

What's the story with these big wheels?

Recently I've been embroiled in what some people would consider a lot of muck-raking regarding the specification and use of 29" or 700c wheels for Mountain Bikes.

My general opinion is very simple. I think that wheels size – like everything else size and proportion related – must have a 'fit' quotient attached to it. I believe fit and handling are pretty much what you're aiming for with a custom frame (unless you're just involved in an exercise in aesthetics) so why would you compromise them just for the sake of a particular component?

Like everything else you bolt to a bike, 29" wheels also place certain physical restraints on a frame. For example, stays much under 17.3" are pushing the clearance friendship. Top tubes under 22.5" can cause toe overlap. 80-100mm suspension forks put the handlebars into the stratosphere – not great if you're short or favour an aggressive XC position.

These are simple facts. If these numbers encroach on the proper fit of your bike, any frame designer worth their stripes won't go there.

And if they do, what exactly are you buying? The whole idea of getting a unique frame is so you can share in the experience of creating a kick-arse frame with a knowledgeable and opinionated professional. What's the point in going to a frame designer just to hear some dogma or just to be told exactly what you want to hear?

I know more than most the amount of pull belonging to a clique or niche has. Heck, I've made fun of everyone at some stage myself, so I'm not immune. However, good quality design knows no dogma or diatribe – good design is self evident.

So are 29" wheels 'good design'? Sure, they can be. The past few months of drawing up designs for my own personal one has been a kind of aesthetic revelation. No longer are designs in my size ugly and plain 'big' looking (I'm 6ft 4ins), but they actually look like normal bikes!

So that's my current position if you want to skip to the last paragraph. 29 = Cool – as long as fit and handling aren't compromised. If they are and you still want one, there are plenty of builders out there that will build anything. Just make sure you ask that question first and go hog-wild.

So what about the physics of bigger wheels?

Generally I'm of the opinion that bigger is badder when it comes to wheels. As a guy who recently lopped a whopping 300g off his wheelset, I can tell you that the difference in your ability to change direction and accelerate is INSTANTLY noticeable. It's been the single biggest seat-of-the-pants increase in efficiency I've made since 1988. (Well, except maybe for gears that actually work and the odd bit of suspension gear.)

"Yeah but, big wheels roll over things better" I hear the peanut gallery yelling. Sure they do, but mountain biking is all about acceleration. I've never had a problem actually rolling over objects – I have a suspension fork and pneumatic tires for that. It's your ability to accelerate - especially after braking that makes the difference, and bigger wheels simply don't and can't accelerate as quickly as a smaller, lighter wheel.

A suspension fork on the front (and the rear suspension) is designed to assist your front wheel roll up and over objects, negating the need for lugging around larger wheels. Smaller mass hanging off that fork is also able to react quicker to inputs, again, advantage smaller wheel.

Many pundits of the larger wheel say 'Well, what if both wheels weighted the same and had the same weight distribution?' In that case, I'd say "Can they both have the same spoke triangulation as well while we're at it?"

You simply can't make any comparisons if you conveniently ignore real-world parameters. If you had two wheels – one 26" and one 29" – and they both weighed the same by some miracle, then the 29" would be more fragile and have less grip, due to its smaller tire which you'd have to run at a higher pressure. There is simply no way around that.

If you can live with that or it suits your riding style, or, well, you don't care, then 29" wheels will be fine. As I stated earlier, if they don't compromise the fit of your new bike and you can live with the restraints of living as a 29er in a 26er world, then I see no reason why larger wheels shouldn't provide you with miles of smiles.

Okay, so what about smaller wheels?

Well, I was watching the Jayco Bay Series on telly this year, watching the women fly around the various courses, and I couldn't believe how many of them were on 700c wheels. It was like someone had got a BMX and thought "I wonder how big I can make the wheels?"

Bottom line? Fit comes first. Wheels should be in proportion to the rider. I can see a world where a designer not only specifies the length of stem, width of bars, length of cranks, but also wheel sizes.

Warwick Gresswell
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Addendum.

This week at Sea Otter, Sherwood Gibson of Ventana fame introduced a 29er full suspension bike called the El Capitan. One statement he made to the press was how he predominantly saw the benefits for larger 6ft+ riders, but didn't see the benefits for himself. It was interesting to see the response from the 29er board on mtbr.com, who generally commended the bike (despite it's 7lb frame weight), yet some contributors felt that he was still not 'on-board' despite being one of 3 companies offering a 29er FS design.

I've often been derided for not whole heartedly supporting larger wheels for everyone, and generally had to wade through a sea of dogma and rhetoric not only from members of various BBS' but also other custom builders, so it's nice to see another company telling the 29er 'movement' something they don't want to hear. (Albeit in a much softer fashion than what I'm used to delivering). Yeah, if you're a smaller rider, they don't work very well.

So no changes to my opinion there. What I had to say initially still stands. (If you can't remember what that is, go back and read it again!)

Warwick Gresswell
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