

# The designer as craftsman

**I** used to race as a kid. I loved riding bikes. But then I got waylaid – Life! I gave up cycling but often regretted it.

So, on my fortieth birthday, life began again – I gave myself my life back by stopping smoking. Then followed a long period of getting fit again. Two years before that, I'd been thinking of getting back into bicycles, but because we had dogs, there were problems I couldn't see how we could handle dogs, and bikes, and roads all at once, so I started thinking and designing a bike for riding the bridleways abounding in the part of Surrey where we used to live. I actually termed it in my head, a "bridleway bike". This was well before the advent of the American mountain bikes.

I wanted a bike which was able to handle off-road work, but could also handle on-road too, but with more precision and more efficiency than any "rough stuff" or "mountain" bike I've tried. As most of my early riding was on a track bike – short, stiff and high, my starting point was quite different from the Americans'.

Originally I modified a ladies' roadster and then a Cleland, and from the lessons I learned I made a bike for myself. Other people liked what I was doing, so I thought "All right then, so this is what other people want, too".

I went along to the bank manager and did all the normal, usual things. Most people thought I was nuts, my bank manager certainly did. "A thousand quid for a bicycle?"

In the end I did what is probably the classic thing, I listened to what everyone said and then ignored all of it.

My customers usually have a pretty good idea of what they want before they come to see me. They've often done a fair bit of off-road riding or touring, so I like to watch them riding one of my demonstration bikes, and then I show them what I can do on

**DAVID WRATH-SHARMAN makes bikes with a difference. In his retreat in rural Wales he designs and makes custom-built machines incorporating new ideas which may one day find their way into mainstream bike design. Here he sets out his thinking and his ambitions.**



my own bike, which often goes way beyond what they had in mind.

There are not too many women customers, which is sad because the principles behind the Highpath would suit them better than any mountain bike.

A while ago I had an argument with this guy. He was a road racer and accused me and my bikes of being "not serious". I asked him to explain what he meant by "serious" and he said "racing". But racing is the most unserious thing I can

think of! What I consider serious is the commuter rider; now that's really serious, going to work every day, getting from A to B, the long-distance tourist, the courier, participating in life, that's serious. Racing's just fun.

I consider a cross-country bike a very serious machine indeed, a sort of universal bike, it can be tremendous fun, too and, sure, you can race it and perform all sorts of stunts and feats but those are not its primary functions.

The kind of questions I like answering are when a guy

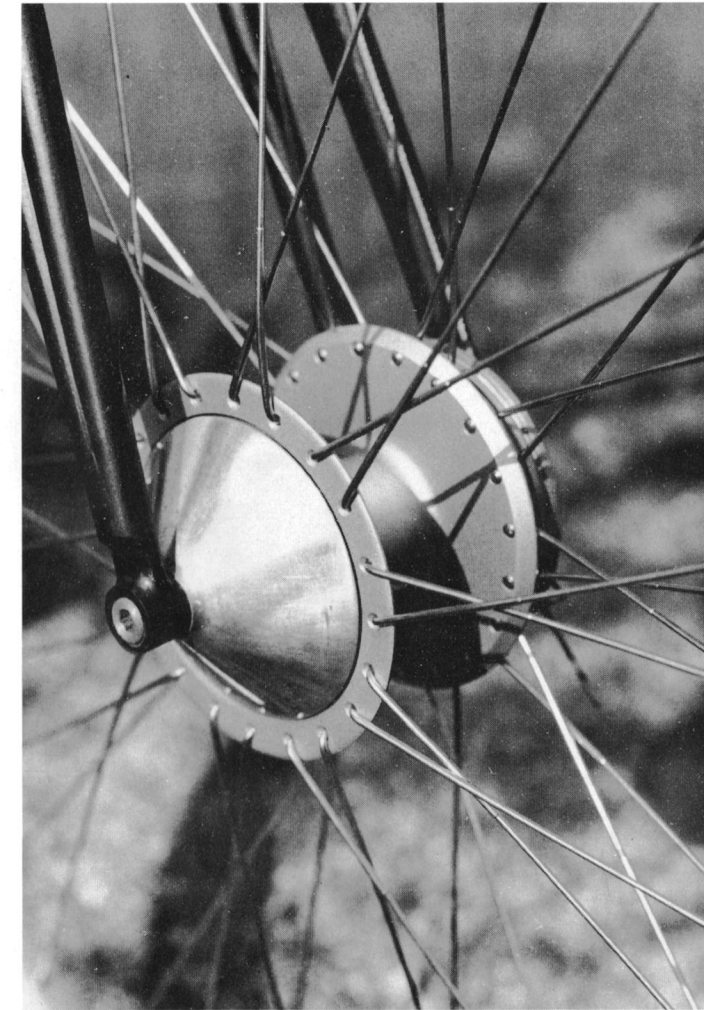
comes to me and wants a bike to use on his nature reserve, to go from A to B fast and silently in summer and winter; he wants to go long-distance touring on it; he wants it to be a once-in-a-lifetime purchase; he wants to have to do only routine maintenance and really, in one sense, he can almost forget about the bike.

