Riding without Brakes, Breaking the Law? The Current and Future Legal Outlook on Fixed Gear Bicycles in the United States

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INTRODUCTION

In any big city in the United States, it is common to see cyclists weaving through traffic. Cyclists ride alongside cars in bike lanes and in lanes of traffic. Cyclists often pass cars and overtake them in slower moving urban traffic. If there is a red light, it is normal and legal for a cyclist to ride alongside the cars and the curb to reach the intersection. Often the light will change and the cyclist will take off with a head start. It is a great feeling for a cyclist to be more efficient and faster than the two-ton machines that compete for the road.

On Friday, February 11th, 2011, things were no different in the Mission Terrace in San Francisco, California. Cars lined up at a red light as a pedestrian crossed the street within the crosswalk. A cyclist weaved in and out of traffic, approaching the intersection at a reasonable clip, and possibly hoping the light would turn green before he would have to slow down. He would have coasted along without any problems but for a 61-year-old woman pedestrian, who tried to cross the intersection a little too late. The woman was still in the crosswalk when the light turned green, but the motorists saw her and waited for her to cross. Just as she was about 10 feet from the sidewalk, she collided with the cyclist with great force. Seconds earlier, the cyclist probably thought he had been lucky with the traffic light, and the pedestrian was relieved because she had almost crossed the busy street.

The collision knocked over the woman, sending her to an area hospi-

2. Id.
3. Id.
4. Id.
5. Id.
6. Id.
7. Id.
tal in critical condition.\textsuperscript{8} The cyclist's bike did not have brakes; he was riding a brakeless fixed gear bicycle.\textsuperscript{9}

The police arrived soon after the accident occurred, but they did not cite the cyclist.\textsuperscript{10} The cyclist did not see the pedestrian before the collision because all the cars blocked his view.\textsuperscript{11} The police impounded the bike because riding without a brake is illegal in California, but no citation was issued.\textsuperscript{12} Who is at fault and what is to blame? Are SUV's to blame because they are built so tall that someone in a small car or on a bicycle cannot see over them? Is the pedestrian to blame because she crossed the street too slowly? Is the cyclist to blame for not keeping a proper lookout or riding without brakes? Suppose a car in the right lane was what hit her, the car approached in the same manner as the cyclist. Would the driver be cited? Now, suppose the driver was in a car without brakes, what would be the result?

Many urban cyclists have begun riding fixed gear bicycles. A large percentage of urban cyclists ride the fixed gear bikes without brakes. Bike messengers ride these bikes because of their simplicity, maneuverability, and reliability.\textsuperscript{13} Others ride fixed gear bicycles simply because they are popular with messengers and are very aesthetically pleasing.\textsuperscript{14} The problem is apparent to everyone. A bicycle messenger in San Francisco said, "You go out in the Mission and there are people who think it's cool to ride [without brakes], and they don't know how to do it. That's when people get hurt."\textsuperscript{15}

This article will analyze fixed gear bicycles in our current legal environment. Section I will give a glimpse into bicycle accident history. Section II will define a fixed gear bicycle. Section III will analyze the bicycle brake and the physics behind how a fixed gear bicycle functions. Section IV will outline the current legal outlook in the United States for brake and stopping requirements. Section V will analyze how fixed gear bicycles fit into the current law and how the law may be changed in the future to accommodate this unique type of bicycle. Section VI will briefly outline of the international treatment of fixed gear bicycles and how its international legal status may implicate future legal developments in the United States.

\textsuperscript{8} Id.
\textsuperscript{9} Id.
\textsuperscript{10} Id.
\textsuperscript{11} Id.
\textsuperscript{12} Id.
\textsuperscript{13} Id.
\textsuperscript{14} Id.
\textsuperscript{15} Id.
I. The First Bicycle-Automobile Accident.

Bicycles are frequently mentioned by courts. In fact, bicycles appeared in the reporters long before they were called bicycles. The first mention of a bicycle in a court's opinion was in an 1884 premises liability case in which a woman fell into a cellar window hole as she stepped out of the way of a boy on a bicycle. From that point forward, the frequency of accidents involving bicycles increased steadily as the modern bicycle became increasingly popular.

Everything changed on May 30, 1896 with the unfortunate meeting of Evylyn Thomas of New York City and Henry Wells of Springfield, Massachusetts. Henry Wells was behind the wheel of a new invention, the Duryea Motor Wagon, a horseless carriage as well as one of the first American gasoline powered automobiles. Evylyn Thomas was riding a Columbia Safety Bicycle. Their meeting was the first of its kind, a bicycle-automobile collision. Ever since this fateful accident, issues between bicycles, cars, and pedestrians have been very prevalent in the courtroom.

II. What Is a Fixed Gear Bicycle?

What is called a fixed gear bike today is the closest modern bicycle to the safety bicycle of the 1890s. Bicycles, penny-farthings, and velocipedes all utilized the fixed gear drive train until mass commercialization of freewheel hubs began during the early 20th century.

