
The North American Handmade Bicycle Show 2005

by Jan Heine and Christophe Zider (photos by Christopher Zider)

On the weekend of January 15, 2005, the first North American Handmade Bicycle Show was organized in Houston. For two days, hundreds of cyclists from all over North America convened here to meet dozens of builders of handmade bicycles. There were some of the "old guard" of builders, such as Brian Baylis, Richard Sachs and Peter Weigle, as well as young builders working in steel, titanium and carbon fiber. Here are a few samples of the exhibits:



The bikes differed in style, design and execution. Clockwise from top left: ; Rock-Lobster with elaborate lugwork; organizer Don Walker's racing bike; Vanilla with couplers and fenders painted to match the frame; Crumpton offers custom carbon bikes; Peter Weigle showed a randonneur bike under construction.



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Round-Table Discussion With Frame Builders and Constructeurs

I always have wanted to get a number of builders together and discuss what makes a great bicycle. So we put the same 11 questions to a number of builders at the Handmade Show and elsewhere. We got responses from Bob Freeman (Davidson Cycles, steel and titanium frames), Craig Calfee (Calfee, carbon fiber bicycles), Darren Mark Crisp (Crisp Racing Titanium), David Kirk (Kirk Frameworks Company, steel frames), Ernest Csuka (Cycles Alex Singer), Mark Nobilette (steel frames), Don Walker (steel frames, organizer of the Handmade Show), John P. Murphy (Columbine Cycle Works, steel frames), Mike Barry (Bicycle Specialties/Mariposa), as well as Peter Weigle (integrated steel bicycles and frames) and Richard Sachs (steel frames). In many cases, builders had similar opinions, so we did not print every single answer:

VBQ: 30 years ago, handmade bicycles were lighter and offered more performance than mass-produced bikes. Today, superlight (and very expensive) mass-produced bikes are available. Why should somebody buy a handmade bike?

Mike Barry: A handbuilt steel bike will appeal to the person that appreciates fine workmanship.

David Kirk: It's about more than the bike. An experienced custom builder can not only build a bike to meet the fitting and performance needs of the cyclist, but can also provide an interaction between the builder and rider that can't be had any other way. It's this rapport that will ensure that the bike fulfills the dream.

Richard Sachs: Industrial-made goods of any type are limited in their quality. If one seeks quality, a hand-made bicycle is a decent consideration, providing that the hand-maker has the experience, set skills, and sensibility to get the job done. Hand-made does not equal "better".

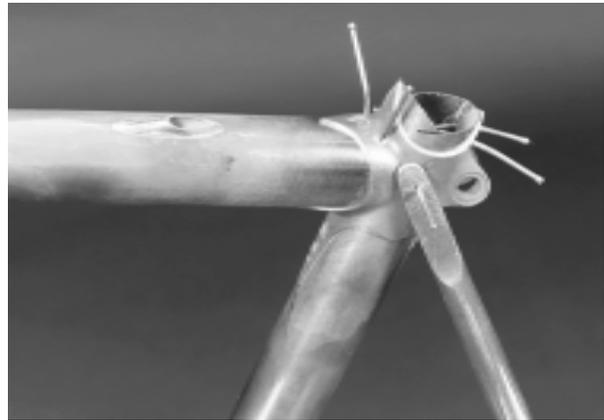
Craig Calfee: Mass produced carbon fiber frames are still made by hand. The difference is in whether those hands are in a near slave-wage, production-above-all-else factory or in a small shop that makes each frame to order with all the care of a real craftsman.

VBQ: Most people's bodies have similar proportions. How important is it to ride a custom bike?

Bob Freeman: I don't believe that is true at all. It is only important for the people who are experienced enough to appreciate the difference.

Richard Sachs: It's not that important at all. "Custom" need not be about 1 mm here or 1 mm there, although it helps. "Custom", a term grossly misused by the industry press, is about producing to a quality level and to tolerances that cannot be met on an assembly line.

Mike Barry: For most people it makes very little difference, if any.



Richard Sachs under construction (Photo: Christopher Zider)

Very small and very large riders will gain most from a custom builder as they are not catered for by the major manufacturers.

David Kirk: Having a custom bike built for you is not only a way to get a bike that fits your body well, but also to get a bike that fits the way you will ride and use it. That can be braze-ons, clearances for tires/fenders/racks, geometry optimized for the type of riding, etc.

