



Feature

N+PLUS ZERO



DAN JOYCE
N+0=4 for Dan. It would take a very special bike to get that down to one

NOT IN STOCK? NOT AFFORDABLE? NOT NECESSARY? MAYBE IT'S TIME TO FORGET THAT NEW BIKE AND MAKE THE BEST OF WHAT WE'VE GOT. DAN JOYCE ELABORATES

Mend and make
do: Real Yellow
Jersey winner Caitlin
Barlett teaches cycle
maintenance

Scratching that new bike itch is more difficult these days. There are a few reasons why it might be time to abandon N+1, cycling forums' favourite formula for "the correct number of bikes to own", in which N equals the number of bikes you currently own.

Chief among them is supply. In brief: there was a pandemic bike boom; factories making essential components shut their doors; and there was, and is, a global shipping crisis... which was compounded by a logjam in the Suez Canal. So bike shops are emptier and due dates for new models and parts keep getting pushed back.

"That's the story of the day for everyone at the moment," the marketing manager at one big bike company told me last July, after confessing that he wouldn't be able to supply a test bike I'd been chasing for a year. "I had a nightmare getting

parts for the UK Olympians riding our bikes. [It's now] November for chains alone!"

The second reason is rising prices. Think the prices seem high for the bikes reviewed in Cycle? They are! The Bicycle Association recently published a report, 'Growth Beyond the Boom: Key Drivers of the UK Cycling Market in 2021'. One of its findings was that the average price of (non-electric) bikes sold in the UK had risen by 36% since 2019. Partly that's customers buying the more readily available expensive models. Partly it's business costs such as shipping: the price of a container from the Far East to Europe was \$1,250 in September 2020, before the shortage hit, and then \$22,000 in November 2021 (source: Cycling Industry News). That's an increase of over \$20,000! Given that a container holds about 250 bikes, it's \$80 or so on top of the price of every bike.

In the UK, Brexit hasn't helped

pricing or, in some cases, availability. Sterling fell significantly against the Euro and, crucially, the US dollar after the Leave vote in 2016, making imports such as bikes more expensive. On top of that, there are now import duties on items from Europe. The Guardian has a good summary ([bit.ly/cycle-brexit-guardian](https://www.theguardian.com/uk-news/cycling/2021/november/15/cycling-uk-members-experiences-on-the-forum)), and there's a long-running thread of Cycling UK members' experiences on the forum ([cyclinguk.org/post-brexit-buying](https://www.cyclinguk.org/post-brexit-buying)).

The third reason to ditch the N+1 formula is simply to avoid buying something we don't need, a consumerism issue the climate crisis has thrown into sharp relief. Bikes are a drop in the rising ocean compared to cars or fast fashion but there's still a real cost in resources. The most environmentally friendly bike is the one you already own.

Which brings us back to N+0. Or, to put it another way: mending and making do.

DAN'S REFURBISHED BROMPTON

My much-mended 21-year-old Brompton is my most neglected bike. When I get back from business trips on it late at night, I tend to forget about it until I next need it.

So I wasn't greatly surprised to find that, although 'rideable', it needed: new chain tensioner jockey wheels; a new chain, sprocket, chainring, and right-hand crank (earlier Bromptons didn't have removable chainrings); a new rear light; new pedals; new brake blocks; and new rims, which after 21 years were very worn.

Since I was overhauling it, I decided to convert it from a 3-speed to a singlespeed. My Brompton journeys seldom exceed two or three miles at a time, for which one gear is fine, and it would save weight. You lift a folded Brompton a lot.

It wasn't much more expensive to buy a Brompton 1/2-speed rear wheel

than the hub, rim, and spokes separately, so I added that – and a front wheel – to my Compton Cycles online order. I chose a 13t sprocket and a 44t chainring for a 55in gear: low enough for hills, high enough to pedal at 15mph.

Lining up the single sprocket on a 2-speed hub with a 3-speed tensioner required a 2.5mm spacer either side. I'd forgotten to buy a circlip but the one from the old 3-speed hub fitted.