By the mid-20th century, fixed gear bikes had found their place in the cycling world, mainly for track racing in the Velodrome. Profes-

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16. Gibbons v. Ogden, 22 U.S. 1, 58 (1824), Court mentions that the City of New York had prohibited the use of velocipedes on city streets in 1819.
18. DAVID GORDON WILSON, BICYCLING SCIENCE 25-26 (2004), GORDON considers the Safety Bicycle as the first appearance of what is considered today as a modern bicycle.
20. Id.
21. Id.
22. Id.
23. The term fixed gear bicycle only refers to the drive train that a bicycle utilizes. There are many varieties of fixed gear bikes, including the following: track bikes, conversions, trick bikes, etc. For simplicity, this article will refer to all bikes with a fixed drive train as a fixed gear bicycle unless otherwise specified.
24. DAVID V. HERLIHY, BICYCLE: THE HISTORY 310 (2004). "By the turn of the century, several bicycle makers in the United States and Europe, notably Ernst Sachs of Germany, had introduced freewheels incorporated within the rear sprocket of the safety bicycle. These enabled cyclists to adjust their pedaling cadence at will, and even keep their feet at rest on the pedals while coasting."
25. ALLISON COTTER, CYCLING 39-52 (2002). A velodrome is a bicycle track, either indoor or outdoor, in the shape of an oval. Both ends of the oval are often steeply banked in the track's
sional cyclists also often train on fixed gear bicycles in the offseason to improve their stamina and form.\textsuperscript{26} In the past two decades, cycle messengers and urban recreational riders have increasingly favored fixed gear bicycles on the streets.\textsuperscript{27}

Mechanically, fixed gear bikes have changed very little since the introduction of the Safety Bicycle.\textsuperscript{28} A fixed gear bike, as described by the late bicycle guru, Sheldon Brown, is "a single-speed bike without a freewheel; that is, whenever the bike is in motion, the pedals will go around. You cannot coast on a fixed-gear machine."\textsuperscript{29} Because the drive train of these bikes are ‘fixed,’ a rider who stops pedaling or attempts to coast may be thrown from the bicycle by the pedals.\textsuperscript{30}

III. BRAKES AND FIXED GEAR BICYCLES

Just as the modern day bicycle evolved from the early iterations of bicycles of the 19th century, braking systems also became increasingly advanced over the years. The first brakes on bicycles, called spoon or plunger brakes, consisted simply of a lever that when pulled, pushed a "metal shoe against the tread of" the front tire to slow the bicycle down.\textsuperscript{31} This simple friction braking was not terribly efficient, but it worked well enough on the solid rubber tires for some riders of the time.\textsuperscript{32} Other riders decided to forego the spoon brake altogether and "simply pedaled backward to keep the cranks from spinning, braking turns. Track bikes are raced on a velodrome; these bikes are built with speed and simplicity in mind. Track races are brief and simple so the bikes only have one speed, no brakes, and no water bottles.

\textsuperscript{26} MIKE KALLAL, The Way of the Fixie, CYCLING NEWS, http://autobus.cyclingnews.com/fitness/fixed.shtml “Fixed-gear proficiency has long been thought to enhance road bike ability. By turning elevated RPMs (pedal rotations per minute) on a fixed-gear trainer, conventional wisdom suggests road-bike “spin” can be developed. So, having become adept at the higher fixie cadence, you will manage the somewhat lower rate of turn typical on the road bike with greater efficiency”

\textsuperscript{27} Jocko Weyland, Unstoppable, NEW YORK TIMES, (Apr. 29, 2007), http://www.nytimes.com/2007/04/29/nyregion/thecity/29gear.html?pagewanted=3. Fixed gear bicycles are chosen by street riders due to the simplicity of the fixed gear drive train. Riders prefer these bikes because they lack devices like shifters, derailleur’s, and cassettes that often require adjustment and repair. Many riders also favor fixed gears, claiming to feel more ‘connected’ with their bike while riding. Many urban riders also prefer fixed gear bicycles because there are fewer components on the bicycle to be stolen. See also, SHELDON BROWN ante note 29.

\textsuperscript{28} RONI SARIG, THE EVERYTHING BICYCLE BOOK 9 (1997). John Kemp Starley developed the Safety Bicycle in 1884. This bicycle was one of the first with equal sized wheels and a diamond shaped frame.

\textsuperscript{29} Sheldon Brown, Fixed Gear Bicycles for the Road, SHELDON BROWN, http://www.sheldonbrown.com/fixed.html (last updated Dec. 6, 2010).

\textsuperscript{30} Id.


\textsuperscript{32} HERLIHY, supra note 24 at 262.
the rear wheel." 33 The development of the pneumatic tire called for the development of a brake. 34 A new kind of brake was needed because the old style of spoon brakes would wear through the new pneumatic tires and pop them quickly. 35

Until further brake developments, riders who did not use a spoon brake were forced to continue to slow themselves with the fixed gear drive train or by dismounting the bicycle to stop. The rapid dismount and other braking hazards did not plague riders much longer, however, because fixed gear bicycles were on their way out.