Craig Calfee: About ten percent of the bicycling population has body proportions that are outside the range of adjustability.

Ernest Csuka: In addition to the measurements, a custom bike will be adapted to the rider's way of riding – whether they want a front and/or rear rack, what type of lighting, which gear ratios and more.

VBQ: Do you think handmade steel bikes have a future?

Bob Freeman: As long as someone makes the parts for them, there will be people wanting to ride them, and someone will make them.

John Murphy: Absolutely, steel is competitive on every level with every other material. I say that with considerable scientific evidence.

Mike Barry: Yes I do, particularly as touring and 'randonneur' bikes and city bikes, where weight is not so much a factor.

Peter Weigle: Yes, for their uniqueness, their style, and their beauty. They will always be around!

Darren Crisp: Today, I would much rather own a custom steel frame than anything I could find on the standard, commercial bike market.

VBQ: How about other materials, like carbon fiber or titanium?

Bob Freeman: We like both of those. They have their place in making a high performance bike as light as possible. You can still add cus-



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tom touches to make the bikes personal.

David Kirk: I think very nice bikes can be built from a variety of materials. I feel it's not fair to generalize bikes by material. I love the way steel rides, but I have ridden steel bikes that I don't like at all. I feel it's not the material, but the design and builder, that matter.

Craig Calfee: As a builder of carbon fiber frames, I prefer it for it's superior stiffness to weight ratio and the vibration damping qualities. The design flexibility offers lots of room for innovation.

John Murphy: Titanium has wonderful possibilities, and I think it will ultimately belong in the extremities of the assembly of the bike, in the spokes and rims, seatpost/rails, and handlebars to be at its best. I have mixed feelings about carbon. Carbon engineers are trying to get the composite to behave much like the homogenous materials like steel.

Richard Sachs: They are all excellent. Bicycles of the highest quality can be made using these materials.

Mike Barry: I think we shall see carbon fibre be the norm for racing bikes in the future as production costs decrease. I cannot see titanium being a major player as it offers no advantages over carbon fibre and the production costs will remain high.

Darren Crisp: I started my "exclusively titanium" company based on the belief that titanium is a superior material for bicycle frames. Carbon fiber is an interesting material if used properly. I don't follow the "build everything out of carbon" fashion trend that seems to sweep the market and do not use carbon in my frames.

VBQ: What "look" do you prefer in handbuilt bicycles? Should they be as perfect as something made by a machine, or should they show evidence of handwork?

Bob Freeman: They should look like the buyer wants them to look, and what he is willing to pay for. By "showing evidence of handwork", if you mean should they all be a little unique, then sure, why not.

David Kirk: I personally prefer that there be no evidence of hands ever touching the piece. It should look as if it has always existed.

John Murphy: I love a beautiful fillet, and the most perfect, lightest (my personal fantasy is an induction hardened welded stainless steel frame) will be that way. But most people don't notice [the difference], especially if you take a long time and do it right. So to get peoples' eyes, and their business, you do artwork/lugwork to make it memorable.

Richard Sachs: I think it's up to the maker. There is no such thing as a flaw, if it's in the original plan. However, most artisans strive to produce "flawless." If they ever meet their goal, they should quit; there'd be nothing left to attain. But I have never seen a flawless bicycle.

Mike Barry: I'm not sure that a handbuilt bike should appear ma-



Alex Singer tandem (Photo: Jean-Pierre Pradères)

chine made, but I do not like to see file marks, etc.

Peter Weige: The frames should be beautiful, and should have the builders 'hand' or signature in the metalwork. I strive to have each frame be unique and not look 'cookie cutterish'.

Ernest Csuka: If you are buying a handmade bicycle, you already show that you are concerned about its workmanship, its line and its beauty. And true perfection can be achieved only by handwork.

Darren Crisp: I shy away from decals, bold colors, and similar details that "date" the frame.

VBQ: What do you think of investment-cast lugs (compared to stamped lugs)?

Bob Freeman: The best thing that ever happened to lugs. They are stronger, lighter, prettier, and they will last longer and are easier to braze.

John Murphy: When working with silver, the viscosity is much lower, and you must have an unbroken capillary space to be sure of a complete joint, so when folks used higher strength steels, and silver to preserve all that strength, the investment cast lugs (that have the inside corners preserved) were a natural step. I don't feel that they are inherently metallurgically superior to stamped lugs.

