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# The *C*EVOLUTION

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Acne may result from inaccurate self-reporting  
— and be cured by good semantics.

## Language, Thought, & Disease

by *W. C. Ellerbroek, M.D.*

# Clunker Bikes

The Dirt Bicycle Comes of Age

BY RICHARD NILSEN



Photographs by Michael Castelli

In Marin County, California, a combination of recycled bicycle parts, human ingenuity, and a network of hilly dirt fire trails has produced a new kind of bicycle and a new sport.

The basic component, the heavy-framed, 26-inch balloon-tired "paper boy bike" has been a familiar sight in America ever since 1933, the year Ignatz Schwinn introduced the balloon tire from Germany as a sales gimmick to imitate automobile tires and hopefully save the bicycle industry from the nosedive it had been in since the advent of the motorcar.

Balloon-tired bicycles remained popular through the late 40's, when a medium-sized tire began to gain popularity. These gave way in the early 50's to English 3-speed bikes with smaller tires, and by the late 50's the move was on to the even smaller-tired, lightweight European racing bikes. Continuously improving roads made these changes both possible and practical.

So by the late 60's, the balloon-tired bicycle was clearly in the category of a forgotten relic waiting to be found. The finders, at least in Marin County, tended to be escapist hippies looking for the cheapest and easiest way to get to the local woods. They were cheap because in those days they could be found by scrounging at the local dump, and they were practical because they were so ugly no one would want to rip off your bicycle; ergo, forget locks, chains and paranoia.

They were and still are called by many names: junkers, clunkers, trashmobiles, bombers, ballooners, cruisers. The classic price for one around 1970 was \$5.00. Gradually the term clunker began to prevail, and became a verb as well as a noun: "You want to go clunking today? We went on a good clunk yesterday."

A revolutionary moment in this history occurred three or four years ago, when Gary Fisher got the idea of putting a ten-speed derailleur assembly on a balloon-tired bicycle. (Gary, who is acknowledged in these parts as being the first person to create such a hybrid, is a lightweight bicycle road racer, who also

happens to hold the record time on the local clunker downhill race course, the Repack.) It took some fiddling, of course, European dimensions vs. American, but when it was finished, the result was a bicycle that not only would roll down the hilly dirt trails; it could also be pedalled back up them. It could be ridden over deer and cow trails, and unlike dirt motorcycles, it could easily be carried over fallen logs and gullies. And it was quiet!

The potential of clunker bicycles has scarcely been explored. I have the distinct feeling that someone, somewhere else in the world must have hit upon this same combination of rugged frame, big tires and many gears. Perhaps the Chinese have millions of them. In Marin County today they are used primarily as suburban recreational vehicles, though a few owners are using them as a means of not having to own and maintain a car. But in forgotten rural America, where there are too few people to create much of a market for anything, clunker bicycles have a real future as everyday basic transportation. Anywhere that the roads are "too bad for bicycles," a clunker now offers an alternative.

As their popularity increased, the \$5 clunker became the \$25 clunker. In the trial and error of off-road use, virtually every part of the bicycle that could be broken was broken: seat posts, brakes, front forks, handlebars, gears, crank arms, rims. Subtle design changes and a desire for rugged replacement parts resulted. By now, bicycle shops and junk-yards in Northern California and a good part of Oregon have been scoured for old parts. With the bicycle industry today concentrating on lightweight racing bikes, and 20-inch banana-seat "motocross" bikes for little kids, new parts for clunkers just aren't made anymore; or if they are made, the quality is often inferior.

In 1965, Schwinn stopped making its heavyweight frames entirely, and the quality and workmanship on the older frames is far superior. A 40's Schwinn frame is therefore better than one from the 50's, and if you have one from the 30's, you now own a bicycle



**DOWNHILL CITY** Charlie Kelly demonstrates an urban application of his "cataclysm cruiser." "I call my bike that because anyone with a clunker who survives a major disaster will be mobile — even if little else is." The pedestrian who looks at this picture and says, "Cars and motorcycles are bad enough, but now this!" has a point. Though all of the riders pictured here are conscious of the impact they can have on hikers and pedestrians (Kelly uses his clunker primarily as a means of getting away from people on back country trails), the fact

remains that in the hands of the wrong people these bicycles can become a menace, just like a rifle or a snowmobile. Clunker bike abuse currently centers around groups of high-school-age boys.