Toward the end of the 19th century, innovation in the cycling world was moving along at a rapid pace. Freewheels were developed soon after the innovative pneumatic tire. The new freewheel began to be a common device on the rear wheel of the bicycle. 36 Because the freewheel allowed the rider to coast and take a break from constant pedaling, the bike required a braking device because pedaling backwards to stop the bicycle was no longer possible. 37 To rectify the brakeless safety bicycle problem, coaster and caliper brakes were developed and implemented on almost all safety bicycles. 38

Coaster and caliper brakes began to ease the braking problem. 39 Coaster brakes dramatically changed the way bicycles worked. Bicycles with coaster brakes used a new style of rear wheel hub that could coast and would function as a brake if the rider applied backwards pressure on the pedals. 40 Caliper brakes are still the most common braking style found on bicycles today. Caliper brakes are the perhaps the most common type of brake seen on road, hybrid, and mountain bicycles today. This style of brake consists of handlebar levers connected to cable operated brakes that apply pressure on the sides of the wheel’s rim to slow the bicycle down.

From this point forward, bicycle technology continued to become more complex and efficient. Derailleurs, cantilever brakes, titanium frames, multiple speeds, internally geared hubs, and disc brakes are

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33. Id.
34. SARIG, supra note 28. In 1888, John Boyd Dunlop developed a new type of inflatable tube for the bicycle. This pneumatic tire would change the world of bicycling forever.
35. Id.
36. HERLIHY, supra note 24 at 310.
37. Id. at 311.
38. Id.
39. BILL HADUCH, GO FLY A BIKE, 25-26 (2004). The coaster brake was introduced in 1889. After the development of the coaster brake, safety bicycles were equipped with them.
only a drop in the bucket of bicycle technology that came about in the 20th century.

Over the years, bicycle technology has vastly improved, resulting in lighter and faster bicycles that are more efficient at putting the pedal power to the pavement. Technology, while making things faster, does not always simplify the machine and its function, as evidenced by a group of cycle messengers in New York City in the 1980s. The messengers did not adopt the newer and supposedly more efficient technology, choosing instead to ride fixed gear bicycles as they made deliveries.\textsuperscript{41} The messengers chose these bikes because they were light, simple, maneuverable, and most of all, they had less components to be stolen.\textsuperscript{42} Because fixed gear bicycles do not have brakes when raced on the track, the first messengers to ride fixed gear bikes on the road did so brakeless.\textsuperscript{43} Over time, people followed these messengers' lead by riding fixed gear bicycles on the road. Some even rode brakeless.

Now, in 2011, fixed gear bikes are a common sight in any urban community or college campus. Brakes only accompany a fraction of the fixed gear bikes that are ridden on city streets. This means that the brakeless fixed gear riders must find other ways to stop their bicycles. As mentioned earlier by Sheldon Brown, “whenever the bike is in motion; the pedals will go around.”\textsuperscript{44} A rider can slow down a fixed gear bike by applying a backpressure\textsuperscript{45} to the pedals while riding, thereby slowing down the bicycle. This is a technique that riders use to regulate their speed while riding, but it is not commonly used for stopping because it takes a lot of effort to slow down the bike to a complete stop using the back-pedaling technique. Because back-pedaling is not an effective way to quickly stop, riders who choose to ride brakeless must master the ability to skid and skip-stop in order to slow down the fixed gear bike quickly if needed.\textsuperscript{46} To skid or skip-stop, a rider must do the following:

If you lock one leg at the bottom of the pedal stroke, as the pedal rises it will start to lift your body upward.

\textsuperscript{41} Weyland, supra note 27.
\textsuperscript{42} Id.
\textsuperscript{43} Brakeless is the commonly accepted term for riding a fixed gear bicycle without a hand brake or other braking device. It will be explored later whether or not a brakeless fixed gear is actually 'brakeless' when it comes to statutory provisions.
\textsuperscript{44} Supra, note 29.
\textsuperscript{45} How to Ride a Fixed Gear Bike, http://www.wikihow.com/Ride-a-Fixed-Gear-Bike. This technique is called back-pedaling.
\textsuperscript{46} Id.
When the cranks get horizontal, pull up on the front pedal, while pushing down on the rear one.

Because your body will have acquired upward momentum, when you yank up with the front foot this will temporarily partially un-weight the rear wheel, making it possible to initiate a skid.\(^47\)

Skip-stopping takes some practice to master and can be easier for smaller riders who can unweight their rear wheel more easily by shifting their weight towards the front of the bicycle. The difference between skip-stopping and skidding is simple: skidding is the prolonged locking of the rear wheel, allowing the rider to skid on the rear tire all the way to a stop; skip-stopping, on the other hand, is the intermittent locking of the rear wheel to regulate the rider’s speed, similar to pumping a brake on a car without ABS.

