises the possibility of a steering induced huli and allows for quick weight shifts to prevent a huli from other causes, such as crew movement or a wave coming ama side.

### THE PRY STROKE:

This stroke is the stronger, stupider brother of the poke stroke. It is used when there is a need for a more aggressive steering manoeuvre to correct or change the boat's course. It is also used to bring a canoe around a buoy or other sharpish turn. But it should be used sparingly as it radically slows the boat causing a lot of stress on your crew.

In terms of the process, it is very similar to the poke. The paddle is inserted vertically into the water alongside the steerspersons' thigh. The full blade is inserted alongside the hull. The pry is not effective unless the full blade surface is brought to bear.

The shaft can be gripped either with the top hand on the handle and the bottom hand where it is normally placed, or with both hands down the shaft one over and against the other. It all depends on the strength of the steersperson and the mechanical advantage needed in order to steer the canoe.

The difference lies in the mechanism by which the canoe is steered. Here, the shaft is actively pulled against the hull by pivoting it against the point of contact on the hull. By pulling the shaft towards the steersperson, the back of the blade is forced out and away from the hull. This pushes water out and away from the side upon which the blade is located.

It has a much greater effect than that of the poke stroke. Instead of slowing the side of the canoe upon which the paddle is inserted in the water, it is designed to push the hull away from that point thus altering the course quickly and vigorously.

Unlike the poke stroke, the pry stroke is not usually about finesse. One can pry gently, but prying is usually resorted to where more severe turning manoeuvres are called for. If the canoe is running off a wave to one or other side, it can have a lot of momentum. In those circumstances, it may be that the steersperson cannot otherwise correct the canoe's course but by reefing on the blade to bring it back. Or it may be that two or more canoes are in danger of colliding. Enter the pry. But use it sparingly. It is hard on the crew and can be even harder on the canoe (in the case of a huli).

## THE DRAW STROKE:

If the pry is the stronger, stupider brother of the poke stroke, the draw is the fragile cousin of the power stroke. The draw stroke has distinct advantages over both a poke and a pry, but it requires a lot of effort on the part of the steersperson and is very hard on the joints.

The mechanism is exactly the opposite of the poke or pry. Here, the paddle is utilized to pull the boat, not push or slow it. It is a finesse stroke again, though with adequate strength it can be used to turn the boat radically. Just don't try to do this too often, or you will find yourself consuming a lot of ibuprofen.

There are two types of draw stroke;

5) *the static draw, and*

6) *the active draw*

## THE STATIC DRAW:

To initiate the draw stroke, one must remove the paddle from the water and turn the upper body in the direction upon which the draw will be undertaken. I believe one should aim for a turn of the upper body of approximately 30-45 degrees. Think “turn and face”.

In the case of the static draw, the paddle is placed in the water away from the boat with the blade angle roughly parallel to the direction of the canoe’s travel (turned 90 degrees from neutral). The lower arm should be almost fully extended and pointed 90 degrees away from the direction of the canoe’s travel.

After the blade is inserted in the water, the blade should be allowed to open up (the shaft rotated beyond 90 degrees so that the leading edge of the power face is turned further away from the canoe hull than the trailing edge). The blade will then have a ruddering effect. Water striking the blade will be directed along the leading edge of the power face and will pull the blade away from the canoe. If the blade is held in place (by sheer strength), the canoe’s stern will be drawn in the direction the blade is pulled. The blade is drawn away and you are holding it static relative to the hull so the stern of the boat goes in that direction.

In order to draw, one must place the blade in the water away from the hull. It is important that the blade is angled in a way that pulling on it does not bring it any closer to the boat. As the canoe slows, as it inevitably will whenever steering the boat, the paddle will begin to migrate towards the hull. In order to counteract this, the angle on the blade will have to be increased incrementally. In other words, the draw will have to be opened up more as the canoe slows. It is also important not to let the drawing paddle get behind the steersperson. This can have a very negative effect on the steersperson’s outside shoulder and expose them to a risk of a shoulder injury.

## THE ACTIVE DRAW:

In the case of the active draw, it is the aim of the steersperson to move the boat more than is possible with a static draw. The static draw is used more when the canoe is moving quickly, the active draw when the canoe is moving slower. It requires too much effort to perform an active draw when the canoe is really underway, and not enough is accomplished with a static draw when the canoe is moving slower.

The active draw is initiated in the same fashion as a static draw, except the blade never needs to be angled more than 90 degrees from neutral. In fact, it is frequently less than 90 degrees. And there lies the magic of the active draw. More on this below.

The blade is fully inserted in the water like in the case of a static draw but here the blade is actually pulled towards the hull. When it nears the side of the canoe, it is removed and reinserted into the water in the same location relative to the canoe as the first time. Again, it is pulled towards the boat. This is done until the boat is essentially on its new course.