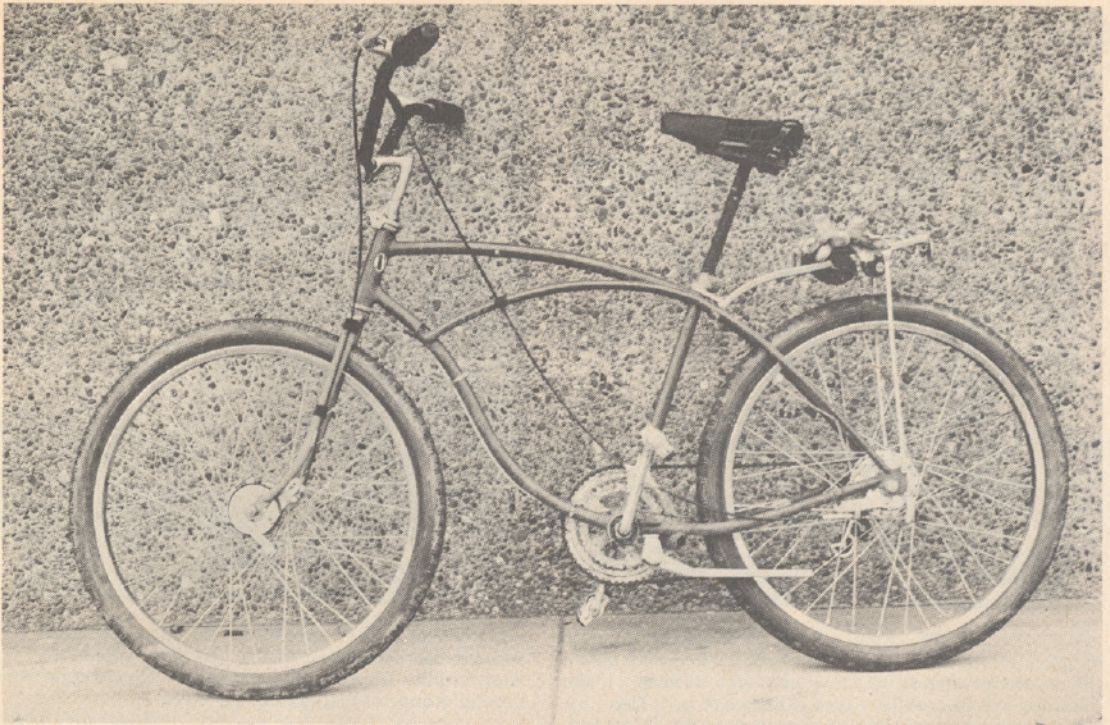
**DOWNHILL COUNTRY** Off the road a clunker bike is in its own element. Terrain that would destroy other bicycles becomes an enjoyable challenge. It is even possible to ride down, not just across, a dry creek bed on a clunker.



**DOWNHILL AND DOWN** A Repack racer just before he puts his bike down on one of the blind, off-camber turns the course is famous for. Successful technique here is extremely delicate; much closer to skiing than to motorcycle racing. On a motorcycle, acceleration is used to power out of skids like this. Here the rider, if he wants to stay on the track, must brake on enter-

ing the curve and then do a controlled skid around the turn. The bike is in a classic skid position, with the front wheel still pointing downhill into the fall line, and the rear wheel sliding sideways around it. Note the rider's uphill leg used as a support — hand-operated brakes, instead of the more conventional foot-powered coaster

brakes, frees his leg to do this. Also notice the wide, reinforced handlebars, a stock part taken from a dirt motorcycle. The width here provides the racer with the leverage needed to hold the bike on the course at high speeds. On a narrow foot or deer trail, these wide handlebars tend to get snagged in the underbrush.



A TYPICAL CLUNKER bicycle in Marin County looks like this. The heavy-weight Schwinn frame came from a pile of old parts in the back of a bicycle shop and cost \$10. The wide, motorcycle style handlebars have a reinforcing bar for extra strength. They are a stock item built for the 20-inch bicycle motocross (BMX) bikes used by smaller kids. The rider's hands don't have to leave the handlebars, since both the brake and gear shift levers are mounted by the hand grips.

The ten-speed, derailleur gears used

here require free wheeling to shift gears; this makes it impossible to use the foot-operated coaster brakes this frame had originally. Instead, this clunker uses drum brakes front and rear, the same kind as on a car. The front brake hub is a Workman, the rear is an Adams. Drum brakes historically have been used only on tandem bicycles, and so they are extremely hard to find.

This clunker weighs 45 lbs., and sold recently for \$130. The price is low end for a clunker with 10 speeds and drum brakes, but is comparable to

the cheapest department store light-weight 10-speed available that would hold together. (The cheapest good quality lightweight racing bikes now cost around \$700.) One bike builder in Marin County has sold a dozen rebuilt clunkers in the past year in the \$325 price range. Due to the local demand, a dealer in the area now offers a modified 26-inch Schwinn balloon-tired bike for \$245. For that you get all new parts that include drum brakes front and rear, ten-speed gears, and a modern (less durable) Schwinn frame.