Those sort of things are legitimate requirements. The guy that wants to go yomping all over the countryside, riding at breakneck speed down bridleways is not legitimate, that is not appropriate use at all.

I try to design everything so that I can make it in the workshop. It's a low technology that I allow myself to play with – what can be made on my lathe, my routers, my bandsaw. I like to keep things simple. Given the sophisticated unlimited technology of a large factory, it's easy to rely on the technology to solve problems, and easy to get carried away with hype – there's plenty of evidence of that around.

Keeping it simple forces me to answer the real questions, to look for what really works. But there's always more than one answer to any problem and some look nicer than others. I try to choose the ones that look nice, and are easy to make. And therefore, my solutions to problems have a family likeness to them, whatever they are. There aren't any frilly bits, just hard, purposeful and, I think, elegant solutions. I suppose that keeping things simple even shows up in the way we live, and especially now we've moved to rural West Wales.

On my passport it says "Designer/Engineer", but if I was to be honest, I still see myself as a sculptor, which together with ceramics, is my original training. It may not look like I'm using that training, but I do, I use it every day. The main thing I got from being a sculptor was, in a sense nothing to do with sculpture, it was simply that within that context, I learned



Opposite page: don't look, it does it... (photograph by Trevor Smith). Above left: detail, bars and front suspension. Above right: Mark 3 Highlight SC fitted to suspension bike. Right: high Summer in rural Wales (photograph by Moira Chesmur).

to handle a lot of different technologies, which became demystified for me. I suspect that for a lot of people, how things get to be as they are, is a mystery; a lot of craftspeople foster that idea and like to keep it that way. Frame-builders are no exception.

The more technologies you get to grips with the easier they become, and you start cross-pollinating from one area into another. The apparent paradox here, is that things get simpler.

When I look at one of my bicycles I see a piece of sculpture for pedalling across the landscape. Its function is complex and requires real problem-solving, yet still satisfies the same aesthetic sense that represents the sole function of a piece of sculpture.

There's a problem with the way most bikes are put together, which I don't believe exists in any other field. A

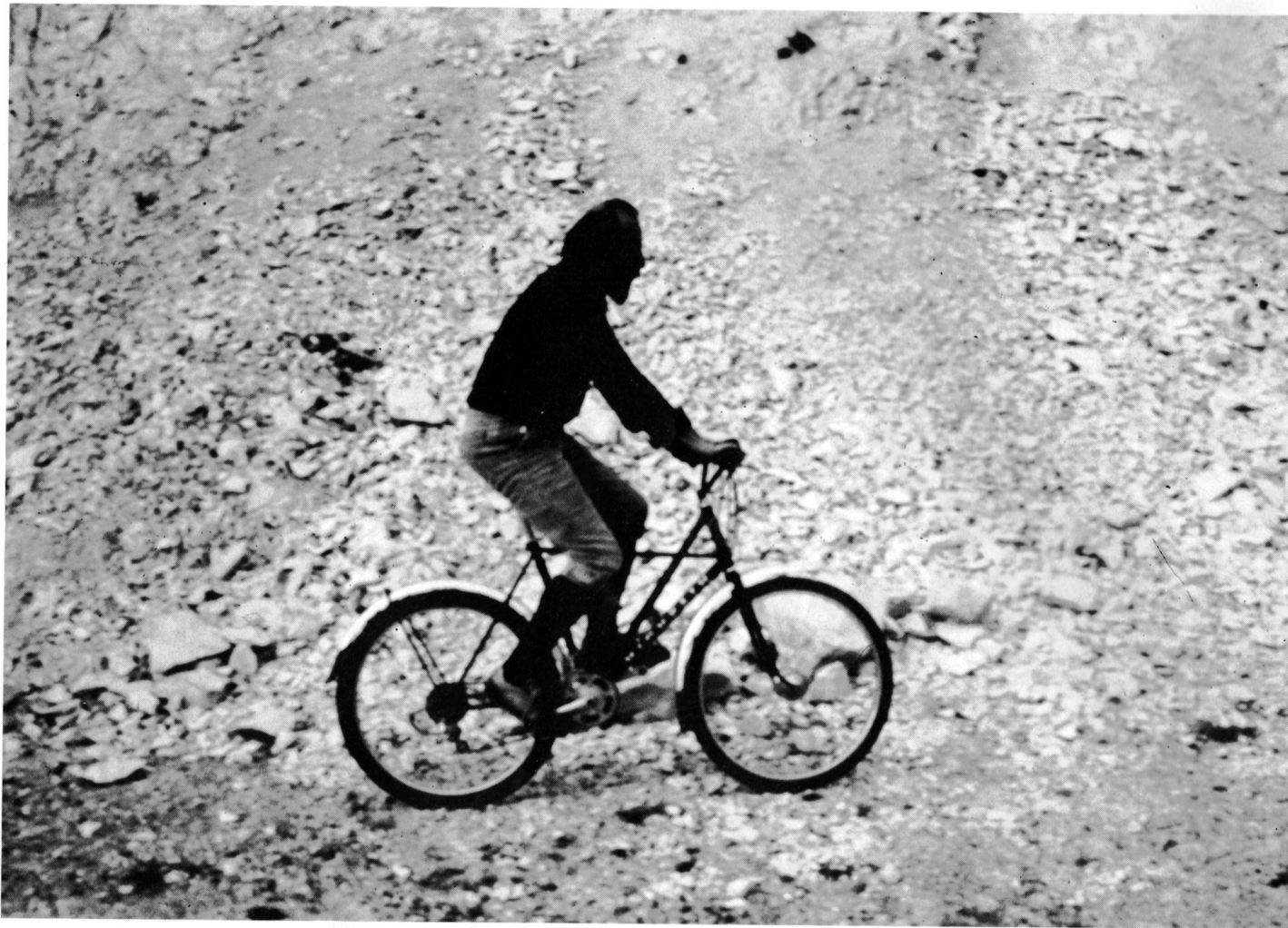
frame-builder makes a frame and it is expected that all components will fit it, which is OK if it's a racing bike because most equipment is designed around that function. If it's for an off-road machine, you've got one huge compromise. You have the constraints of all the racing-derived components that must fit it. You have fat tyres, narrow bottom-brackets, big chainrings and long-arm changers and, rim brakes!. Those are the real problems off-road.