Mike Barry: They have a cleaner finish and require less hand work. Other than that there is no advantage over pressed lugs.

Ernest Csuka: I never have used them, so I have no opinion.

Richard Sachs: Unfortunately, some folks think of investment cast lugs in a "use as-is" mentality. The process should be thought of as a starting point to achieving excellence rather than a shortcut.

VBQ: What about incorporating parts from outside suppliers, such as carbon forks and stays, into handmade bicycles?

Bob Freeman: Why not make the best bike you can for the rider? If

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Davidson Randonneur bike with Berthoud rack (Davidson photo).

it means carbon parts and that is what he wants, then it is a good thing.

David Kirk: For the most part, though, it seems that the current offerings only add cost and compromise the geometry, leading to a bike that doesn't ride and handle as well as it could.

Mark Nobilette: I'm ok with carbon forks for racing frames, but I think that adding more glued parts to a frame is trouble for most people.

John Murphy: If I have to make frames with carbon forks, I'll stop, which may happen because I just ran out of Prestige 0.8mm fork blades...

Mike Barry: I don't like carbon back ends – if we were to use carbon back ends we might as well get the whole frame made in China.

Don Walker: I found out the hard way that [carbon stays are] just a "gimmick" for a steel bike. The bikes ride just as good with steel stays.

Darren Crisp: I do use carbon forks. I have built a few forks from titanium, but they are somewhat cumbersome and very difficult to incorporate into a road geometry. I think the market brought us carbon stays, and I currently do not see an advantage to their use.

Craig Calfee: Don't forget to inspect the carbon forks for symmetry as they are prone to warping if taken out of the mold too fast.

VBQ: Can you envision building fully integrated bikes with custom racks, integrated fenders, designed as a complete unit rather than a frame with "accessories?"

Bob Freeman: No. You would be making them overly complex and hard to build. We would like to keep them simple and easy to make so we can turn around an order in a reasonable time.

David Kirk: Yes, I'm very open to that. I do my absolute best to provide a fully integrated system to the rider.

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Richard Sachs: No. I trust the component makers realize their part in the equation and can get the job done.

Mark Nobilette: I build mostly frames and forks only, but I am very interested in the randonneur-style frame with racks and touring fittings. I will be building racks for my frames in the future.

Ernest Csuka: If you want to make a truly beautiful cyclotouring bicycle, you have to build it as a unit, with its racks, fenders and lights as part of the design. Only then do you get racks that are straight, and everything fits together and is reliable.

Mike Barry: That is the essence of a Mariposa, having carriers, fenders and lighting as an integral part of the bike. The overall appearance of the bike is very important to us. There is nothing worse than selling a frame to someone and then seeing it built up like a "dog's breakfast."

Peter Weigle: I've been building frames with custom 'randonneur' style racks and fitted fenders for some time now.

Craig Calfee: It's not a problem if enough people are willing to pay the higher price for these custom items to justify setting up the tooling to produce them at a profit. It's often far more cost-effective to adapt a mass-produced rack or fender than try to custom-make one.

Don Walker: I can see it happening ... one day when I have nothing to build, just build a total monster for touring, wet weather, etc.

VBQ: Geometries have changed a lot in the last 30 years. Through the early 1990s, we saw steeper and steeper angles, now many bikes use geometries that seem to be more 1970s than 1990s. What is your take on this?



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Calfee carbon lug (Calfee photo).

Darren Crisp: There is not much new happening in the geometry front.

Bob Freeman: We have always made the geometry suit the rider and the purpose. We don't pay attention to trends.

David Kirk: I built race bikes for pro teams to ride in the Tour many years ago, and they were "all day bikes," yet the weekend racer was riding silly steep bikes. Fads come and go, don't they?

Mark Nobilette: We built frames with steep geometries in the 1970s. Geometries have reverted back to what works best for most of us.

Mike Barry: Fashions dictate in this business as in all others. We had very small frames and shallow angles in the thirties, big frames and steeper head angles in the forties and fifties. I tend to feel that the geometry of the seventies bikes is about ideal.

Peter Weigle: In the old days my customers demanded 'crit' bikes... these days most of my orders are for randonneur-style frames. The lower, slacker geometries are of course much better for this... But I must add, these frames/bikes are still very spirited and fun to ride.

