Photoessay—The Technological Landscape

John Laudun, The University of Louisiana at Lafayette

Editor's Note: Each of the images embedded in this essay is also a link to a larger, high resolution version of the same image (1000x667px) which will open in a popup window. Close that popup to return to the text.

The Question Concerning Technology

In his 1953 address to the Bavarian Academy of the Fine Arts, "The Question Concerning Technology," Martin Heidegger warned of the dangers of imagining technology as simply instrumental, as a means to an end, and not as something more powerful, something more like culture, as something that we not only wield but also wields us in some fashion. His warning now seems obvious, living as we are in a post-genealogical moment and having been made well aware of the ideas embedded in products and processes. That is, we now easily glean from the presence of a tractor in a field that increased productivity for an individual releases others from the same, or similar, labor, making it possible for us, the consumers of the produce, to do other things. Our release from agricultural necessity not only frees us to engage in other cultural pursuits, but it forms the very fabric of our culture itself. We live in a world where excess productivity is the norm. We engage in a variety of forms of exchange in order to purchase products we need so that we may focus on our own production to the exclusion of others. That is who we are, what we do, on a daily basis. While Heidegger did indeed warn that thinking technology is not culture is dangerous, and urged us to oppose any course of action in which “all revealing will be consumed in ordering” (33), he also proposed a revision of our view of technology. He suggested that we consider technology, over its historical course, as part of a larger process of human “bringing-forth,” of revealing the nature of what it is to be human. “There was a time,” he noted,

when it was not technology alone that bore the name *techné*. Once that revealing which brings forth truth into splendor of radiant appearance was also called *techné*.

Once there was a time when the bringing-forth of the true into the beautiful was called *techné*. And *poiesis* of the fine arts was also called *techné*.” (34)

Thus Heidegger puts a book of poetry and a silver chalice on the same patch of ground where a flower might bloom and asks that we consider each an object that is subject to forming by human beings and also capable, in turn, of forming us. We are both shapers and shaped. Thus the poem, the chalice, and, yes, the tractor are all part of a long process by which human nature is revealed to us. Most technologists agree with such an expanded landscape for investigations of technology, though, I would argue, many who travel under such a moniker rarely stray from the comfortable climes that computers require and thus they limit their investigations of technology in a different fashion. Luckily for us, today’s tractors have enclosed cabs, and if we allow ourselves a moment to slow down to plow, there is the off chance that we might discover something on this particular landscape, the landscape of rows and fence lines, that will reveal something about the larger domain of technology that could be useful to us. As long as we find ourselves on this expanded landscape for technology with a silver chalice in our hands, I would like to tell the story of another metal vessel, a very peculiar object whose name obscures as much as it reveals and whose very form boggles most minds that behold it. My goal in doing so is to get at the mind behind the object, the vessel of one kind that holds another and in pouring forth the form of the latter, bringing-forth in Heideggerian terms, it reveals the human imagination at work, and at home, on a landscape that larger public discourses have recently failed to imagine. The metal vessel under investigation here is the crawfish boat, a modern-looking thing with its metal hull and drive unit, hydraulic hoses and rams, and small-bore engine. All the metal is handcrafted in a small number of shops and barns dotted across the Louisiana landscape, and despite its rather homely appearance, it has a hidden virtue that reveals an openness to landscape ambiguities perhaps useful to our larger project of re-thinking the nature of technoculture: it can go on land and water. It was not any particular scholastic landscape that immediately drove me to my current work, though several formed important backdrops. Instead, the landscape on which the current project bloomed was in fact one where the landscape itself was in question. In the wake of Hurricanes Katrina and Rita, there ranged a variety of debates and discourses around the nation about the wisdom of rebuilding in the areas struck by the 2005 storms. It makes no sense, many argued, to build a city, especially a modern American city, on land so, well, not land. That is, much was made of New Orleans being below sea level, of it being built on swamp. The arguments might have renewed force and importance, but the assumptions about the nature of land, and what counts as land, have long been held about New Orleans and other parts of Louisiana: too little land, too much water, too much risk. On the second anniversary of the storms, reporting on the current state of things in New Orleans, a *National Geographic* article led off with:

The *sinking city* faces *rising seas* and *stronger hurricanes*, protected only by *dwindling wetlands* and *flawed levees*. Yet people are trickling back to the place they call home, *rebuilding in harm’s way*. (Bourne 33; emphases in the original)

Those five adjective-noun pairs — “sinking city,” “rising seas” — build to a kind of apocalyptic inevitability. The contradictory nature of the gerunds — first “sinking” and “rising” and then “dwindling” and “rebuilding” — underlines the absurdity of living on, or in, an ambiguous landscape. The nouns tell much the same story: city, seas, hurricanes, wetlands. Given such a description, who in their right mind would continue to dwell in such a place, on such a landscape? The extent and nature of such remarks revealed that something had to be done to understand the nature of the resident imagination that seemed either completely disconnected with reality or understood reality fundamentally differently. If that difference could be bridged, then it might be possible to bring the two lands together, to communicate from the smaller landscape to the larger one how it is the former conceives of place. Taking Heidegger's assessment that all forms of *techné* are potential modes of revealing, I found myself focusing on the one artifact that seemed to compress within its very form and function what needed to be carried across the divide, and it just so happened that the artifact itself could drive across. Because it helps not only to see the things themselves, which speak readily to their own genius, and to see the landscape on which they operate, what follows is an argument by illustrations.

A Technological Landscape

Figure 1: A rice field in late winter.

The Louisiana landscape can be a confusing one to behold. Returning to Louisiana in the 1980s to film an episode of his *American Patchwork* series, folklorist Alan Lomax kept calling the landscape he passed through as he traveled the two-lane highways between Mamou and Eunice marshes. There are, in fact, a few marshes sprinkled about the area, but they are small and infrequent. Instead, what Lomax found himself walking on was the northernmost portion of the West Gulf Coastal Plain, which runs from the Texas-Mexico border to the Mississippi River. The land was once prairies of tall grass stretching only broken by tree-lined bayous.

These prairies could not have been more stereotypically American if they had been captured on film by John Ford: Louisiana's prairies were first settled by Cajuns, who ranched it extensively, replacing the native buffalo with European cattle. In some cases, especially along the coasts, they practiced a tradition they had brought with

ISSN 1938-0526

them of building levees around marshy land made marginal by saltwater intrusion and draining the fields off when they were flooded by rain. This practice of reclaiming marsh land for grazing by cattle continues to this day.

Figure 2: An open riser floods a rice field.

The real agricultural revolution came to Louisiana with the third wave of German settlement toward the end of the nineteenth century and the realization that the thin top soil, with a firm clay pan beneath, and relatively flat land could be turned to advantage by flooding it for rice cultivation. Rice is water tolerant and flooding the fields in which it is planted is an effective form of weed and pest control. Between the two systems of land use, draining a field to graze cattle on it or flooding a field to cultivate rice, the operative pairing in south Louisiana is not wetland or dry land but whether you are “pumping on” or “pumping off.”

Figure 3: A rice field flooded up in late winter in preparation for being leveled.

ISSN 1938-0526

Water is managed by pumping into an established network of levees which, in the rice producing prairies, sway and arc across fields. The levees manage the gentle landscape of the prairies, which have gentle drops of only tens of feet over a mile or more. There are a few places where one can glimpse the terracing that is, quite literally, all around, but for the most part it appears to the casual observer as simply a series of ponds. When the rice is high, the levees practically disappear and only a trained eye noticing the difference in vegetation textures can discern them.

Figure 4: Detail of a rice field levee drain.

The levees are “pulled up” in the fall, usually after soybeans have been harvested, and they divide fields into a series of “cuts” within which a farmer either seeds rice or crawfish. The cuts are imagined as a series, moving water from the highest point to the lowest point. The goal is to limit the difference between the high side of a cut and the low side to being less than an inch. Despite what some may think about abuse of water or the spill off of agricultural chemicals, farmers do not like to pump a single gallon more of water than they have to nor do they want to lose one ounce of any pesticide, herbicide, or fertilizer they have applied. In both cases, it is money lost.

Figure 5: The view from the cab of a combine harvesting rice.