If I've instigated anything at all, it's the idea of designing the whole bike with as few compromises as possible. I'm not limited to standard bottom-bracket widths, I'm not limited to standard drop-outs, I'm not limited to standard brakes or hubs, because I make my own.

I actually enjoy the process of making, but I'm very impatient. I'd be very happy if







Above: trials on harsh limestone (photograph by Thomas Eisl).  
 Upper right: a £2,000 28" wheel off-road long distance tourer with Mk 2 brakes. Lower right: hand-forged brake levers, modified gear levers and fully adjustable bars.

I had a really competent frame-builder and machinist, so I could get on with the designing and prototyping. I suppose it's answering the questions that's the bit that really turns me on. I don't make frames by habit, so I'm never able to say categorically how a new bike is going to handle, but I've got a bloody good idea and every one has given me new insights.

If there's information that I want and haven't got, I simply jump in the deep end and start doing things. I could of course read everything written on the subject, find out 90% more than I need, get bogged down with what I'm not supposed to be able to do and probably get put right off.

I would rather find out the minimum, and then experiment; you quickly find the questions that need answers that way. It's the same with any experimental work, just get on with it and

find out. If I'd listened to all the so-called experts I'd never have done anything.

I'd like to see frame builders and component manufacturers really answering the questions that need answering, instead of simply making the thing look different for the sake of it so that the product sells on visual appeal, not performance. The way a product looks is important, I'm not denying it, but function must come first. It seems that the big question for most manufacturers, given that there is no significant difference between them is, "how do we make it sell?"

Up till now all my bikes have been custom-made, so if someone wanted to review a Highpath my glib answer was "OK, give me £1500 and I'll make a bike for you to review". It's like the difference between a suit from Saville Row or Burtons. The Saville Row won't fit unless



Above: an experimental suspension bike.  
 Left: a £2,000 28" wheel tourer with cro-mo racks, lighting, and 21 gears.  
 All photographs by David Wrath-Sharman unless otherwise credited.

it's made for you. The Burtons suit on the other hand will be made in enough sizes and variations so a good approximation can be made, sometimes almost equalling the hand-made job.

Far more people have wanted bikes than I could make, many simply couldn't afford one. For some time I've wanted to manufacture a production Highpath, but the problem was to know where and how to make economies without compromising performance. Another goal was to make a bike that was entirely European. That at least is becoming possible as the big European manufacturers get their act together, though the biggest problem remains the lack of a really reliable and affordable hub brake - but that could change soon.

One of the reasons for moving to West Wales was the need for a large workshop, to

make the production bikes, so right now I'm pretty busy renovating and rebuilding our cottage and the old water-mill, just more sculpture really, but life-size. Besides prototyping the new Highpath I'm also involved with Sturmey-Archer and others on some exciting new developments!

The above is taken from a conversation with Thomas Eisl which appeared in *Crafts, the decorative and applied arts magazine* (Jan/Feb 87). It has been up-dated by David Wrath-Sharman for publication here.

