NOTES AND THOUGHTS, Rachel Jackson  
on July 2006 lesson with Gordon Hamilton

no bad strokes

add speed, not effort

open arms wide, reaching high into the oncoming current at the catch  
and release early, as soon as the work is done

thoughts on the finish/release
GH comment to Kenny: „push from balls of feet at finish‰
   like the rest of our leg muscles, calf muscles are very strong,  
   carry and lift our weight all day

I had been concentrating on pushing with my whole foot, flat, throughout the stroke  
focusing on pushing with the balls of my feet at the finish was new  
and produced a strong effect
I leave my foot straps loose, so it is very clear when pressure on the bottom of my feet drops
pushing on the balls of my feet at the finish (heels still down) feels very strong  
clearly gives added strength to the end of the drive
I feel this added work/strength most clearly in my abdominal muscles  
if I hold onto the water too long I feel the pressure on the bottom of my feet drop to nothing

thoughts on the drive
Ken Robinson,s comment:  
   that during a terrific, strong piece everything vanished except his seat/hips,  
      no hands, no arms, no water, no catch
thinking of reflexes:  
   sensory nerve signals that travel only as far as the spinal cord (not up to the busy brain)  
   and produce an immediate muscle response
as rowers we are well practiced/trained in our powerful leg/hip drive  
we no longer have to tell our legs/hips to drive  
it has become a reflex, a very fast and sure response  
so it happens without intention and seemingly without effort

Sunny,s comment:  
   that reaching high into the oncoming current at the catch  
   and releasing earlier at the finish
   the drive, the work of our bodies in the boat has shifted aft and  
   the work of the oar blades in the water has shifted to bow where it is most effective
notes on my lesson
when I „try hard‰ I become tense in my upper body, which does no good at all
taking the focus away from „busy, clever hands‰ and even from trying to go fast
and instead focusing on the water, being sensitive to it, working with it
each stroke becomes interesting and wonderful
the sensation of finding the water and feeling its strength and lift feels
really good
the legs and hips engage in their powerful work eagerly and seemingly without effort

what I think made the boat move so well on that one piece
what I was working on:
   pushing with balls of feet at finish
   releasing earlier
   relaxing! (trying hard was creating tension in my upper body)
   being patient, spreading my arms wide and reaching high upstream at the catch
what I think made the boat go faster: much more effective finishes
during the drive the strength of the legs and hips pushes the face of the blade strongly
   against the water and puts some bend in the oar shaft
   when the leg/hip drive is done the arms, being far less strong,
      can only work to hold the face of the oar blade tight against the water
      pushing against the balls of your feet and holding firmly with your abdominal muscles
      gives the best leverage
   arms, elbows levels with handles, are holding that drive pressure,
      the face of the blade against the water,
      and are holding the oar shaft seated firmly against the pin
with less drive strength coming from our bodies now
   the oar shaft unbends, releasing the stored energy
if the oar blade is being held firmly against the water
   and the oar shaft is being held stable, firmly anchored on the pin,
then all the stored energy is transmitted to the water, sending the boat forward
if you are ready to release right at this moment the oar pops out effortlessly
if you do not still have solid pressure on the face of the blade against the water
   the energy of the unbending of the oar shaft is wasted,
   having nothing to push against
if the oar collar is not seated firmly against the pin the energy is lost in „rattle‰
even if you get everything else right, if you hold onto the stroke too long
   you are putting on the brakes,
once the oar shaft has released its energy
   the oncoming current will catch up with the back of the blade,
slowing the boat down and lifting you off of the foot stretchers!
add speed, not effort

so just as you gain more speed without more effort
by reaching high into the oncoming current at the catch,
letting the oar blade and the water lift you forward into the current
you can also gain more speed without more effort at the finish
by bracing the face of the oar blade firmly against the water,
allowing all the energy stored in the oar shaft
to be transmitted to the water held by the face of the blade, sending the boat forward

at both ends of the stroke the bracing of the oar shaft against the pin is „static‰
whereas at the catch „pressure against pressure‰,
the opening of the arms wide into the water, is an active motion,
the blade pressing up against the oncoming stream of water,
and at the finish the bracing of the face of the oar blade against the water
is an active continuation of the drive
now with the ball of the feet-abdominal muscles-arms

the direct contribution of speed by the rower is with the biggest muscles, legs and hips,
and happens in the middle of the drive
the contribution of speed at each end of the stroke is from the oar and the water!
at the entry we brace the oar, pushing it upstream
and let the blade and the water create lift
and at the finish we keep the oar blade pressed firmly against the water
up to the instant of release
and let the oar shaft send the boat forward with its release of stored energy

coming into the catch and coming through the release
strength and stability comes from the core
lats coming into the catch, abdominals coming through the release,
arms simply stabilizing the oar against the pin throughout the stroke

the task through the recovery, and especially through the catch and release
is to pay attention, to be as sensitive as possible to the water,
slipping the oar into the water strongly and effectively at the catch
firmly bracing the oar in the water through the finish
to allow the oar shaft to release its stored energy
and lifting the oars out of the water, completing the release, at that instant
during the heart of the drive we can simply trust our rower’s legs and hips to do their work!
a good catch, entering the oncoming current well and feeling the lift from the water,
is so exhilarating that the legs and hips join in the speed and strength of the work eagerly
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standing starts as a terrific learning tool
water is both fluid and powerful
the first few strokes feel how much work the water allows ---too much pressure tears the water
feel how much work is possible ----------feel the density of the water
once the boat is moving, gathering speed
feel how the current pulls you forward at the catch
a clean slice forward into the current creating lift on the oar blade
the faster the boat speed, the more powerful the lift received
every time you set the boat in motion you discover again how much the water helps you
(Gordon: “no bad strokes......not even one%o)

more on starts
practicing starts makes clear how crucial pressure out onto the pins is at all times
for boat stability, for receiving lift for the current,
for transmitting all the work of the drive to the water
throughout the start, each stroke is different,
taking full advantage of what is possible at each moment
the more sensitive the rower is to the water the faster the boat will gain speed

the first 2 or 3 strokes you can apply only as much pressure as the water allows

tearing the water is wasted energy and destabilizes the boat
these first strokes are short strokes, a push, push, push, with heels down
use the middle of the stroke, where you are strongest and most stable
sitting tall, use legs and hips but almost no body swing
come out of bow very quickly
getting the oar back into the water for the next stroke as soon as possible
recovery is very fast, just pulling heels to hips, pressure out onto pins
these first few strokes the oar is in the water longer than it is out of the water
(this same technique is used to move through very rough water or into a strong tidal current!)
as the boat gains speed each stroke lengthens and drive-to-recovery time becomes more equal
strokes lengthen until full reach (and full speed) is attained,
the oar reaching high into the oncoming current
here the sensation of lift from the current on the oar blade at the catch is very clear

finally the rower shifts into a rhythm that maintains the boat speed
and allows time for recovery and a sustained effort
  quick drive through the water,
  a long glide though the recovery as you gather for the next stroke