A straight stretch mid-way on the Repack downhill race course. The track is a two-mile long dirt fire trail with a vertical drop of 1,200 feet. When the riders passed the camera they were doing close to 35 mph. In an actual race the contestants are separated to avoid collisions; a timer at the top starts one racer every two minutes. The environmental impact from the bikes on the trail is a continuous one-inch deep groove the width of a bicycle tire, which traces the fall line of the track, and some loose dirt on the curves. On a race day, contestants begin by walking up the course to clear it of rocks.

worth locking up. Other makes of sought after old frames include Shelbys and Columbias.

With these changes, some of the early pioneers began to call their creations by other names. "To refer to a \$300 bicycle as a 'clunker' is a contradiction in terms," says Joe Breeze, who calls his radically designed, homemade bicycle a balloon.

Popularity has also brought abuses. Clunker bicycles on narrow dirt trails are not particularly compatible with either hikers or horses. Many clunker bikers don't ride on weekends just for this reason, or else choose trails where they are less likely to encounter people. But how to explain these fine points of user responsibility to a group of 16-year-old clunker enthusiasts is an unanswered question. Andrea Sharp, the CQ office manager, has had to leap off of hiking trails in Marin to escape an oncoming pack of clunker riders. She says they are *worse* than dirt motorcycles, because they give you no warning of their approach.

The advantages of a clunker on dirt become disadvantages on pavement. The heavy frame is that much more mass to move, and the big balloon tires have a



Joe Breeze, a local lightweight ten-speed racer, designed and built this bicycle, which he calls his "ballooner." It embodies the current STATE-OF-THE-ART in clunker design. Modelled after a Schwinn Excelsior X, the curving Schwinn frame has been reduced to a cluster of straight-sided triangles.

The frame is of 1-1/8 inch diameter "4130" chromium-moly steel tubing, brazed with low temperature bronze solder. This tubing is nearly twice as strong, and weighs much less than the 1-inch diameter mild steel used in the old Schwinn frames. The longest diagonal tube is actually two tubes, one to each side of the rear hub. These 5/8-inch twin laterals are an important design feature, since they prevent both lateral and torsional flexing of the frame, which under racing conditions can be severe.

Broken seat posts have been a recurrent problem during races. The post here is stronger because of the larger diameter tubing, and because the frame design shortens the length of the post. The quick-release seat post

clamp used is no longer available, not because it is old, but because the U.S. Consumer Products Safety Commission considers the protrusion lever hazardous. Joe Breeze is irate about this form of governmental interference. "For example," he says, "Campagnolo, by far the most respected Italian parts manufacturer, has been forced to modify many of its designs to meet with CPSC approval." The seat is a Brooks B-72, extra wide for support on bumps, and "the only genuine leather seat available in its size."

The front forks of the frame are reinforced by a slender pair of fork braces. Chrome-moly motorcycle handlebars hold thumb shifters for the gears, and motorcycle brake levers. Rim brakes were chosen over drum brakes because they weigh about 4 lbs. less. They will not work as well in wet weather, but they are a cantilever design, and are brazed to the frame.

The sealed bearing bottom bracket is of European diameter, and is custom made in California. Sealed bearing hubs are also used. The crank arm,

pedals and derailleur transmission assembly are all stock items taken from ten speed road bikes.

The Schwinn mild steel 22-inch rims are rolled and stamped, and are of poor quality — it's hard to find a pair that are true. They are all that is available for balloon tires, though, until somebody starts manufacturing a superior cast aluminum alloy rim. Likewise the tires: manufactured by Carlyle Rubber and Tire, these 2.125 knobbys come in only one pattern for a 26-inch wheel. Breeze would prefer a tread with the knobs extending further around the sides of the tire for added traction. Spokes are 14 gauge.

Through careful selection of parts and materials, Breeze has kept the weight of this bicycle to 38 lbs., which compares favorably to the typical 45 - 50 lb. clunker. He estimates a production version of this bike would run \$650 - \$700, putting it in the same price class with European lightweight racing bicycles.

high rolling resistance. Those looking for a bicycle to use both on and off the pavement should consider an intermediate weight frame and a tire such as the 1.75 inch diameter size — smaller than a balloon tire, but larger than a racing tire.