The skip-stopping and skidding alternatives to stopping may seem sufficient for safe riding, but they require greater awareness from the rider and more dexterity than a normal handbrake. The other disadvantage of these stopping alternatives is that any rear wheel braking is less efficient than front or a front and rear combination braking.\(^48\)

This is due purely to the physics and principles of momentum that apply to the bicycle and rider when attempting to stop. These principles are well explained by John Stevenson of CyclingNews.com as he discusses bicycling science:

\[\text{[T]he maximum deceleration of a crouched rider on a standard bike} \]
\[\text{... on a dry road is 0.56g. Try to brake any harder than that and you}\]
\[\text{go over the handlebars, which is the limit condition, as the limit}\]
\[\text{from tyre adhesion of vehicles that don’t pitch over (tandem [bi-}\]
\[\text{cycles], recumbent [bicycles], and cars) is about 0.8g.}\]

If you brake with only the rear wheel, according to Wilson, the limit is 0.256g, because braking effectively shifts your weight forward, reducing the load on the rear wheel to the point that it skids at that deceleration. Once a tyre is skidding, its braking effectiveness is reduced because you no longer have sticky solid rubber in contact with the road, but a lubricating layer of molten rubber.\(^49\)

Simply put, the front brake puts out over twice the braking power as the rear brake. Furthermore, once the rear brake initiates a skidding rear tire, the braking effectiveness is reduced even further. The science behind braking indicates that the dangerousness of using a front brake is a bit of a myth, and the front brake should in fact be

\(^{47}\) Id.


applied with a much heavier hand than the rear brake for maximum braking efficiency.50

IV. Statutory Requirements for Bicycle Brakes

In the late 19th century, the New York State legislature recognized that bicycle riders are entitled to the same rights on the roadway as carriages.51 This trend continued as the courts began to decide cases about cyclists and their duties, weaving cycling into the common law.52 The city of New York included bicycles in the city's traffic ordinance system in 1897, which started the trend of codifying bicycles in various regulations.53

Since the bike boom of the late 19th century, the Federal Government of the United States,54 all 50 states,55 various municipalities,56 and private regulatory groups57 have all followed New York's lead and codified rules regarding bicycle use on the nation's roadways. These codifications may include requirements for lights, reflectors, horns and bells, helmets, and of course, brakes.

It is best to begin the discussion on brake regulations with the Uniform Vehicle Code (UVC). Although a private group develops the UVC, most states and municipalities have adopted its contents in some form or another. Section 12-706 of the UVC states, "[e]very [b]icycle shall be equipped with a brake or brakes which will enable its driver to stop the vehicle within 15 feet from a speed of 10 miles per hour on dry, level, clean pavement." Although this is the suggested standard, no states except one require the rider of a bicycle to meet the standard of stopping within 15 feet.58 Some states have relaxed the standard and require the bicycle to stop within 25 or more feet.59

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51. MiONSKE, supra note 19 at 74.
52. Id.
53. Id.
55. MiONSKE, supra note 19 at 75.
56. See e.g., Chi., Ill., Mun. Code tit. 9, ch. 52 (1990).
57. See e.g., Uniform Vehicle Code, written by The National Committee on Uniform Traffic Laws and Ordinances.
58. Pennsylvania requires a rider going 15mph to stop within 15 feet. 75 PA. CONS. STAT. § 3507(c).
   Every bicycle and motorized bicycle shall be equipped with a brake or brakes which will enable its driver to stop the bicycle or motorized bicycle within twenty-five feet from a speed of ten miles per hour on dry, level, clean pavement. R.I. Gen. Laws. § 31-19-10 (2009) Lamps and other equipment on bicycles, (e) Brakes. No person shall sell a bicycle, new or used, that is not equipped, and every bicycle, excluding bicycles that are
Massachusetts, for example, has a braking distance requirement that is more relaxed than the UVC. The General Laws of the Commonwealth of Massachusetts state, "[e]very bicycle operated upon a way shall be equipped with a braking system to enable the operator to bring the bicycle traveling at a speed of fifteen miles per hour to a smooth, safe stop within thirty feet on a dry, clean, hard, level surface." Most other states' vehicle codes do not even mention a required stopping distance. For example, Illinois requires that "[e]very bicycle shall be equipped with a brake which will adequately control movement of and stop and hold such bicycle." The Illinois statute makes no mention of stopping distance or any additional requirements. Many states have a skid requirement instead of a stopping distance requirement. Oregon's Vehicle Code previously included a skid provision and stated that, "[a] bicycle must be equipped with a brake that enables the operator to make the braked wheels skid on dry, level, and clean pavement." The current Oregon statute has been amended and now states that "[a] bicycle must be equipped with a break that enables the operator of the bicycle to stop the bicycle within 15 feet from a speed of 10 miles per hour on dry, level, and clean pavement." Although it may seem that riders in certain states may have strict or relaxed braking requirements, riders must remember to look toward the laws of the city they are riding in to make sure there are no additional requirements. For example, riders in Illinois may rejoice because their braking requirements are seemingly more relaxed with no stopping distance or skid requirement. This leaves riders under the jurisdiction of their local laws. Riders in Chicago, for example, are subject to a more stringent standard. The Municipal Code of Chicago states that, "[e]very bicycle shall be equipped with a brake that will enable the operator to make the braked wheel skid on dry, level, clean pavement." especially designed and made for off-road use, shall be equipped with a brake or brakes which will enable the operator to stop the bicycle within twenty-five feet (25') at a speed of ten (10) mph on dry, level, clean pavement.