Rather than buy a Brompton folding pedal (£47), I bought a pair from Decathlon: £12.98 delivered. I spent about £340 altogether, a saving of around £1,000 on a similar new Brompton.

The old bike rides better than ever – that lovely singlespeed silence! – and is palpably easier to carry. It was 11.98kg. It's now 11.15kg. That's a bigger weight saving than you get from a titanium fork and rear triangle.



This was bad enough. Additionally, shipping container prices soared

REASSESS: YOUR BIKE CAN DO MORE

Magazines, websites, and adverts sometimes imply that you need a specific bike for a certain kind of riding. You don't. A particular bike or type of bike may do a given job better but you don't have to have the 'right' one.

Granted, some bikes are less versatile than others. I've been mountain biking on an 80in fixie with 28mm tyres. It was entertaining and challenging but not something I'd want to repeat. I've done a 10-mile time trial on a Sinclair A-bike for a laugh. While I didn't, remarkably, come last, I'd never do that again either.

Most situations aren't so black and white. You can ride all or most of that bridleway on your road bike with 25mm tyres – with a bit of care. You can do a sportive or club ride on your mountain bike – with a bit more effort and ideally different tyres. You can tour on anything so long as it's comfortable, has low enough gears for you, and will carry your essential luggage.

Back in 2017, I wrote about using one bike for everything ([cyclinguk.org/article/can-you-just-have-one-bike-does-everything](https://www.cyclinguk.org/article/can-you-just-have-one-bike-does-everything)). That was N=1 rather than N+0

but the conclusion is relevant. Namely: the Genesis Longitude I rode was better in some roles than others but it didn't actually prevent me doing any cycling I wanted or needed to do. One bike really did do everything.

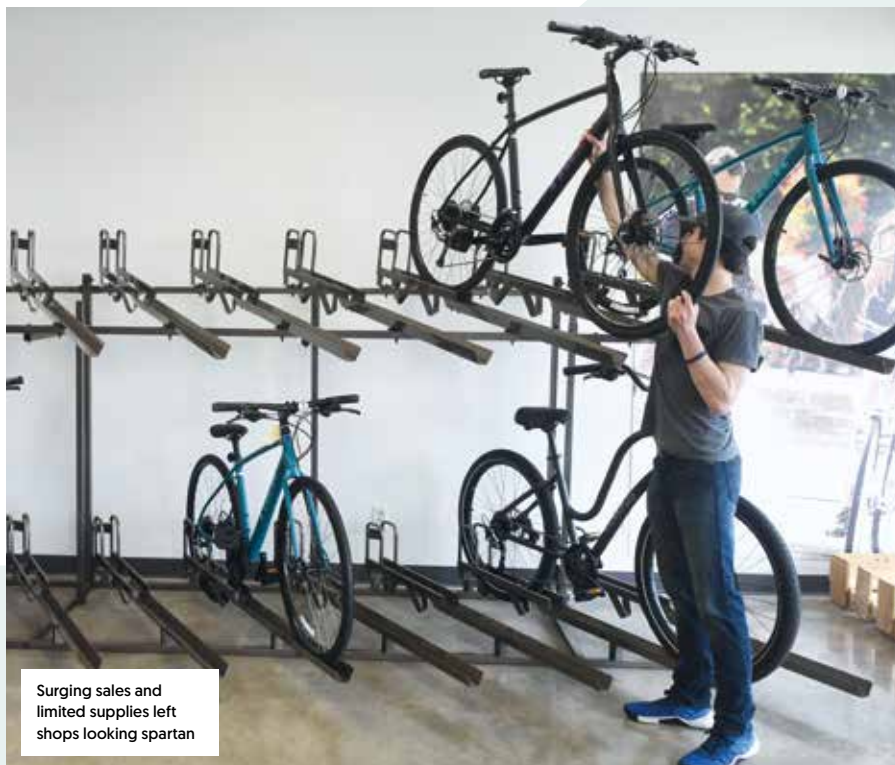
Sub-optimal cycling beats not cycling every time.