Okay, why is an active draw a magic stroke? Because it can turn the boat and propel it at the same time. Remember that an active draw is never performed with the blade angle greater than 90 degrees. If it is less than 90 degrees and the power face of the blade is pulled towards the boat, the force applied will be between a pure steering draw and a pure power stroke. As a result, it does both. The greater the angle of the draw, the more of a steering effect it will have. The lesser the angle, the more of a propelling effect it will have. You have to experiment with angles here.

Two things here; first do not use a draw stroke for very long. It should be used for only three or so strokes. Second, do not use it on the right side except with extreme caution. Leaning out and pressing against the inside of the hull, as one inevitably does when drawing, may cause a very quick hull if done on the right.

Those of you who are thinking ahead will have seen a pattern with steering strokes. One rarely performs them on the right. Luckily, when one cannot draw on the right, one can always poke or pry on the left to achieve a similar effect. Similarly, though

one ought not to poke or pry on the right too vigorously (because it will tend to make the boat rotate so that the ama is lifted thereby exposing the canoe to a possible huli), one can always draw on the left.

I do not want to overemphasise the notion one should stay off the right side when steering. I consider it prudent to stay off the right side whenever possible. Many steerspersons seem to switch sides almost as much as the power paddlers. With a balanced boat and an experienced crew, there is nothing wrong with it. But if you stay on the left, you won't cause a huli, nor will you contribute to boat instability. Govern yourself accordingly.

Okay, the last steering stroke is the rudder.

### THE RUDDER STROKE:

Again, this is a very simple stroke to understand and to perform. It can be utilized on either side of the boat with little risk of upsetting the canoe. It is very effective, but does tend to slow the boat quite a lot. The steersperson also has a lot of mechanical advantage when performing this stroke. As a result it can be difficult to be subtle.

*It is similar in origin to both a poke and pry stroke. The essential difference between a rudder and a poke, pry or draw is that these other strokes do not actively redirect the water passing by the canoe. They each rely on side force or on drag. Rudder actually involves the paddle being held in a position under the water that is other than parallel to the direction of travel of the canoe.*

We begin in a way that is not dissimilar to the poke or pry. However, instead of inserting the blade vertically alongside the hull, the shaft is angled at approximately 45 degrees from vertical. The hands remain on the paddle in the position they would be if powering the boat forward. Mechanical advantage is a good thing here. The steersperson rotates the upper body 30-45 degrees from neutral. The hands are dropped down and to the side of the steersperson. The power face of the blade is allowed to drift back against the stern of the hull behind the steersperson. Once the

upper part of the blade or lower shaft is in contact with the hull, the paddle can be held there or the handle can be pulled in towards the steersperson for more steering effect.

If left in place, the angle the blade makes with the shaft (the bent shaft) will cause the boat to be ruddered or steered bow towards the side upon which the rudder is effected. If the shaft is pivoted against the hull causing the blade to be pushed out and away from the hull, the boat will change directions much more quickly. This combines the effect of the rudder and the pry stroke.

So, why do we need this stroke? What does it do that the other steering strokes do not? Nothing. But when the steersperson is paddling very hard such as during a sprint or while in a power series or if trying to catch a wave to surf, there is usually very little time to change hand position. This steering stroke can be built into the end of a power stroke. Just don't remove the paddle at the end of the stroke. Instead, let it drift back against the hull for a quick rudder and then get back into the stroke rhythm of the boat right away. Even better, if combined with active draw strokes, the boat can be propelled and steered in either direction all from one side very quickly and efficiently.

## EFFICIENT STEERING:

Well, this is our goal. How do we give our canoe every advantage available to it? What do we do to make our canoe faster? How do we do more with less effort? Recall that as steersperson, it is your job to preserve your crew's strength for their piece, whatever it may be. It is your responsibility to ensure that whatever conditions they encounter, you maximize what benefit can be derived from those conditions, or minimize any disadvantage the conditions present. The following are some tricks that may help you attain your goal.

Recall that steering has been likened to an artform. Some people are more artistic than others. It may be that two people with equal physical ability and equal experience steering will be very different performers on the water. The difference is mostly in

boat feel and water sense. There is no way of knowing at the outset of one's steering career whether one "has it" or not. But there are ways in which you can begin to develop that feel in whatever form it is present in you.

For the beginner steersperson, the most important thing to concentrate on is making the boat go towards its immediate destination. Essentially, one must pick a point of land and do whatever is necessary to make the boat go towards that point. Yes, your crew will feel the effects of your steering. But everyone has to learn sometime. Start out by just poking on either side until you can basically make the boat go straight. Stay away from draw strokes and rudders at the start. Try to utilize as few pry strokes as you can. Don't try to do more than this at the start.