60. MASS. GEN. LAWS ch. 85, § 11(B)(7) (2011).
61. Id.
63. Skid, Merriam-Webster, http://www.merriam-webster.com (last visited Apr. 1, 2011). Skid means to slide without rotating (as a wheel held from turning while a vehicle moves onward).
64. OR. REV. STAT. § 815.280(2)(a) (2001).
In addition to national, state, and municipal codes, other sources of law exist regarding bicycle brakes. The United States Consumer Product Safety Commission\(^67\) (CPSC) requires that all bicycles, except track\(^68\) and sidewalk bicycles\(^69\), sold in the United States have brakes. The CPSC also requires that a bicycle that only has hand brakes must “stop within 15 feet when tested with a 150-pound rider riding at 10 miles per hour.”\(^70\) Although these requirements are far more stringent than the state stopping requirements and the Uniform Vehicle Code’s bicycle requirements, they beg the question for riders and attorneys alike: how are the CPSC requirements are enforced?

Bob Mionske has answered this question in his book, Bicycling and the Law:

> The task of enforcing CPSC regulations is left to the CPSC. Although the CPSC regulations are not traffic statutes that the states enforce, they have been adopted as the bicycle brake standard in the Uniform Vehicle Code, and thus could conceivably become state law... If a state adopted the UVC standard, the CPSC standards would, in effect, become enforceable by local and state law-enforcement authorities.\(^71\)

Even though it seems far-fetched that states will fully adopt the Uniform Vehicle Code standard, Bob Mionske’s warning that this could lead to the full-scale adoption of the Consumer Product Safety Commission’s standard is justified for safety reasons. If this standard were enforced, there would be no question that a brakeless fixed gear bicycle is not legal because the bicycles are literally unequipped with physical brakes.\(^72\)

The laws analyzed so far consist of skid requirements, stopping distance requirements, and arguably antiquated ‘adequate’ brake requirements. As of the date of this article, only one compilation of code in the United States contains more specific terms and is accom-

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68. 16 C.F.R. § 1512, “Are any bicycles exempt from the requirements? Yes. Track bicycles designed and intended for use in competition that have tubular tires, a single crank-to wheel ratio, and no freewheeling feature are exempt.”

69. 16 C.F.R. § 1512, sidewalk bicycles are a type of children's bicycle that have a seat to ground height of less than 25 inches and are subject to different regulations.

70. Requirements for Bicycles 16 C.F.R. § 1512.18(d)(2)(vi).

71. MIONSKE, supra note 19 at 76. Bob Mionske is a two-time Olympic cyclist, an attorney who specializes in bicycle law in Portland, Or., and a writer on all bicycle law topics.

72. MIONSKE, supra note 19 at 76.
modating of the fixed gear bicycle within its bicycle law. Title 18 of the D.C. Municipal Regulations states,

Each bicycle shall be equipped with a brake [sic] which enables the operator to cause the braked wheels to skid on dry, level, clean pavement; provided, that a fixed gear bicycle is not required to have a separate brake, but an operator of a fixed gear bicycle shall be able to stop the bicycle using the pedals.\footnote{73}

After decoding all of the national regulations, state codes, municipal laws, and third party compilations, the state of bicycle brake law is left in flux. There are four ways that bodies are regulating brakes on bicycles: (1) maximum braking distance requirements when the bicycle is going a certain speed, (2) skid provisions that require the rider to skid the rear wheel and come to a stop, (3) general laws that only require the rider to be able to stop his or her bicycle, or (4) a law-making body may become more specific and even include fixed gear bicycles in the statute. The question that follows is: how do fixed gear bicycles fall into the first three of these categories of statutory provisions, which provide no specific help concerning fixed gears?

V. ARE BRAKELESS FIXED GEAR BICYCLES REALLY 'BRAKELESS' UNDER THE LAW?

The question for cyclists, bicycle manufacturers, and attorneys alike deals with the statutory classification regarding brakeless fixed gear bikes. Do brakeless fixed gear bikes qualify as having a 'brake' for bicycle regulations if the rider can skid and stop the fixed gear bike with his or her legs? It is certain that in at least one major metropolitan area, Washington, D.C., no rider is left wanting further classification of fixed gear bicycles because the District’s vehicle regulations have incorporated a fixed gear bicycle provision into its laws.\footnote{74}

The issue of whether a fixed gear bicycle itself can constitute a brake if the rider can meet the statutory stopping or skidding requirements has appeared in the Oregon Courts a few times in recent years. In June 2006, Ayla Holland, a bicycle messenger, was given a ticket by a Portland Police officer for violating the Oregon Revised Statute,\footnote{75} which at the time required a bicycle to have a brake capable of a skid.\footnote{76} The officer told Holland that she must equip her fixed gear

\footnotetext[73]{73. Wash., D.C., Municipal Regulations tit. 18, ch. 12, § 1204.1 (2006).}
\footnotetext[74]{74. Id.}
\footnotetext[75]{75. OR. REV. STAT., supra note 64.}
bicycle with a front brake in order to avoid the fine of $73.00. Holland was not pleased with the ambiguousness of the brake language in the Oregon statute so she challenged the ticket in front of a traffic court judge.