Ernest Csuka: This is nothing new. From 1946 to 1949, people believed that bikes with steeper angles climbed better. Before the war, most bikes had slack head angles of 72°, so 74° head angles became fashionable for a few years. At some point, at Singer, we decided to keep the head angles at 73° for most sizes. So from 1950 onward, our frames have been "modern." They are stable, corner and descend well, etc...

VBQ: Many of the old French cyclotouring bikes used very long fork offsets (60 mm and more) with head angles of 72 or 73 degrees, to arrive at very low geometric trail figures (40 mm and less). Do you think that is a useful geometry for long-distances?

David Kirk: I personally haven't ridden a bike with these numbers, but I feel that there are many ways to get the desired handling.

Craig Calfee: This geometry was developed for riding on rough roads and cobblestones. Eddy Merckx uses a similar front end geometry in his modern race bikes, and it works fine. The famous Paris-Roubaix classic race over cobblestones inspires some of today's professional teams to use forks with lots of offset as a way to absorb shock.

Richard Sachs: My racing bicycles rarely have forks with less than 50 mm rake, so my trails are less than most. You could say that I agree.

Ernest Csuka: That geometry is very comfortable for your hands, and it works well on poor roads. It results in very stable bikes. Today, fashion is for less fork offset – it is like long skirts being replaced by short ones... I think that fork offsets of 40 mm are good for racing bikes,



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and 45-55 mm for cyclotouring bikes [with head angles of 73°].

Mike Barry: I do not like the way long fork rakes and low trail figures handle, loaded or unloaded.

Peter Weigle: There is no magic number whether its trail or bottom bracket drop that will decide how a frame rides! They all have to work together in order to achieve a balanced feel, or ride.

Don Walker: I see long rakes as a scary thing. Based around performance bicycles, I think I would not be qualified to answer that.

VBQ: Name one or two things we can learn from past craftspeople and their bicycles.

Bob Freeman: You will always have to work hard to make a living. People will always appreciate your paying attention to their desires.

David Kirk: There are no short cuts when it comes to quality.

Craig Calfee: There is little that hasn't already been done before.

Darren Crisp: Don't do things because they are fashionable or trendy. Trends pass, but quality, handcrafted work is timeless.

John Murphy: Many older makers had some influence from aircraft work, where much engineering has been done and disseminated. I think [this] is dangerously missing in bicycle work today in favor of "technology", which without science is incomplete.

Richard Sachs: To surpass the master is to return the debt.

Ernest Csuka: The best builders of old created something that was far out of the ordinary for their time. Their bikes were well-designed and carefully finished. They worked well, but also were beautiful.

Mike Barry: We should know the history of bicycle development.



Kirk Frameworks seatlug detail (Kirk Frameworks photo).

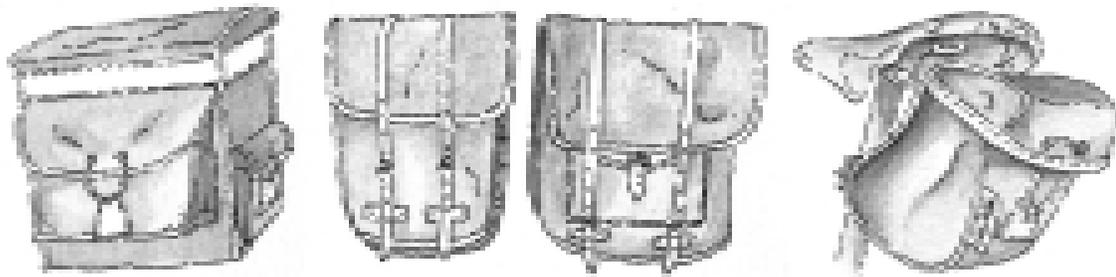
Almost all "new" ideas have been tried before, be it saddles with holes in them, oval chainwheels or shaft drives. But they keep getting reinvented and marketed to a gullible public.

Mark Nobilette: There are many ways to build frames. We should try to be individuals and build the way we want and in the style we like.

Peter Weigle: Each frame I build is an assemblage of design elements I've seen over the years. I sort through them and then pick what pleases my sense of taste. After that I add my own 'spin' to the mix. ●

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