Once one has become proficient at this task, it is time to begin to utilize the other steering strokes. Again, the goal is to make the canoe go towards its destination, be it a turn buoy or a finish line. Begin to use the draw as a subtle way of redirecting the canoe. Utilize the pry at the apex of buoy or other sharpish turn to bring the boat around quickly.

Finally, when you can do this easily, it is time to begin to propel the canoe with power strokes. Do this in time with the crew as much as you can. Be careful not to overdo it. Do not paddle until you have to steer to correct. Steer until you can paddle without having to correct. Use rudders at the start in combination with power strokes to keep the canoe headed essentially straight. Use them less and less as you learn to feel when the canoe is about to swing one way or the other.

Don't forget to feel the boat under you. You should feel a surge each time the crew catches together. Let your body rock fore and aft as the canoe accelerates with each stroke under you. Let the boat roll side to side in waves on the beam. Keep your body upright as it rolls. Concentrate on the feel of the canoe as the ama gets light. Be careful on the right whenever the waves are coming at you ama side. The ama will be very light here.

Correspondingly, feel how heavy the boat is when the ama is down in a trough. You should also be able to discern when the canoe is being slowed by waves hitting the



bow, or when the boat comes over top a wave and buries its bow into a trough. The steersperson will feel this through his or her own paddle when in the water. These are all useful clues as to what the canoe is encountering; what forces are acting on the canoe. They tell you what your crew is experiencing. And they can be cues as to what you as steersperson should be doing. If the canoe is slowing down, can you do anything to make it speed up again? If the canoe is unstable, can you prevent it from becoming more unstable or even make it more stable? The answer is yes, most of the time.

Once you feel you can do it all, steer and paddle equally well, it is time to begin to utilize your new knowledge of boat feel and water sense. However, before you start out trying to make the most of what your crew, canoe and conditions offer you, you had better assess what you have.

*First*, what kind of boat are you and your crew in? Is it a boat that turns really quickly and with little effort, or does it track well and resist turning? If it is the former, then it probably has more rocker (the bow and stern at the water line are pulled up) and will surf fairly well, but won't be as fast in a straight line. It will require you to steer more and you will not be able to paddle as much. If it is the latter, you may not get much benefit from a following wind or sea. However, you may be able to paddle almost as much as your crew does, because it will track like it is on rails. It also won't be as affected by side winds. So, is it a surfing, turning canoe or is it a locomotive, or somewhere in between.

*Second*, what about the rig of your canoe? Is it conservative or radical bordering on reckless? Decide how much you will have to watch your ama and how uneasy your crew might be at various stages of the piece due to instability. Know this before you get on the water if possible.

*Third*, what are the conditions like over the course you will be required to navigate? Flat, windy, wavy, choppy, and from what direction? All other things equal, how will your canoe fair in the conditions? Where will your canoe have an advantage and where will you be struggling? It may be that on race (or practice) day, your canoe will be

better or less well suited to the conditions than the other canoe(s) on the water. Live with it. There will be other days when the situation is reversed.

*Fourth*, where do your crew's strengths lie? It is a light or heavy crew? Powerful or finesse paddlers, or both? Endurance or sprinters? And what about placement in the boat? Are you going to be bow heavy or bow light or trimmed flat? How will the design of the canoe and the conditions affect your crew's performance?

*Fifth*, where do your strengths lie? Are you a paddler who steers or are you a steerer who can occasionally give your crew a bit of a push? How do you fair in side waves and how well do you surf? What can you add to the mix?

*Sixth*, how can you tell if you are going well or not? Well, you can look a clock, but that is hardly helpful unless you are doing a time trial over a stretch of water you know well and you can factor in the conditions and crew to see how you did. But that is the problem; you only know after the fact, not at the time.

Alternatively, you can rely on your own feel of the canoe's progress, or on testimonials from other crew members. But both can be deceiving. We have all experienced a day where we felt terrible and had people telling us we looked great, or others day when we felt terrific and the time over distance did not reflect that feeling.

So, what can you rely on? *The best way to tell how you are going is to compare your progress to that of the other canoes on the water.* In order to do that effectively, you must factor in everything you considered when you were assessing how your own canoe would go; crew, course, conditions and canoe. But how you perform relative to the other canoes remains the best indicator of how well you are doing.

It would be easy at this point to say, there are too many variables here to be able to answer all the questions posed above. And even if they were answered, the answers do not tell a steersperson what to do in a given set of circumstances.

Both these statements tell us part of the answer, but the real truth lies in the fact that there is no right answer. What works for one steersperson may not work for another.

And the only way to know what works for you is to try it and then try it again and then try something else and then try it again, and so on...ad infinitum. Because you never know it all and you can never predict with absolute accuracy what will happen in any given set of circumstances. The best you can hope for is a reasonably accurate educated guess.

Therein lies the art of steering. Be creative. Be an artist.

BV Bagnall

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