ISSN 1938-0526

By late July, the rice turns a golden color and the levees re-emerge as striking, bold green lines. All the drains and curtains are pulled and farmers hope for a few dry weeks so that they can put combines in the fields to harvest the rice. Farmers generally prefer that the ground either be fairly dry or “sloppy wet.” In both cases, it is easy to get a combine through a field. The worst case is when the topsoil appears to be relatively firm and can be easily walked upon or driven upon by light gear like a pickup truck but sticks to the wheels of a combine as it tries to ply its way through the thick mud. It makes the large vehicles hard to steer, causing them occasionally to slip off course, and the engine has to be run that much harder to make it through each pass. Under such conditions, it can take more time, which is sometimes not all that available, and it takes more fuel to complete a harvest, both of which are costly.

Hydraulic Machines for an Hydraulic Landscape

Figure 6: A combine makes its way through a rice field, returning the chaff as it goes.

In some way, hydraulics is at the center of this history. Pumping water onto fields, pumping it off. Pulling levees up to hold water and plant rice. Pulling them down for better drainage for soybeans. Certainly one dimension of hydraulics is simply about moving water around. Another dimension is the pooling and channeling of water into canals so that it will power machines: water’s motion is converted into energy. There are no water wheels in south Louisiana; its relatively short topography does not provide on a regular basis the kind of pressure behind water flows that produces reliable power.

And, to be honest, water under pressure is a poor transmitter of energy anyway. It transforms too readily from one state to another: apply too much pressure and it turns to steam. It certainly doesn’t help that water and steel, the chief structural material of our time, also have a rather tempestuous relationship: the iron in the steel is all too happy to pass its electrons to the oxygen in water and become ferrous oxide, more commonly known as rust. Because of this, almost all modern devices use some form of oil in their hydraulic systems. Hydraulic machinery is, of course, all around us. Almost any time heavy-lifting needs to get done over a relatively short distance, it will get done by a hydraulic piston, sometimes also called a ram. You see such rams raising and lowering the blades of bulldozers, powering the movements of back hoes, raising the arms of garbage trucks. They are the hidden power behind most elevators — contrary to popular belief, wires and winches are usually reserved for buildings of five floors or more.

If you were to walk around a combine, the first thing that would strike you is its massive front wheels, which are taller than your head and so thick that were you try to hug a tire and reach for the rim, you would probably not be able to do so. Big tires for a big machine that gets heavier as it moves around a field, gulping great draughts of grain as it goes. Surely there must be a huge engine driving a massive transmission to drive such a hungry beast. There is, but it is ten feet up in the air. And there is no transmission of the kind we find on cars and trucks, and even on other tractors. Instead, the engine drives a pump which feeds the hydraulic motor that drives the wheels. (For those unfamiliar with hydraulic motors, simply imagine a turbine driven by oil instead of steam.) Hydraulic machines for an hydraulic landscape.

Hydraulic connections abound, too, on most tractors, powering front-end loaders, back hoes, as well as the great variety of equipment farmers pull behind them — harrowers, cultivators, plows, almost all of which have “wings” that are lifted when the unit is moved from one field to another or has to pass down a two-lane highway but then lowered when it is time to get to work. Indeed, when it is time to get to work, the device is usually lowered by raising the transport wheels up into the carriage, somewhat like landing gear being raised up into an aircraft. All of this raising and lowering, digging and smoothing, is guided by hydraulics.

A substantial advantage to hydraulic systems is that they are closed: all oil pumped out to a piston or motor is driven back by leftover pressure into an oil reservoir from which the pump will draw when more work needs to be done. In order to do that work, the oil is pumped put under a great deal of pressure, which means the seals that keep the system closed must be extremely rugged and operate with reasonably small tolerances. A leak means a loss of power, as well as a loss of the very thing that conveys that power. It is the sealed nature of the system that brings us to the advent of the crawfish boat.

Water is the enemy of steel, but corrosion is a slow enemy. Abrasion is much faster, and grit comes in many forms. Most commonly it can be found in the small particles of clay or sand that are the inorganic constituents of top soil. It can be picked up by the wind as a plow works the ground or churned up in water, but no matter how it rises up, it finds its way into every open crevice or hole until it manages to get trapped somewhere. If nothing is moving, then all it does it build up. But if movement is involved, then failure of some part is inevitable, if only through the slow careful grinding of one piece of grit on one small spot.

