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## **America Should Not Discriminate Against Bicycling: The Case Against the Anti-Cyclist Discriminatory Laws**

### **1 Traffic Law for Bicyclists**

In all American states persons riding bicycles “shall have all of the rights and all of the duties applicable to the driver of any other vehicle ...” (Uniform Vehicle Code 11-1202) That is as it should be; if all drivers operate by the same rules they move harmoniously; if some drivers were required to operate by different rules, then the two classes would be moving along different paths and colliding with each other.

However, motorists didn't like the idea of giving slow cyclists the right to delay motorists. Therefore they took away cyclists' right to use most of the width of the roadway: “Any person operating a bicycle ... shall ride as close as practicable to the right-hand curb or edge or the roadway ...” (UVC 11-1205) That was first enacted about 1940 (1944 for the UVC). There was no study of the reasons or the results; motorists wanted this law, so they got it.

The first time that this law was subjected to official technical scrutiny was during the operation of the California Statewide Bicycle Committee in the early 1970s. This committee was created by the legislature ostensibly to recommend changes in traffic law for cyclists. (I, John Forester, forced the committee to engage in this technical scrutiny. The committee did not want to scrutinize this law; their concealed assignment was to further restrict cyclists' use of the roadways by means of bikeway laws.) But the committee was forced to admit that there were many situations when cycling far to the right (hence the label FTR law) was dangerous. Because the committee's assigned but concealed

task was to strengthen the restrictions on cyclists, they could not recommend repeal of the restrictive FTR law. Neither could they approve a law which sometimes required dangerous cycling, lest the whole law be invalidated by the courts. Therefore, they added a group of exceptions to this law, saying that FTR did not apply if any of these conditions were present. This occurred in California in 1976, and in the UVC in 1979.

Therefore, the following condition exists. The basic law gives cyclists the rights and duties of drivers of vehicles. The first part of the second law denies cyclists the general right to use the roadway, takes it away from them. The second part of the second law then returns some part of that right whenever some special condition applies. Everybody understands the legal default requirement that cyclists ride FTR, while very few even know about the special conditions which, some times under some conditions, remove that requirement.

### **2 FTR & Its Excuses**

Motorists presented a series of public arguments to justify the FTR law.

- 1: Motorist Convenience. But no, while motorist convenience was the real motivation for the FTR law, that was never mentioned in public, because the public would never accept such a self-serving excuse.
- 2: Cyclist Safety. Stay at the edge of the road where you'll be safe.
- 3: Child Incompetence. When the California Highway Patrol argued for California's initial FTR law, it argued that child cyclists needed the

FTR law because it was so simple that any child could understand it.

- 4: Cyclist Incompetence. The motoring representatives who composed all but one of the California Statewide Bicycle Committee argued that the FTR law was required because most cyclists were not capable of obeying the rules of the road for drivers of vehicles.
- 5: Motorist Productivity. Motorists have argued that highways are a scarce resource that should be operated in the most efficient way. That is, with traffic at the highest usable speed, thus excluding non-motorized traffic.

As plausible as these (not counting number one) seem to be, not only do they have no evidence to support them, they all have sufficiently obvious defects to disprove them, as will be discussed later. They are all self-serving excuses dreamed up by motorists interested in promoting the superior status of motorists among the roadway traffic without regard for the welfare of cyclists.

### **3 Discrimination: Motorist Superiority & Cyclist Inferiority**

Most drivers of vehicles have all the rights and all the duties stated for them in the rules of the road section of the vehicle code. The one exception is cyclists. According to the first part of the FTR law, they have only those rights that can be exercised while close to the edge of the roadway; they have no rights elsewhere on the roadway. In the case of a car-bike collision elsewhere on the roadway, the cyclist can be accused of causing the collision simply by being where he was. This principle is well understood by both the general public and by police officers, as evidenced by both words and actions.

Clearly, this is discrimination against cyclists, no matter what other names are also applied. Since both motorists and cyclists are people, supposedly equal before the law in the use of public facilities, this discrimination is not lawful unless there is a valid reason for it. No valid reasons have been offered, as stated above and demonstrated later. The only reasonable inference is to look to who is benefited: motorists, who enacted the FTR law, think, rightly or wrongly, that that law makes motoring more convenient. That's all there is to it: nothing else. The FTR law discriminates against cyclists in favor of motorists for no other reason than the convenience of motorists.