Clunker bicycle racing is the third, and certainly the least-known about, kind of off-road bicycle racing. The oldest is European cyclo-cross racing. The bicycle here is a very refined, lightweight knobby-tired ten speed, the track length varies from 3/4 to 1-1/2 miles in length, with enough laps to make a 15 - 20 mile long race, that usually takes about an hour to run. From 30 to 40 racers compete together.

The catch is that there are as many as ten mounts and dismounts for obstacles in each lap — logs, gullies and mudholes. The trick is in being able to leap the obstacles on your bike, or else to dismount, run through the obstacle and remount, all without breaking stride. Needless to say, this sport requires great physical stamina.

The second and more recent off-road sport is called bicycle motocross, or BMX. Described as the largest two-wheeled sport in America, it is for kids too young to have licenses to ride motorcycles. It is largely supported by the motorcycle manufacturers as a not-too-subtle means of instilling product identification

in the minds of its future customers. Racers ride 20-inch, one-speed MXers in heats of 5 or 6 over quarter-to-half-mile manicured dirt tracks with jumps interspersed. The courses are very gentle, and no body training is required. These small 20-inch MX style bicycles can be seen lining the walls of any bike shop in America today.

Clunker bike racing as it is practiced in Marin County, is a downhill event, with each racer taking his or her turn against the clock — much like a downhill ski race. Other variations exist elsewhere (see box). The dirt course is two miles long and drops 1,200 feet. It is a fire road with numerous blind, off-camber hairpin turns. The best times have been turned in after rains, when the course is less dusty and better packed. Gary Fisher's track record of 4:22.14 was set in December of 1976. Any time under five minutes is considered good, since that time requires an *average* speed over the track in excess of 25 mph. Which means that if you are not braking and skidding through one of the turns, you have to be pedalling downhill like crazy.

The racers have the course memorized by heart, and with 100 foot maximum visibility and 200 foot stopping distances, it's easy to see why. "The Repack course kind of comes on like a recurring dream," says race organizer Charlie Kelly (he owns the synchronous timers). The course got its name from the old coaster brakes, which used to come smoking across the finish line and would have to be repacked with grease.

Clunkers are clearly capable of providing enough off-road versatility and thrills to entice a few dirt motorcycle riders to give up straddling a mechanical vibration and find out instead what warm leg muscles feel like. But since clunking does involve perspiration, the American male's love affair/addiction to the internal combustion engine — insofar as dirt motorcycles are concerned — will probably remain good to the very last drop of oil. ■



When this woman races in the Repack, she wears the gloves shown here, plus a long-sleeved shirt and pants. Almost none of the racers uses a helmet, though many wear knee and elbow pads. On this day, she was out taking pictures. For wildlife photography especially, clunkers are an ideal form of off-road transport, because they are quiet.

## CLUNKER BIKE RACES

### California

The Repack Downhill Clunker Race takes place about once a month, weather permitting, usually on Sunday mornings. Currently from 10 to 20 racers compete on the mountainside course just outside of Fairfax, California, a small town about 20 miles north of San Francisco. Race dates are announced by telephoning previous competitors. Newcomers and racers from outside Marin County are encouraged to compete. Contact Alan Bonds or Charlie Kelly at 32 Humbolt St., San Anselmo, CA 94960. Telephone (415) 454-4359.

### Colorado

Clunker biking in Colorado is centered in the small mountain resort town of Crested Butte, high in the Rocky Mountains south of Aspen. Balloon-tired bicycles are popular because there aren't many paved roads in town. There isn't even much dirt, but there are plenty of rocks. The technology is not as advanced as in California; single-gear, coaster-brake balloon-tired 26-inch Schwinn's are what most all clunker bikers use here.

With last winter's drought and no snow, things began to pale in this ski town, and so some bike races helped to alleviate the boredom. There was a beer slalom through the back alleys of town, with beer stops en route. There were sprints down the main street, and a distance jumping contest on pavement off a 2-foot high ramp. The record was 27 feet.

But the main event each year is the Crested Butte-Aspen-Pearl Pass Clunker Bike Race. This 40-mile, two-day overnight race leaves Crested Butte, climbs over 12,700-foot Pearl Pass, and descends into Aspen. The downhill thrills are earned after pushing your bike up much of a trail that follows a stream bed and crosses interminable scree slopes. Out-of-town contestants are most welcome, and heavy duty spokes and rims and a helmet are recommended.

The race takes place in early September. The first one was held in 1976. Last year's race had to be cancelled, ironically, due to the drought. Many of the racers belong to the local fire crew, and were out of town fighting forest fires during the month. Plans continue, however, for a race this year. For information, contact The Grubstake Saloon, Box 229, Crested Butte, CO 81224.