Every maker of machines know this and everyone who maintains machines know it as well. In rice country, with grit being both airborne and waterborne, every farmer knows it all too well. What is needed are incredibly small tolerances between pieces of a machine to keep the grit out, the kinds of precision required of hydraulic systems. It was thus inevitable that hydraulics would find their way onto a vehicle that was slowly emerging onto the landscape, the crawfish boat.

The Rise of the Crawfish Boat

As the commercial market for crawfish expanded through the 1970s, it became increasingly clear that there was room for more producers. The market had been dominated by crawfish trapped in natural habitats like the Atchafalaya Basin, but as the decade wore on, more and more farm land was being turned to crawfish production, either full-time or seasonally. All a landholder had to do was either not drain a field after the autumnal rainy season or flood it back up after rice harvest — strategies varied depending on extant land use. Some fields could produce a crawfish "crop" all on their own: the animals are indigenous to Louisiana and practically omnipresent in any wetland area as well as those regions adjacent to wetlands. They live readily in roadside ditches and near the many irrigation canals and coulees that form an almost continuous web of water across the Louisiana landscape. If crawfish do not simply turn up by simply holding water on the land, then they are easily seeded.

Unfortunately for farmers, rice fields are not like swamps, which usually have channels through which one can run a boat with a conventional outboard motor. Rice fields are, as described above, wide, flat, and very shallow. They are perfect for placing traps

ISSN 1938-0526

throughout the entire field, but walking in a flooded field is a tiresome affair, as one's booted feet plunge not only into water but several inches of sticky mud. Farmers had to content themselves with working the edge of the fields, placing traps around the perimeter and accessing those traps by walking along the rice levees with a five-gallon bucket, or two, in hand. Their routine was to empty traps the traps into one bucket and then rebait the traps from the other bucket, returning to a provision point when either the crawfish bucket was full or the bait bucket was empty.

But everyone could see all that unused area in the middle of the pond, just begging for traps to be placed in it. A few hardy individuals put some traps down and worked their fields by pulling washtubs or childrens' wading pools behind them: if it floated and could hold crawfish reliably, it was worth trying. Some truly hardy individuals pulled or pushed john boats, light aluminum-hulled scows sold widely and cheaply through the U.S.A. for use as fishing boats, through the fields — there are even photographs of one farmer who hitched his boat to a horse.

As productivity in these fields rose and demands for a commercial crop rose, there was clearly a need for a way to move more easily and more quickly through the traps. Normal outboard motors simply could not operate in the shallow waters of flooded rice fields. A few farmers tried the newly-manufactured Go Devils — in the larger project I also document the invention of what is now called the surface-drive motor — but they proved hard to use in a field application. What everyone wanted was a machine that would walk its way through the field at something like a man's pace.

As luck would have it, the very first idea was the right one, but its appearance would spur a period of wild creativity in which any number of possibilities were tried out. Some took lawn tillers and hung them off boats; others built custom gear reductions or used a system of belts and pulleys in an attempt to take the high RPM of most small bore engines and tie them to some sort of steel driving wheel. But everyone was essentially trying to replicate what Ted Habetz and Harold Benoit had simultaneously arrived at as the solution, though Habetz was the first to demonstrate the power of the idea.

Habetz's boat premiered in the fall of 1982, at a field day hosted by Louis Kramer. The day was designed to mimic those held by local agricultural centers which had not yet turned their attention to the growing interest in commercial crawfish production. Kramer was someone who always kept the big picture in mind and so he was simultaneously interested in growing the market for crawfish while making sure to attend to expanding local production capacity. Kramer had invited folks to come out to talk and compare notes. His plan was to have Amos Roy of Beaumont, Texas demonstrate a harvesting machine. And certainly the buggy that looked a bit like the lunar land rover set down in the middle of a muddy Louisiana rice field got people talking, but it appears to have been eclipsed that day by a johnboat-come-lately that was built by Tedmon Habetz, who wasn't entirely sure what he had just gotten himself into.