The judge concluded that although a bike messenger may be able to stop a fixed gear bicycle with his or her legs, "[t]he brake must be a device separate from the musculature of the rider." Although this was just one trial judge's interpretation of the "brake" language in the Oregon statute, did this set the standard for what is a "brake" in motor vehicle codes as they apply to fixed gear bicycles? The answer is no. Ayla Holland's case did not set the standard of interpretation in the Oregon traffic courts or anywhere else.

Just two months later another Portland cyclist received a ticket for not having a hand brake on his fixed gear bicycle by the same police officer that ticketed Ayla Holland. John Boyd, another Portland cyclist, also decided to challenge his fix-it ticket in court. Although Boyd faced the same infraction, officer, and court system, he was in front of a different judge who was more open to a wider reading of the statute. Because there was no statutory definition of brake and the rider of a fixed gear "enables the operator to make the braked wheels skid on dry, level, and clean pavement," the trial judge found that Boyd was not in violation of the Oregon Vehicle Code.

Despite the statute having been subsequently amended and the skid requirement removed, the new stopping requirement would pose the same problems, because the riders found themselves in court not because

77. The irony of requiring a front brake in this situation is that the Oregon Statute requires a skidding stop. If the bicycle had a freewheel in the back and a only a front brake, the bicycle would not be able to skid at all. The skidding requirement in Ayla Holland's situation is already met with her fixed gear drive train, not with the addition of a front brake.

78. MAUS, supra note 76.
79. Id.
80. Id.
81. Ayla Holland appealed this decision in Oregon v. Ayla Holland. See MIONSKE, supra note 19.
83. Nycole Price, What is a Fix-it Ticket?, WiseGeek.com, http://www.wisegeek.com/what-is-a-fix-it-ticket.htm (last visited Apr. 1, 2011) (A fix-it ticket is a type of ticket for vehicle infractions that allow the offender to correct the violation in order to avoid paying the fine of the ticket).
84. MAUS, supra note 82.
85. OR. REV. STAT., supra note 64.
86. MAUS, supra note 82.
they were incapable of a skid but because they were not equipped with a brake.\footnote{OR. REV. STAT., supra note 65.}

At this point, there have been trial court decisions that came down on both sides of the question. Some judges believe that the fixed gear mechanism and the rider's legs do qualify as a brake for statutory purposes,\footnote{Note, they only qualify as a brake and satisfy the statute if the rider actually has the ability to perform a skid or skip-stop. It is still undetermined if this has to be proved in court when challenging a ticket.} and they will strike down any brake violations given to fixed gear cyclists. Other judges are under the impression that the word 'brake' in the statute means that there must be an actual device designated as a brake for the cyclist to use.\footnote{MIONSKE, supra note 19 at 77.} These judges are even satisfied with a front brake if the statute does not specify which brake is required.\footnote{It is counterintuitive to allow a front only brake to satisfy the statutory requirement because, as discussed earlier, many statutes (including Oregon) require the cyclist to perform a skid. A skid is not possible with a front brake.}

Because the courts in Oregon have come down on both sides of the issue, it is important to determine which is more logical and therefore, the most likely outcome in future cases. Most definitions come to the same conclusion: a brake is a device for arresting,\footnote{Brake, Merriam-Webster, http://www.merriam-webster.com/dictionary/brake, (last visited Apr. 1, 2011).} inhibiting,\footnote{Brake, Wikipedia, http://en.wikipedia.org/wiki/Brake, (last visited Apr. 1, 2011).} or stopping motion.\footnote{Brake, The Free Dictionary, http://www.thefreedictionary.com/brake, (last visited Apr. 1, 2011).} The next question in the logical analysis is: what is the definition of a device? In defining “device,” the analysis gets a little hairy. One common definition proffered by Merriam-Webster is, “something devised or contrived: as a piece of equipment or a mechanism designed to serve a special purpose or perform a special function.”\footnote{Device, Merriam-Webster, http://www.merriam-webster.com/dictionary/device, (last visited Apr. 1, 2011).} This definition is what many people, including Ayla Holland's trial judge, would attribute to the brake requirement in bicycle statutes. However, the other definition offered by Merriam-Webster is, “something devised or contrived: as a plan, procedure, or technique.”\footnote{Id.}

It is hard to determine if the plain and logical meaning of “a brake that enables the operator of the bicycle to stop the bicycle within 15 feet from a speed of 10 miles per hour”\footnote{OR. REV. STAT., supra note 65.} leads to the conclusion that
the brake requirement is a device, a technique, or even both. The analysis of the language and the Courts' results in Portland suggest that a skillful attorney will be able to argue either side of this issue and reach a favorable result.