## **4 Obeying The Rules Of The Road Is Safer Than Disobeying Them**

One would think the above paragraph title would be obvious, but most American readers believe that, for cyclists, it is false. The emotions of these readers are overwhelmed by the greatly exaggerated fear of same-direction motor traffic and the false belief that FTR cycling is required for safety. To an approximation, about 5% of car-bike collisions occur between straight-ahead cyclists and straight-ahead motorists, while 95% occur because of crossing or turning movements by either, or both, parties. For urban areas in daylight, the smaller proportion is more nearly 2%. In short, the popular superstition about the traffic dangers of cycling is exactly opposite the facts.

Furthermore, according to the best evidence, those groups of cyclists who are most likely to obey the rules of the road for drivers of vehicles (RRDV) have a car-bike collision rate per mile only 20% of that of the general public cyclists, who do not obey the RRDV.

One may argue that these "club cyclists" show the result of greater experience. That is correct, but the result of greater experience is a greater tendency to obey the RRDV. Obeying the RRDV is so much better than FTR cycling that cyclists, once they learn the advantages of obeying the RRDV, do not regress to FTR cycling.

Those cyclists who attempt to be safe by staying out of the way of same-direction motor traffic, using the FTR method, put themselves in greater likelihood of being hit in or by a turning or crossing movement, while at the same time failing to pay attention to the crossing and turning movements that constitute by far the greater danger. This is traffic incompetence. The cyclist who obeys the RRDV appreciates the advantage of understanding the traffic pattern and paying greatest attention to his own turning or crossing movements or those of the motorists around him. This is traffic competence.

## **5 Cyclist Incompetence Does Not Justify FTR**

It is argued that the traffic-incompetence of American cyclists justifies the FTR laws. This argument can be made in two ways. One way argues that cyclists are not capable of obeying the rules of the road for drivers of vehicles (RRDV).

The other way argues that American cyclists don't want to obey those rules.

None of those who argue that cyclists are not capable of obeying the RRDV has ever identified any RRDV that cyclists are not capable of obeying. The RRDV require only normal vision, modest physical abilities and modest mental abilities. Just riding a bicycle does not render its rider deficient in these abilities. No, this argument gets phrased in different terms, that cyclists lack the horsepower to stay up with traffic and lack the courage to do so. As is discussed elsewhere, going as fast as other traffic is not a legal requirement.

The argument about courage is just plain false; it depends on one's emotional state. When one believes in the safety of FTR and the exaggerated danger of same-direction motor traffic, one sees leaving the FTR position as dangerous. However, both of these beliefs are false, which is what makes acting in accordance with these superstitions a phobia. The moment that the cyclist develops confidence by obeying the RRDV, he finds that the supposed dangers have disappeared, were never present.

The argument that American cyclists don't want to obey the RRDV has much truth in it. After decades of false motorist propaganda about staying safe by riding FTR, obeying the RRDV appears to be not only dangerous but anti-social.

The fact that most Americans want cyclists to ride dangerously in the FTR manner instead of safely by obeying the RRDV is an unpleasant fact that Americans have to live with. There is no political possibility that Americans could require that cyclists obey the RRDV; the cyclist-inferiority phobia is too strong. But by the same argument, there is no justification for requiring cyclists to ride in the FTR manner, when most will do it anyway. The supposed justifications for requiring FTR are all disproved in this paper.

American society has to realize that the style of cycling it likes, FTR cycling, prevents cyclists from acquiring the safe skills of obeying the RRDV. However, that social desire must not be allowed to prevent cyclists from acquiring the safety skill of obeying the RRDV, as by requiring FTR cycling. America has to accept both cycling according to the RRDV, because that meets the traffic engineering requirements for safety, and cycling in the traffic-incompetent FTR manner, to suit the populace. A legal system allowing both styles of cycling requires repeal of the FTR laws.

## 6 Traffic Engineering of the Overtaking Movement

One argument for the FTR position is that it creates more opportunities for motorists to overtake cyclists than would occur if cyclists were allowed to occupy the lane. That is, motorists believe that, if the cyclist rides FTR, motorists can slide through the gap between the cyclist and the traffic in the adjacent lane.