The Habetzes are a German family from “the Cove” as Roberts Cove is known among its denizens, but Ted Habetz did not grow there. Instead, his father farmed near Loreauville, which is something of a center for boatbuilding in south Louisiana. It is the home of a number of boatyards, none of which have anything to do with the current story — though it is interesting to note that neither the crawfish boat nor the surface-drive motor were produced by dedicated boat builders. Habetz’s role as the man credited with inventing the modern crawfish boat began in 1964, when his father decided to drain one of his fields that had been flooded by Hurricane Hilda, which perhaps hammers home better than any analytical flourish the idea that Louisiana natives understand the landscape differently. His father started crawfishing it. As far as I know, the Habetz family crawfished it like everyone else, using set traps and working from lightweight john boats pulled or pushed through the water.

Some time just before Louis Cramer’s field day, Habetz’ brother Bruno built an eighteen-foot boat. It was pulled through the water by a spoked wheel turned by a worm drive pulled from a combine. Ted Habetz built a somewhat smaller boat with a chain drive. On the day of the demonstration by Amos Roy of his crawfish buggy, Harold Benoit remembers seeing what he called “the first combine that anybody had ever seen.” At some point Habetz must have switched the boat over to hydraulics, because, admiring what Habetz had done, Benoit turned to his friend Lawrence Adams and said, “Look, it’s my boat.”

Working entirely independently, Benoit had arrived at much the same conclusion as Habetz, though he had not yet figured out how to get his boat down to a workable speed. As soon as he had done so, a number of friends and acquaintances immediately pressed him into making them boats, just as Habetz found himself founding Crawfish Combines, Incorporated, which would go on to make three hundred boats over the next ten years.

Neither Benoit nor Habetz intended to become manufacturers of crawfish boats, but a revolution had begun and they found themselves reluctant leaders, or at least suppliers. Over the next two decades, others joined them. Some were welders, like Greg Frugé of Eunice and Clayton Courville of Kaplan. Others were fabricators like Kurt Venable of Rayne and Mike Richard of Richie. Others were agricultural equipment makers and/or repairmen like Gerard Olinger of Robert’s Cove or Jimmy Abshire of Kaplan. And thanks to vocational agriculture programs still active in area high schools, a large percentage of farmers were able to weld together the necessary parts to turn a fishing boat into a crawfish boat. Within a few years, it became a common sight to see a farmer sitting in a boat being pulled by its own front-wheel drive.

But almost all modern crawfish boats, however, are rear-wheel drive, a change that occurred around 1985 when one maker, Gerard Olinger, responded to increasing complaints by farmers about the difficulties they were having crossing levees with the front-wheel drive boats. The problem was twofold: first, most of the boats were using fairly lightweight engines and wheels, in part to keep costs down because no one was sure if anyone would pay more, and, second, there is the impossibility of the physics of pulling a boat across a levee from a wheel attached to its bow as that same bow noses up into the air. There is just not much traction on air. A lot of farmers had working solutions, but they mostly involved driving a post in at a crossing point and winching the boat across.

Working with a farmer, and friend, Jerry Heinen, Olinger put the driving wheel in the back of the boat, creating a boat that could crawl over levees. Unfortunately, the power delivered to the rear of the boat crushed the lightweight johnboat hulls everyone had been using. Olinger's solution was to build hulls himself of a similar size as the commercial ones, but made of thicker aluminum sheets and with much more bracing. The durability of the custom hulls combined with the ease of use of the rear-wheel-drive boats proved popular. In part, they were popular because farmers were driving the boats faster, covering more ground in a day, making more money. Driving fast in a boat which sat a little low in the back thanks to the drive unit wasn't a problem: the bow of any scow will tend to push up a little bit as speed increases. Turning fast proved to be something of a problem: water was slipping over the top of the boat's side at the back of the boat. Olinger's initial solution was simply to raise the sides of the boat at the back. His more enduring solution was to widen the boat to make the boat more stable and more buoyant, and thus less prone to swamping.

It wasn't long before he and fellow boat makers like Mike Richard and Kurt Venable took advantage of their custom handwork to build hulls better suited to the task, and so they used wider sheets of aluminum to build five- and six-foot wide boats that could carry more crawfish and had greater stability while being pushed through the water.