If this is still an open issue for the appellate courts or the legislature to decide, where are they heading and how specific will they have to be? As of now, Washington, D.C. is the only jurisdiction in the United States that has put pen to paper and decided how it stands on the issue of fixed gear bicycles. Washington, D.C. has set the standard for bicycle advocates everywhere. Even though the brake language could be interpreted either way, having the fixed gear exception codified in the nation's capital has effectively solved the interpretation issue for all future cases. Even though Washington, D.C.'s motor vehicle regulations are far from enforceable in other jurisdictions, it is now an official interpretation on the books. This law will have an effect on decisions and future legislation all around the country, simply because they made the distinction that a brake is not a technique, but a piece of equipment.

In the summer of 2007, a year after the codification of the Washington, D.C. amendment, the Oregon State Legislature began the process of amending the Oregon Revised Statutes braking requirement in ORS 815.280(2)(a). The proposed amendment was going to add, "except that a fixed gear bicycle is not required to be equipped with a separate brake." This amendment would be the first addition to cycling laws to accommodate fixed gear bikes since the Washington, D.C. amendment in 2006. In the end, however, this amendment was struck from the Oregon Senate bill because some of the senators were not "comfortable" with the fixed gear clarification.

The failed attempt to amend the Oregon Revised Statutes brings up another pertinent issue: how would this change to the law promote the legislative purpose, presumably of safety, as proposed, if it was lacking language linking it to the original Oregon braking requirement? Compare the proposed Oregon statute to the Washington, D.C. statute, which includes the language of, "but an operator of a fixed gear bicycle shall be able to stop the bicycle using the pedals," to the provision

97. Mionske, supra note 19 at 77.
98. See supra note 73.
100. Id.
101. Id.
including fixed gear bicycles from having an extra brake. Does the first part of the Oregon statute apply to the fixed gear exception? Is there a "brake" if the rider can stop within the proscribed distance even if technically no braking device?

It is likely that the Oregon state senators were not comfortable with the amendment to the bicycle brake requirements because it did not set out any requirements for actual fixed gear riders. As discussed earlier, it is a fact that the fixed gear bicycle is capable of coming to a skidding stop that is possibly within 15 feet while traveling at 10 miles per hour. What is still at issue is whether or not every fixed gear rider is capable of this maneuver. The judge in Ayla Holland's traffic court case stated it best when he said, "Take me for instance. I don't have leg muscles as strong as a messenger. . . how would I stop safely?" This question is paramount to writing new legislation to incorporate fixed gear bicycles. It would be unwise to codify the exemption for fixed gear bicycles with a loophole that could potentially give riders who lack the ability to skid their fixed gear bicycles the green light to ride them on public roads at risk to pedestrians, other cyclists, their own well being, and even motorists.

Although it would be difficult to predict how many fixed gear riders lack the ability to make their fixed gear bicycle skid or skip-stop without a thorough investigation into a large sample of riders and their physical abilities. It is likely, as the judge in Ayla Holland's case mentioned, that some riders would lack the musculature to lock the rear wheel and skid the bicycle to a stop in the required distance. It is also likely that some riders are simply too heavy to properly unweight the rear wheel to initiate the skid. Other than those groups who have the physical inability to perform the skid-stopping maneuver, there is certainly a large group of beginner riders who have not yet mastered the skill. Even if the new riders would eventually master the skill, it would not be wise to allow them to ride on city streets during their learning period without a backup brake.

VI. INTERNATIONAL TREATMENT OF FIXED GEAR BICYCLES

Another way to come to a consensus on the legality of fixed gear bicycles is to look at the treatment of these bicycles in the international cycling community. Even though most countries have their own bicycle braking laws, it is best to begin with an international consensus on what types of brakes bicycles are required be equipped with. In

102. See supra note 73.
103. MAUS, supra note 76.
1968, the United Nations Economic and Social Counsel held a conference in Vienna and established an internationally recognized Convention on Road Traffic.104 69 countries ratified the Convention.105 Despite most of the Convention being focused on automobiles and trucks, the drafters of the Convention included three requirements for bicycles.106 Bicycles without an engine shall “have an efficient brake,” a bell, and both front and rear lights.107 Coincidently or not, the rest of the international community meets this very minimal “efficient brake” requirement.

The United Kingdom requires every bicycle on the road to be equipped with “two independent braking systems, one acting on the front wheel(s) and one on the rear.”108 Although this may seem like a requirement for an actual braking device, the United Kingdom’s National Cyclists’ Organization, the CTC, has found that the Pedal Bicycle Safety Regulations for bicycle brakes has been interpreted to mean, “a fixed wheel drive counts as a braking system—on that wheel or wheels.”109 So although the United Kingdom requires two brakes, they likely allow for the fixed gear mechanism to satisfy the rear brake requirement.

Closely related to the United Kingdom are the laws of Australia and New Zealand. Western Australian law states, “[a] person shall not ride a bicycle that does not have... at least one effective brake.”110 Despite the fact that this Western Australia requirement may be interpreted either way like the similar law in the United States, the national Australian Competition and Consumer Commission has started cracking down on fixed gear bicycles that are sold without a front brake.111 Although, as mentioned earlier, the United States Consumer Product Safety Commission has a similar requirement for manufactures of bicycles. The Australian counterpart actually enforces their brake requirement on resellers of bicycles, not

106. Convention on road Traffic, Ch. 5, Art. 44, §1(a)-(c), Vienna 8 Nov. 1968.
107. Id.
 RIDING WITHOUT BRAKES

So although not requiring two brakes like the United Kingdom, a fixed gear bicycle will not be legal unless it has a front brake in addition to the fixed gear mechanism, which is virtually the same result as a fixed gear bicycle in the United Kingdom.

