



Dynamics of cycling cases: from equipment to roadways

Questions you must ask and steps you must take to build the strongest case for the injured cyclist

BY NATHANIEL LEEDS

As a not-particularly-fast amateur bicycle racer, I often receive calls from fellow cyclists when things go wrong. And, on a bike, when things go wrong they tend to go very wrong. As an avid cyclist, I naturally assume that if there was an impact with a car, there must be liability. Sadly, my clients can rarely count on a jury of *my* spandex-bedecked-peers; more likely is a juror who was cut off by a cyclist on the way to jury selection.

The goal of this article is to walk through some of the dynamics of cycling cases and what you can do to make your case better.

I love cars, and hate bikes

The first thing to remember about a bike case is that you are unlikely to have the same high-quality physical evidence that you do in automobile cases. When cars collide, they imprint evidence in their bent metal. With a couple of cell-phone photos of the vehicle damage, your expert can reconstruct the speeds and impact angles of two cars.

Bikes are brittle and they bounce. Significant impacts may leave the bike unscathed; and a minor impact can snap a bike in two.

To further complicate the problem of reconstructing a bike collision, bikes are nimble. What this means is that a defendant in a bike case can tell any story they like about how the bike was moving before they hit him (i.e., “he darted in front of me;” “she was going against traffic;” “they came out from between two parked cars;” “she was wobbling” . . .). If defense counsel said one of these things about a fellow motorist, the jury would



laugh – when they say it about a cyclist – 6 of the 12 will be nodding their heads.

What this means is that much more than with a motor vehicle case, your bicycle case is likely to hinge on your cycling plaintiff’s ability to give credible, coherent testimony about what happened. Sadly, many urban cyclists are going to have a hard time appearing credible for reasons that have much more to do with their youth, “punk affect” and demographics than whether they were in the right.

Dumb equipment questions you should ask

I was once asked to co-counsel on a case that a colleague had filed. At the first meeting I asked a stupid question: “Did your bike have brakes?” When the

client answered no, I looked for the door.

For case-evaluation there are a couple of areas of the bike you should discuss:

- **Brakes:** As hard as it is to fathom, many young (and not so young) urban cyclists ride “fixed-gear” bikes that do not have traditional hand or foot brakes. Do not confuse this set-up with the pedal-brakes common on kids’ bikes and beach-cruisers. In the “fixed-gear” set-up there is no freewheel, so the rider can slow down by slowing their legs. But, needless to say, they cannot stop very well. If your potential client was riding a “fixed gear” bike, consider it a strike against them – the jury almost certainly will.

- **Shoes/Pedals:** Most serious recreational and commuter cyclists will use some sort of system to lock their feet to the pedals. *Most* of these systems are easy for *most* cyclists to clip in, and clip out of. But “most” may not include your client or his system. People who are not yet comfortable with their pedals can struggle to get in and out of them – and while they are struggling with their feet, they can drift dangerously into traffic.

And, there are some “urban” cyclists who like riding with older-style toe-clips. Some race-style toe-clips can be almost impossible to get out of unless you lean against a wall. Cyclists who cannot get out of their pedals do not like to stop and are more likely to run stop signs and red lights.

- **Helmets:** Modern helmets often do not look particularly damaged after an impact. This is because a well-designed helmet is sheathed in a flexible plastic shell which prevents the soft foam underneath from sticking to the pavement and



snapping the rider's neck. Even if the helmet photos do not look like there is any damage, make sure to keep the helmet (and have your client replace it), because internal helmet damage can be significant even if externally the helmet looks fine.

•**Aerodynamic Bicycles:** Serious triathletes and some traditional bike racers will train on special aerodynamic bicycles that allow the rider to get into a very low wind-cheating tuck. The thing you should know about these bikes is that 1) they do not corner well; 2) they do not stop well; 3) they can be very unstable in cross-winds; and 4) the rider's ability to look around can be compromised if they are in a tuck.

In other words, people should not be riding specialized aerodynamic bikes in congested areas, and you should be careful about taking a case where someone was.

No lights, no problem [maybe]

In an urban environment there are a lot of night-time cyclists. Many do not have the legally required lights. This may be foolish on their part, but it is not necessarily fatal to your client's case.

As a matter of simple optics, it is often the case that a reflector will give a car a better visual warning about the rider's presence than a light. Why? Because the reflector is going to reflect right back at the driver (a light may be pointed in the wrong direction) and the reflector is always brighter than the reflected light created by the head-lamp light bouncing off of other surfaces. Tail lights on a bike might be good, but it is hard for a bike-light to out-shine a car light.

The people who make cycling equipment have realized that reflectors are a cheap way to enhance safety and have started integrating flexible, highly-reflective materials into all sorts of bicycle components and clothing. Places to look for reflective materials are in the sidewalls of tires, shoes, helmets, jackets . . . In many instances your client may not know how reflective they were.

Many advanced reflective materials are no longer obvious in regular daylight. So, you may want to collect your client's clothing, equipment, and bicycle and photograph them with a camera or phone that has a nice, strong flash. Often, you can end up with a photograph worthy of a mediation brief.

Dim lights

On the other side of the bike-light debate is the increasing availability of low-cost LED-based bike lights. These lights are attractive, low-weight, affordable – and completely inadequate for urban cycling use.