The Form

There were more innovations to come, as will be discussed below, but with this one revision, the moving of the driving wheel from the front of the boat to the back, the basic form of the crawfish boat was established. This was the form that Mike Richard used when he began building boats in the late eighties and the one that Kurt Venable adopted when he began building in the early nineties. Between the two of them, they have become the most prolific of the builders. Richard produces on average two dozen boats a year. Venable slowly ratcheted up production and he now regularly turns out seventy boats a year.

But what is a crawfish boat? How to describe an object that seems like something imagined by Rube Goldberg? It is clearly a boat, and yet it did not arise out of a maritime tradition. It is a boat made by farmers and metal workers who refer to the bow as the front and the stern as the back. With the exception of Venable — who used an entire vacation to study traditional boat building — none of these men have any interest in boats apart from getting in one to go fishing. And some not even that.

ISSN 1938-0526

Still, the crawfish boat is undeniably a boat, and any account of it would be remiss if it did not take up the boat portion of the vessel, which is, in form, a scow with a square bow and transom. While the transom stretches across the entire width of the boat, there is typically about a foot of taper from the standard width of the boat to the tip of the bow: five-foot wide boats taper to four feet at the bow, six-foot boats to five, or, in other words, about six inches on each side. The gentle curve up from the bottom of the hull to the bow typically stretches across the same three foot length as the narrowing taper, reducing the depth of the hull from eighteen inches just in front of the front wheels — more on these in a moment — to three inches at the nose. At the stern, the transom is vertical for the top two-thirds and then breaks between six and ten inches from the bottom to rake forward. This cut to the transom keeps the rear edge of the boat from digging into the earth like a bulldozer blade as the boat portages from one field to another.

Early boats by Olinger had a few thwarts along the bottom of the hull or, at least a few braces. Venable maintains thwarts in some fashion with his use of small, one inch by two inch, aluminum I-beams that run across as well as fore and aft in his boats to strengthen and rigidify his hulls. The structural network is hidden by plywood sheets that become the boat's deck. Both Richard and Olinger prefer an open plan, depending upon the steel bench that holds the engine and the operator and which sits athwart the hull a few feet ahead of the transom as the principle lateral bracing. The sides of the boats flare only a little, a few inches of difference between the edge of the bottom sheet of aluminum and the edge of the gunwale rail that all the builders use to cap the narrow sheet of aluminum that is welded on edge to the bottom sheet.

The hull is thus made up of only a few sheets of aluminum, a five by fifteen foot sheet that lays flat starting at the transom until it curves up to the bow. On top of that is welded two fourteen foot long by eighteen inch high sides, which taper at one end to help form the scow bow. The transom is the width of the boat and a little bit taller than the sides when it is first, in order to accommodate its forty-five degree bend. The final principle piece of aluminum sheet is the bow deck, which is attached to both the tip of the bottom hull sheet as well as the side sheets, wrapping back to form the boat's nose and giving the bow structural stability and strength.

All this strength is required of a vessel that essentially regularly crashes into a levee, bellies onto and over it through sheer force of will, and then heaves itself from its beached state into the next field. To do so requires a great deal of power and an extremely robust, and yet at the same time incredibly articulate, channel for that power. Every modern crawfish boat has a steel arm which holds in its grasp a cleated steel wheel. The arm is hinged to move up and down, in order to allow the wheel may float, in the mechanical sense of that term, so that it may find the bottom of a flooded rice field but later swing up, in relation to the thrust line of the boat, when the hull angles up over the levee. The arm must swing down again as the boat clears the levee but the arm itself has not. It is usually at this moment that the operator uses a hydraulic ram to push the arm down to force the wheel to have traction. Another ram swings the boat from side to side, but how that turn is accomplished varies from maker to maker. All the arms are about, on average, about six feet long and hold wheels that are anywhere from two and a half feet to three feet in diameter. Mike Richard's arms are hinged at the very back of the boat; Gerard Olinger's arms are hinged just ahead of the fork that holds his twinned wheels; and Kurt Venable's rams turn the wheel itself. While both Olinger and Venable use rectangular tubing to fabricate the arms of their drive units, Richard uses three-quarter inch thick flat steel bent somewhat like a P not only to put the wheel on center with the arm itself but also to give the flat bar greater rigidity to prevent it from twisting.