Any valid analysis must be of safe overtaking movements; it must not be of dangerous overtaking movements. The typical car is about 7 feet wide, the cyclist is about 2 feet wide, the clearance required for safety between the cyclist and the car is, where it is specifically defined by law, 3 feet, and the clearance required between the cyclist and roadside objects is 1 foot. That is 13 feet, without considering vehicles as wide as trucks and buses. The typical standard lane is 12 feet wide, with lane widths being reduced to 11 or even 10 feet in tight situations. Therefore, typical motorists cannot safely overtake cyclists riding FTR without using some of the adjacent lane.

Drivers may lawfully intrude into a lane only when that lane is clear of traffic for a sufficient distance to be safe. On multi-lane roads the required length of clear lane may be quite short, but on two-lane roads, where traffic in the adjacent lane is traveling in the opposite direction, it is much longer, and the lateral position of the cyclist (FTR or occupying the lane) does not significantly change these distances.

Therefore, the ability of a motorist to safely and lawfully overtake a cyclist is controlled by the traffic in the adjacent lane and the sight distances along the road and is not affected by the lateral position of the cyclist within his lane. Therefore, the argument that requiring cyclists to ride FTR to enable more safe overtaking movements by motorists is disproved. Cyclists' lateral position within a lane is irrelevant to the ability of motorists to safely overtake.

## 7 FTR Positioning Does Not Reduce Car-Bike Collisions and Likely Increases Them

It seems obvious that keeping cyclists close to the edge of the roadway will reduce the probabilities of their getting hit by motorists. However, this assumption is false. Analysis of the data on American car-bike collisions collected by Ken

Cross in 1974, the most statistically robust study yet conducted on this subject, shows otherwise. In urban areas in daylight, only about 2% of car-bike collisions were between straight-ahead cyclists and straight-ahead motorists. These statistics apply to most cycling and where most bicycle planning is done. Nighttime collisions are complicated by the defective lighting of the time, and rural collision statistics apply only to rural conditions. A crude and generally applicable statement is that 95% of car-bike collisions are caused by turning or crossing movements by either or both parties, and only 5% do not involve turning or crossing.

Therefore, the FTR requirement cannot significantly reduce car-bike collisions. But it is quite likely to increase them. The FTR requirement puts cyclists on the right-hand side of the motor traffic. At the very low traffic speeds when cyclists can overtake motorists, there appears to be sufficient width for safe overtaking. That is, until the vehicle being overtaken turns right. This “right hook” type of car-bike collision is a major problem in urban centers, often with fatal results. FTR positioning puts cyclists where motorists making crossing or turning movements are less likely to look and, often, are less likely to be able to see, thus increasing the probabilities of car-bike collisions involving motorists making turning or crossing movements.

Furthermore, the FTR requirement makes cyclists feel unsafe and guilty whenever they are not in the FTR position. For any activity of this kind, we know that persons under mental stress are less likely to take action and are more likely to commit errors in action. This means that when cyclists should be outside the FTR position, as when they are making turning and crossing movements, they are likely to delay making the move and are more likely to commit errors when doing so, thus increasing the probability of car-bike collisions involved with crossing and turning movements by cyclists.

## 8 The False Psychology of FTR “Safety” Motivates Traffic and Policy Errors

The predominant argument used by the creators of the FTR law and subsequent generations of motorists to justify the FTR denial of cyclists’ rights is that it makes cyclists much safer. As has been discussed above, there never has been any evidence to support this argument; it is no more

than motorists’ self-serving desire. But because FTR was what motorists most desired of cyclists, and motorists were in charge of highway affairs, including cyclist safety instruction, FTR became the centerpiece of “bike safety” instruction. Because it was too difficult, or even impossible, to produce a valid instructional program based on FTR, the instructions to obey FTR were based on fear and guilt. Cyclists were told that same-direction motorists were extremely dangerous and they owned the roads. Some forty years ago I described that instruction as: “The cyclist who rides among traffic will either delay the cars, which is Sin, or, if the cars don’t choose to slow down, will be crushed, which is Death, and the Wages of Sin is Death.”

Decades of such training have produced an American population whose predominant, practically overpowering, reaction to cycling in traffic is fear of same-direction motor traffic and guilt for delaying it. This emotion, which matches the definition of a phobia, does the following:

- 1: Drives cyclists into refusing to ride safely by obeying the rules of the road for drivers of vehicles
- 2: Drives motorists into contempt for cyclists
- 3: Directs police into assuming that all traffic law for cyclists is an extension of the FTR law
- 4: Directs public policy regarding bicycle traffic into almost exclusively catering to the fear of same-direction motor traffic

Undoubtedly, these results are all wrong.