REFURBISH: FIX AND FETTER

Cherish the bike you own. It's easy to be distracted by the siren call of the shiny and new. Yet the fact that there's a new bike that's better than your old one doesn't make your bike any worse than it was when you bought it. And when you bought it, you probably relished riding it.

Recapturing that warm glow is partly mind games. Think back on past rides. Consider the fact that, assuming your bike can tackle the task at hand, the principal limiting factor for fun or performance isn't the bike but you. Let's say a road bike costing several thousand pounds could make you a few percent faster for the same effort. That still leaves 97% of the total room for improvement down to you. Your bike isn't holding you back – not much.

There are practical things you can do to make yourself feel better about your old



Surging sales and limited supplies left shops looking spartan

bike. Some are cosmetic, such as making your bike look better. I like a bike with what Grant Petersen of Rivendell Bicycle Works calls 'beausage' – a portmanteau of 'beauty' and 'usage', which means the former comes from the latter. In other words, a well-used bike with some scuffs and scars looks better than a pristine, unridden bike. But if you prefer a polished bike, shine that frame! Want perfect paintwork? Get a respray (cyclinguk.org/cycle/back-best). Don't like looking down at worn bar tape? Replace it. The more your bike meets *your* ideas of how a bike should look, the more you'll like it.

Showing your bike some love isn't just about cleaning – or, as it might be, not. It's also about maintenance, which isn't the same thing: a bike can look tatty and work brilliantly. Every cyclist appreciates the quiet susurrant of a well-kept drivetrain,

“ ADVERTS IMPLY THAT YOU NEED A SPECIFIC KIND OF BIKE FOR A CERTAIN KIND OF RIDING. YOU DON'T ”

brakes that are squeal-free and well-modulated, and bearings that are well-adjusted and smooth. When a bike is kept running sweetly it is, in the only way that really matters, as good as new.

Cycle maintenance is a readily learnable skill. It's technology that anyone can, literally, grasp. All you need is patience, a bike workstand (a £50-£70 one from Decathlon or Halfords will suffice), and a collection of tools that you can supplement as you go along. There are guides to some of the simpler jobs on the Cycling UK website (cyclinguk.org/article/simple-bike-maintenance-guides). For more advanced stuff, invest in a good manual like Zinn and the Art of Road/Mountain Bike Maintenance (delete as appropriate), buy an app such as The Bicycle Maintenance Guide (bicyclemaintenanceguide.com), or watch some free YouTube videos. Don't want to get your hands dirty? Your local bike shop will oblige.

One complication now is that many replacement parts are as difficult to obtain as new bikes. Supply problems have hit groupsets hardest. Are you set on replacing like for like or are you happy to compromise with a component from

SAM'S REPURPOSED SURLY

Back in early 2020, I'd made up my mind that I needed/wanted a nippier bike than my sturdy Surly Disc Trucker. I'd drunk the gravel bike Kool-Aid, while at the same time grown enamoured with the randonneur style of riding.

The idea of an off-road capable bike with on-road zip, and which could also take a light load, was intoxicating. When the pandemic struck, however, those dream bikes sold out. So I decided to upgrade my existing bike. I already had a clear idea in mind of what I could do.

I swapped my 26×2.0 Schwalbe Mondials – on editor Dan Joyce's recommendation – for Rene Herse's 26×1.8 Naches Pass tyres (stocked by Sven Cycles). I immediately noticed the difference. My bike had never flown so well... or been so puncture-prone. Flats aside, I had the zip I'd been looking for.

Dave at Pilgrim Cycles had some secondhand flared Genetic Digest handlebars he sold for a song, which I wrapped in some fun yellow tape from VeloDuo. Outside of the tyres, my biggest and most difficult purchase was a Rawland Cycles Rando V3 rack, which I had to order in from the US as the UK was flat out of front racks. I bodged a rear rack mount to take my dynamo light on the front rack, and my 'gravelandonneur' was complete.