New Zealand’s law, however, is a bit more ambiguous when it comes to the legality of fixed gear bicycles. The New Zealand Transport Agency’s Official Code for Cyclists states that a bicycle must have “[g]ood brakes on the front and back wheels (or, if the cycle was made before 1 January 1988, a good brake on the back wheel.” Because New Zealand’s brake requirements are essentially the same as the United Kingdom’s regulation, it is a safe assumption that a fixed gear drive train may satisfy the rear brake requirement if argued properly.

In the summer of 2009, Germany made the news regarding fixed gear bikes as police in Berlin began confiscating fixed gear bicycles and giving fines to riders who are caught riding without brakes. German law requires, “all bicycles used on the street have front and rear brakes.” Soon after the news about the Berlin de-facto fixed gear ban hit the wire, a story was published to Der Spiegel’s website, reporting that a court in Bonn ruled that a fixed gear rider’s fine should be overturned because the fixed gear mechanism is a “part of a vehicle that serves to reduce that vehicle’s speed,” and therefore is a brake under the law. It is interesting that the court reversed the fine, because officials argued that the rider’s bicycle still did not meet the two-brake requirement. The issue remains unsettled in Germany, however, because as the author of the article points out, this traffic court’s decision is unlikely to “serve as precedent elsewhere in the country.”

112. Id.
115. Still No Fix for Fixies: German Court Rules in Favor of Fixed-Gear Cyclist, Der Spiegel, (Aug. 7, 2009), http://www.spiegel.de/international/germany/0,1518,641075,00.html.
116. Der Spiegel is a weekly German news magazine.
117. Der Spiegel, supra note 115.
118. Id.
119. Id.
The French Ministry of the Interior briefly covers bicycle safety requirements for persons riding on French roadways. Other than a light, bell, and reflector requirement, the French Government requires that each wheel be equipped with a brake. More specifically, it says, “Braking: each wheel must be equipped with a braking device.” Although this seems like a specific requirement for a brake on each wheel, perhaps the argument can be made that the fixed gear drive train satisfies the braking device requirement for the rear wheel. Regardless, a brake will be required on the front wheel, which still means brakeless fixed gear bicycles are prohibited under French law.

Conclusion

Even with a thorough exploration of fixed gear bicycles, their history, inner workings, statutory treatment, and international status, it is rather difficult to come to a conclusion on the future legality of riding a brakeless fixed gear bicycle. Despite their increasing popularity in the international community, it is readily that brakeless fixed gears do not have much legal support at a quick glance of their statutory treatment in various countries as mentioned above. Regardless of this statutory treatment, it can be argued that the fixed-gear drive train counts as a brake in the U.K., this might not be a viable argument much longer if more accidents occur involving fixed gear bicycles, or if a decision in the courts strikes the argument. Riders in the Southern Hemisphere should install some brakes and ride on, because the current trend against brakeless bicycles in Australia is picking up steam and it is likely that New Zealand will also follow this interpretation. The German government has already expressed its dislike for brakeless fixed gear bicycles, leading riders to believe that there is not much time until a legislative ban comes into effect.

In the United States, Washington, D.C. is the only city with fixed gear language on the books. This trend started to spread to Oregon but was shut down as trial courts ruled both ways on the legality of a brakeless fixed gear bicycle. Most likely we will see the next move out of Oregon. Because Portland has been regarded as the second...

121. Id. Translation from: “Freinage: chaque roue doit être équipée d’un dispositif de freinage.”
122. Pedal Cycles, supra note 108.
123. Western Australia Consolidated Regulations, supra note 110.
124. LEVITT, supra note 114.
125. See supra note 73.
126. MAUS, supra notes 76, 82.
most bicycle-friendly city in the United States, it is no surprise that the most recent cases regarding fixed gear bicycles have taken place there. The future of brakeless fixed gear bicycles in the United States hinges on two things. First, more states can adopt a statute like that of Washington, D.C. and specify stopping requirements for fixed gear bicycles. Or a traffic court case can be reviewed on appeal, giving us the first definitive appellate opinion of whether or not a fixed gear drive train serves as a valid brake under state law. In either case, any decision or legislative action will likely spur more action in other cities and states, finally settling the debate of the legality of the fixed gear bicycle on American streets.

If an accident were to occur, it is very likely that a cyclist who is riding without brakes could be found to have been negligently riding her bicycle. One thing is for sure though, regardless of negligence or legality, your safety as a rider and the safety of pedestrians should be the first priority. Cyclists should always ride with at least a front brake on a fixed gear bicycle just in case they need to stop to avoid an accident or to have a backup if the chain breaks. Until the issue is settled, cyclists should be weary of riding their bikes without brakes, illegal or not.

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128. MIoNSKE, supra note 19 at 77.
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