If a client says, "I had a light," you need to learn as much as you can about the light they had. Bike lights range from the dangerously inadequate \$20 Knog Frog LED (8.5 lumens) to the stadium-grade \$500 Seca 2000 Race (2000 lumens). Which light your client had can significantly change your case.

Also, remember, many cyclists do not think about their rear lights and do not change the batteries when the light becomes dim. You may want your client to bring the light in and make a cell-phone movie of how bright it was before the batteries went dead. A higher-quality rear light will have a USB charger, so ask how often your client charges their rear light (I charge mine every day).

The [overly] social cyclist

For many regular commuters, racers and cycling enthusiasts social media (coupled with GPS and heart-rate devices) has become a part of the cycling experience. And, these people can be very active uploaders and data-gatherers. Far and away the most popular place for people to broadcast their ride accomplishments is on www.strava.com. As with Facebook, you need to ask about your client's Strava account and have them make it private, immediately.

Just as with any social media, Strava is a rich resource for case development and evaluation. A quick scan of your

client's Strava page can reveal how familiar they are with a section of roadway. If your client has ridden through the area where they were hit 500 times (which is not uncommon for some commuters), that fact would tend to suggest that the car had done something unusual.

This data can also tell you how popular an area is with cyclists. For example, when this article was written, Strava had recorded 1,842 people with GPS devices had ridden around the Golden Gate Park Polo Fields a total of 213,387 times. This data can significantly undermine a "cyclist in the wrong place" defense.

The Strava data (or any data recorded by an athletic GPS device, or phone running the right software) can also help you explain how your client was cycling on the day when they were hit. Depending on which device and set-up your client had, you can even find out how fast they were going the moment before they were hit – i.e., did they really "dart" in front of Defendant's car, or had they been going a steady 14 to 16 mph for the last five blocks.

On the flip side, many clients who are still "in a lot of pain" cannot seem to help bragging to their friends on Strava about how fast they had been riding. I recently did an intake with a woman who had set the course record on a particular rocky dirt trail about three months after she had been hit by a car. I have no doubt that she was still in pain, but if that pain was not significant enough to keep her from racing her social-media friends, it was not significant enough for a lawsuit.

By downloading the individual ride data you can learn whether or not your clients were stopping at stop lights, or how their speed on various sections compared to the speed of an average cyclist. Typically, this data is stored in an XML-type data format and can be easily read with Excel or a text-editor, like Microsoft Notepad – at trial you will need an expert, but for case evaluation it does not take more than 10 minutes to learn to read that data yourself.



WARNING: GPS devices do not typically have much on-board data storage and tend to “over-write” the data on a regular basis. So, make sure to get the device, and either upload the data to a Web site like Strava (which will cache for you), or download it into your own servers before it disappears.

The pavement from hell was maintained with the best intentions

No discussion of cycling cases would be complete without a discussion of how cities and counties plan for cyclists – and then rarely follow through with their plans.

In order to get available regional transportation funding; cities, counties, and multi-jurisdictional transit authorities are often required to periodically prepare bicycle transit planning documents. These documents are often prescient in their description of dangerous intersections and pieces of roadway and offer a long list of recommended improvement projects and pavement standards.

Make sure to send a public records request for these documents. I have a very thorough public-records request I have developed and am happy to provide the language.

Unsurprisingly, the bike-friendly utopias described in the transit-planning documents are rarely fully implemented once the transit authority obtains their grant. I had a case recently where there were over 60 recommended improvement projects; ten years later my municipal defendant had undertaken more than 50 of the listed projects – just not the “high priority” one which would have prevented my client’s injury.

In addition to not implementing bicycle-friendly projects, many municipalities do a poor job of making road maintenance crews aware of the standards articulated in the planning documents. I recently took the depositions of three PMKs in the road-maintenance, road-engineering, and transit-planning departments of a wealthy bike-friendly city in the South Bay. None of them were aware of the bicycle transit plan adopted by their own city council or the pavement standards articulated therein.

In addition to planning documents, cities typically have pavement indexing systems. The goal of these pavement indexing systems is to periodically inspect every roadway for degradation and target funding to repairing roadways which 1) have high motor-vehicle traffic and 2) are showing signs of subsidence, water penetration, or other early warnings of impending structural failure.

The uniform metrics used in these pavement indexing systems are often not adjusted for the particular pavement needs of cyclists. For example, a popular pavement indexing software system does not factor in road-edge degradation – so the bicycle “lane” can turn into a Paris-Roubaix worthy minefield, and the indexing software can still give the roadway a clean bill of health. This is a known problem with the pavement indexing software used by many Bay Area transit authorities and is a problem which bicycle advocacy groups have been concerned with for the last 20 years. Often you will find criticisms of the indexing systems articulated in the bicycle-route planning documents.

Municipal planning documents in non-roadway cases

Even if the roadway where your client was riding was pristine, you should still send a public-records request to get the transit planning documents. One of the implicit defenses in many bicycle cases is “roads are for cars, why was a bike there anyway?” The planning documents will often offer clear, authoritative descriptions of what traffic planners expect of cars (speeds and flow) and cyclists, and bike-conscious features of the roadway which may not be readily apparent to you during your site inspection.

At the end of the day, it is always better if your cyclist was doing exactly what transit planners wanted them to do – they were in the right, and would have been safe if the defendant had just followed the rules of the road.



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