All in all I probably spent ~£250, which is a lot but still cheaper than a new bike. In its new guise, I've tackled King Alfred's Way, ridden rough-stuff through Dorset, Surrey, Sardinia, and Tuscany, and made countless visits to the shops and work. It's given the bike a new lease of life, and while I still yearn for something altogether different, it's sure been fun!



Near left & far left: Alamy



Above: Cleaning non-moving parts? Optional
Top right: Any bike can haul loads with a trailer
Bottom right: E-bike kits are widely available



a different groupset? Compatibility can be a minefield, so ask on forums like Cycling UK's 'Bikes & bits – Technical section' if you're unsure. If you're seeking must-have parts, the Cycling UK forum is also a useful source for swaps or trades ([cyclinguk.org/small-ads](https://www.cyclinguk.org/small-ads)). Ebay is useful too, both for used parts and new components you can't track down locally.

REPURPOSE: OLD DOG, NEW TRICKS

The scope of any bike isn't set in stone. You can change components to make it fit a different role better. Maybe not quite as well as a bike specifically designed for that job but well enough for your purposes.

The more specialised the bike – and, in particular, the tighter its frame clearances and the fewer fittings it has – the fewer your options. A track bike might become

“ A HARDTAIL MOUNTAIN BIKE, TOURER, HYBRID, OR GRAVEL BIKE CAN FILL A WIDE VARIETY OF ROLES ”

a fixed-wheel commuter or time trial bike (don't forget that front brake!) but it won't ever make a good off-road bike or tourer. Conversely, a hardtail mountain bike, tourer, hybrid, or gravel bike can be re-specified to fill a wide variety of roles.

It's impossible to look at all the adaptations you might make. Here's a selection.

EASY WINS

- **Tyres.** The first things to change. There will be something faster rolling or more puncture resistant in a similar width to what's on your bike, and probably something grippier off-road if you need that. I like Rene Herse tyres (and Schwalbe's discontinued Marathon Supreme) for tarmac-going gravel bikes, and Schwalbe Durano Plus for commuterised road bikes and fixies.
- **Riding position.** A different handlebar of the same general type is a straight swap. A shorter and/or more upright stem and a seatpost with more layback may be all it takes to improve ride comfort.
- **Lower gearing.** SunRace makes 11-40 (and larger) Shimano-compatible cassettes in 9-, 10- and 11-speed. Add a gear hanger extender, possibly a longer B-screw for

your derailer, some extra chain links, and you're done.

- **Better brakes.** Replace the cables. Consider switching to compressionless cable outers (e.g. Gusset XL Linear). Fit different brake pads. Semi-metallic pads are good all-rounders for discs, for which larger rotors (frame/fork allowing) also improve stopping power. Kool-Stop Salmon rim brake blocks ([cyclinguk.org/article/kool-stop-salmon-rim-brake-blocks](https://www.cyclinguk.org/article/kool-stop-salmon-rim-brake-blocks)) are great for sidepull, cantilever, or V-brakes.
- **No pannier rack mounts?** Use bikepacking bags ([cyclinguk.org/article/group-test-seatpost-bags-bikepacking](https://www.cyclinguk.org/article/group-test-seatpost-bags-bikepacking)) or a big traditional saddlebag from the likes of Carradice.
- **Lack of mudguard clearance and fittings?** SKS Raceblade Long mudguards work well enough for road bikes. Ditto Crud's Roadracer Mk3. Mudhugger's Rear Gravel Hugger is a good option for gravel or adventure bikes going off-road.
- **Load hauling.** Most bikes can tow a cargo trailer full of groceries or a child trailer. Just check the hitch options and make sure you have low enough gears and good enough brakes for the additional weight you'll be hauling.

MORE COMPLEX CONVERSIONS

• **Flat bar to drop bar.** To keep the reach manageable, you'll need a stem about 4cm shorter. You'll need different controls but can keep your derailleurs. Microshift (microshift.com) makes bar-end and thumb-shifters for lots of mountain bike and road derailleurs. A Jtek ShiftMate adapter is another option. Assuming you have cable brakes, you'll likely need linear-pull drop-bar levers such as Tekro's RL520. If you have hydraulics, TRP's brake-only Hylex RS levers are a simple solution.