The hull is a big aluminum box to which is attached the steel drive unit. The problem for each builder is that the drive unit is so powerful it is quite capable of taking the hull and crumpling it much like you or I might fold up aluminum foil after unwrapping last year's fruitcake. The marriage of the two parts is further fraught because aluminum and steel cannot be cemented to each other through welding but must be accomplished through some other arrangement, usually bolting. Both Richard and Olinger use braces; Venable has cleverly adopted the use of a pod, an aluminum box welded into the structure of the hull itself and onto which he bolts his drive unit.

All of this engineering is required in order to accommodate the demand placed on the boats to be able to power through any situation, which in almost all cases involves muddy water and muddy land and quite often someone trying to get the job done as quickly as possible, since crawfish season begins in winter, when there is a great deal of wind that only picks up more of a cutting edge as it races across mile after mile of cold, flooded fields.

All the boats are powered by small-bore engines running at a high, fixed RPM. The two engine makers who dominate this particular market are Kohler and Honda, though Yamaha, Vanguard, and Kawasaki are popular elsewhere in the region and are regularly used in surface-drive boats. The engines drive a pump which simultaneously feeds three hydraulic circuits: the drive wheel, the steering ram, and the ram that raises and lowers the drive arm. The operator of the boat sits in the rear on the right-hand side and controls each of these three circuits by operating a collection of valves. Immediately in front of the operator is a sorting table onto which he, or she, dumps the contents of a crawfish trap. He then simultaneously sorts the keepable animals into sacks hanging off the table, dumping out those not worth keeping as well any debris in the trap, and then rebaits the trap all in time to stick it in the ground right next to the next trap, which he then plucks out of the water. He does all this while operating a set of rocker pedals at his feet which steer the boat left or right through the field. Steering is an important part of the rear-wheel drive boats: when the drive wheel is in front, the boat simply follows. When the drive wheel is in back, the boat is always seeking a direction and must be more actively steered.

The cleated steel wheel at the end of the steel drive arm has been a part of the crawfish boat since its inception in 1983. The size and the width of the rim as well as the number and placement of the cleats, as well as the angle at which the cleats are affixed to the rim, have changed over the twenty-five years of active production, with each maker staking out certain ideas as their own, which may or may not be adopted by others. One example is illustrative and recent here and serves as well to recall a point made earlier in this essay about the matter of abrasion and wear on metal parts.

While the cleats, affixed as they are as normals to the wheel's circle, appear more like paddles, they are best thought of as treads, and in some ways they are more clearly related to the old steel tires that were once used on tractors — sometimes called locally moon tires, perhaps in reference to the steel tires that made it possible for the lunar rover to navigate the thick dust of the moon's landscape. Because the entire drive unit is hinged so that the wheel will drop to the bottom of a field the cleats are as pronounced as they are in order to give the boat traction through the soupy mud that lies there. As the cleats push along, they are ground down by the sand and clay grit in the mud, and in some areas it is not unusual for a three-inch tall cleat, typically made of one-quarter inch thick steel plate which has been cut into a rectangular shape and then welded directly onto the rim, to be worn down to a one-inch nub within a few years. Such wear results in the wheel being brought back to a maker for repair, which means the old cleats must either be cut off with an acetylene torch so that new ones can be welded on or they must be cleaned up enough so that the new cleats can be welded onto the old ones. One maker, Kurt Venable, grew tired of the constant repair work and decided to weld a length of steel rod along the entire width of his cleats. It worked. More importantly, not only did it reduce the wear on the cleats, it also gave the wheel better traction and, many farmers felt, it lessened the damage the wheels did to fields. (Every trough that a boat makes in a field is one that will be felt later on a tractor when the field is drained and plowed for rice.)

Fluid Imaginations

Venable's innovation was quickly adopted by others. In the same way that everyone quickly embraced Olinger's idea of equipping boats with front wheels. Like Venable's later innovation, Olinger was in search of a solution to a problem he was facing: farmers were wearing out the hulls of their boats all too quickly. One farmer after another would bring in a boat whose hull needed patching. He finally asked and learned that what they were doing was driving their boats from one field to another, instead of, as had been the practice, of trailering them. Sometimes they even drove their boats down a gravel or paved road. His response was simple: "I thought as long as they were going down the road, they might as well have wheels."