• **Drop bar to flat bar.** Most people don't

“FLAT BAR TO DROP BAR? TO KEEP THE REACH MANAGEABLE, YOU'LL NEED A STEM ABOUT 4CM SHORTER”

seem to mind the shorter reach. If you do, try a stem 2-4cm longer. Thanks to sporty hybrids, you can readily buy flat-bar short-pull brake levers (e.g. Sora, Tiagra) and flat-bar road shifters (ditto).

• **Geometry changes.** Angle headsets (e.g. by Cane Creek or Superstar Components) enable you to slacken a bike's head tube angle by 0.5 to 2° to increase the trail. The effective seat tube angle is easier to change: just switch from an inline seatpost to one with layback (or vice-versa) and/or move the saddle fore/aft in the clamp.

• **Lack of frame clearance for bigger tyres.** You can't go wider than the frame and fork allow, but you can switch to tubeless tyres to utilise lower pressures. If you're riding off-road like this and bashing rims, try tyre inserts (e.g. CushCore), which are available for cyclocross or gravel tyres down to 33mm.

• **Electric assistance.** Retrofit kits are

widely available and can be fitted by a competent home mechanic. See cyclinguk.org/article/electrify-your-bike for more. Alternatively, many suppliers will install a retro-fit kit for you, for a fee.

• **A 'folding' frame.** You can make an existing steel frame separable with the addition of S&S Bicycle Torque Couplings. It can then travel as luggage on trains and planes. Expect to pay from around £600 for this.

Total up the cost of any conversions before getting started. It may make more sense to buy a new frame and transfer the components, or even to buy a completely new bike (if you can find one!). How does that square with N+0? Easy: one in, one out. Sell your old bike or old frame, or donate it to a bike recycling centre. Some of Cycling UK's Big Bike Revival partners in England recycle bikes. See cyclinguk.org/bigbikerevival and make contact with the centre before visiting. ●

YOUR BIKES



JOHN BARNES'S DIY FOLDING E-CARGO BIKE

I cut the top and down tubes and added a low front to make a Long John style cargo bike. For more details, see 'Folding Long John' on YouTube (bit.ly/cycle-DIYecargo-video). It folds in half for storage and the possibility of transporting it on a train. I use it for shopping and transporting waste to the town's recycling centre, and for any other short journey which requires a load to be transported.

It rides fine but is more difficult to get around cycle path barriers because of its length. It didn't require any special parts, except for the Bafang crank motor that I bought from Brighton Bikes. The mudguards are made from worn tyres. It cost me about £200 in welding gas and consumables, £150 in steel tubing, and £900 for the motor.



THOMAS MCALPINE'S SECONDHAND HYBRID

The bike was secondhand to me and required attention. I removed rust patches on the frameset and varnished it. Then I replaced a faulty crank, the stem, and the headset with new components. Wheels and a melodious bell came from my previous bike. I added mudguards and latterly dynamo lighting for winter riding.

It was rewarding to spend time and care returning it to working condition. It's the first time I've repaired and renovated a bike, learning new skills while being able to reduce, reuse, and recycle. If I was faced with only having one bike in the future, this would be top of my list. It's my main transport. I use it for shopping trips, commuting to work, touring, and day trips out. It is capable on the road and on unpaved bridleways and paths. It cost me about £120.



DAVID ROSSALL'S TRIKE

It was originally a one-wheel-drive 10-speed (2x5). I was riding an audax when I put the drive wheel down a huge pothole, which broke the driveshaft housing. A planned repair at Trykit turned into an opportunity to modernise and have a complete rebuild. It now has 9-speed Ergopower shifters and a frame respray, although the wheels, bars/stem, chainset, and saddle are unchanged. There are structural reasons that make Shimano cassettes more suited to trike use than Campag ones, but I wanted Ergos and Campag derailleurs so I'm using a JTek ShiftMate to convert. I use the trike mainly for audax rides, and as a change from riding bikes. I don't like to think about how much it cost. With the complete respray and so on, I think it was near £1,000.