To Olinger, the idea was simply a reponse, but the effect in 1985 was to turn the crawfish boat into a full-fledged amphibious vehicle. As the boats matured during this time, so did the business of making boats, always with about a half dozen builders actively producing craft. The first two, Benoit and Habetz, eventually left the business, and others, like Greg Frugé and Clayton Courville, manufactured for a time and then left the field to do other things. The current makers are Kurt Venable of Rayne, Mike

Richard of Eunice, Dale Hughes of Jennings, and Michael Quirk of LeBeau. Henry Cormier and his sons always build a few extra boats each year to sell to neighbors and acquaintances. Gerard Olinger makes the occasional boat and does a lot of maintenance or upgrading of boats. All the men are familiar with the work of the others.

With a stable form and individual innovations often quickly adopted by others, it would seem that all the boats must surely look alike, and perhaps to an outside eye they do. But to eyes adjusted to the landscape and adapted to seeing the differences that matter as well as the commonalities that bind everyone together, each boat readily reveals its maker, barring any complications.

Perhaps the place where each maker’s signature is most clear is in the drive unit itself. Gerard Olinger has long preferred two wheels permanently welded into pairs and driven by two hydraulic motors. The steel arm of his drives slopes gentle up to a hinge point that comes just ahead of the fork that holds the two wheels from the side. Such a hinge placement means that his boats turn differently than Mike Richard’s boats, whose drive arms hinge right at the back of the boat and hold a single, massive steel wheel that is driven by a single hydraulic motor. Richard feels confident that this is sufficient power for his boats, which are clearly designed to be much lighter in weight and more flexible in structure than those of Venable, who incorporates a significant number of structural elements in his hull design, which is in turn driven by a single wheel, driven by two motors. A Venable boat turns at the wheel, which is held in place by a vertical fork that comes from above thanks to a z-bar drive arm. Hughes models his boats after Venable, and Quirk models his after Richard. All of these are different from a Cormier boat or a Courville boat, as well as those boats made by the Abshires.

There are relatively few secrets — a few manufacturing secrets here and there that each man closely guards — because everything there is to know is in a boat. Every hard won idea must manifest itself in steel or aluminum where it is available for all to see, analyze, and judge. And there is almost no end to the discussion of who makes a better boat or whose boat is best suited for which soil or terrain type. The makers themselves are judged for the quality of their boats or their willingness to customize a boat or their willingness to repair a boat or modify a boat made by someone else.

The crawfish boat is the *nonpareil* of an imagination that is not anxious about the transmutation of land and water. If, for the rest of us, there is some lingering concern about contamination, that land made wet cannot ever be trusted as land again, then the people living in south Louisiana do not share it. Wetlands are drained. Prairies are flooded. And then drained. And then flooded again. A rolling landscape is terraced to hold rice and crawfish and low-lying fields are leveed to graze cattle.

Works Cited

Bourne, Joel K. "New Orleans." *National Geographic* 212.2 (2007): 32-67. *Academic Search Complete*. EBSCO. Web. 26 Aug. 2011.

Heidegger, Martin. "The Question Concerning Technology." *The Question Concerning Technology and Other Essays*. Tr. and with an Introduction by William Lovett. New York: Harper and Row, 1977.

John Laudun has published regionally, nationally, and internationally on a variety of topics having to do with folklore and its uses both in present as well as in understanding the past. He has examined the role of history-telling and talk in a Midwestern community, the uses of African American folklore both in lived experience as well as in literary texts, the use of space by urban Appalachians, what it means to use folklife materials in elementary and secondary classrooms as well as the uses, and abuses, of Louisiana foodways. His scholarly work has appeared in journals (including *African American Review*, *Journal of American Folklore*, and *Louisiana Folklore Miscellany*) as well as anthologies. He has served as a consultant on a number of public and private projects, was awarded grants by both private and public foundations (including the National Academy of Recording Arts and Sciences and the Louisiana Board of Regents). He has produced CDs and directed a television series on folklife. His book on creativity was chosen to be part of the Mellon Foundation's *Folklore Studies in a Multicultural World* series and will be published next year by the University Press of Mississippi.

Technoculture Volume 1 (2011)