## 9 Tangled Law

The basic traffic law for cyclists consists of three parts. The first part gives cyclists the rights and duties of drivers of vehicles, just like all the other drivers of vehicles. This is a general law for all drivers of vehicles. (UVC 11-1202) The second part is a specific law for cyclists alone. Being a specific law for cyclists it overrules the similar general laws for cyclists. It denies cyclists those rights by limiting them to those that can be exercised while being as close as practicable to the right-hand edge of the roadway, the FTR position. (The initial requirement of UVC 11-1205) Having denied cyclists the general right to use the roadway, the third part of basic traffic law for cyclists restores some of those rights by allowing cyclists to move away from the FTR position when special circumstances apply. (The exceptions listed in UVC 11-1205)

That's pretty clear. Cyclists don't have the general right to use the roadway, except sometimes, maybe. When connected to the general superstition that staying FTR is necessary for safety, there's no inclination to examine matters any further.

What rights do cyclists have? Well, they have the right to stay FTR. While one can write a lengthy detailed analysis of the rights that cyclists actually have, that is only of interest to a legal scholar. Nobody else would bother to read it.

Traffic law has to be understood and obeyed by the general driving public many times every day. The traffic law pertaining to cyclists is impenetrable to such people. For that matter, it is impenetrable to those who are supposed to know enough about it to enforce it. American traffic law for cyclists is so complex that it cannot work, leaving its interpretation to the lowest common concept, that cyclists are not welcome on the roadway and, if permitted at all, must stay FTR.

## 10 The FTR Exceptions Effectively Repeal the FTR Law

The FTR law allows cyclists only those rights as drivers of vehicles that can be exercised while in the FTR position. When an exception removes the FTR requirement, the cyclist regains all the rights of drivers of vehicles. The California Legislature created the exceptions because it was informed of a long list of situations in which obeying the rules of the road for drivers of vehicles (RRDV) was much safer than cycling FTR. The Legislature could not knowingly enact laws that required cyclists to operate dangerously.

The list of situations in which obeying the RRDV was safer than cycling FTR covered all such situations that were recognized at the time. There may be more such situations, but they seem to be insignificant.

One result is that the well-informed cyclist can ride obeying the RRDV with reasonable confidence that if he is stopped by the police the incident will turn out to be one more police error. Troublesome and costly to the cyclist, but not producing a conviction, or a finding of negligence in a civil suit. In short, the FTR law with its present exceptions is substantially unenforceable against well-informed and sufficiently wealthy cyclists.

However, that's not the result for the general cycling public. Here the combined superstitions of the police and cyclists enable the police, often without going to court, to enforce their FTR dis-

crimination on most cyclists.

In short, the discriminatory FTR law enables unlawful discriminatory police actions against people who are ignorant of the legal details or are insufficiently wealthy to fight back. A traffic law which is so complicated that only those exceptionally well-informed and wealthy can protect themselves against its police misuse is wrongly conceived.

## 11 Improper Police Actions

The combination of the FTR safety superstition and the FTR law leads police into attempting to prosecute cyclists who are driving lawfully.

When a cyclist has lined up for a left turn some distance down the road, or is just controlling a lane, both of which are listed exceptions in the FTR law, the police officer gets all concerned about the safety of the cyclist. Having stopped the cyclist, he tells him that he should have stayed FTR longer, or have ridden FTR, because there are all kinds of dangerous motorists out there who can hit him. In short, the cyclist, having inferior status, must give up his right to proceed lawfully because of the unlawful actions of some motorists.

When a cyclist is lawfully controlling the right-hand lane the police officer tries to get him prosecuted for violating the statute for slowly moving vehicles. That statute (UVC 11-301 b) requires drivers moving slowly to use "the right-hand lane then available for traffic, or [proceed FTR]". The police officer is so imbued with the FTR safety superstition and the FTR law that he claims that 11-301 b denies the cyclist the right to use the right-hand lane for traffic. This false concept is stated in the officially published instructions for cyclists in several states.

When the presence of a lawful cyclist has slowed some motorists, the police officer tries to get him prosecuted for violating the minimum speed regulation, (UVC 11-805 a) "No person shall drive a motor vehicle at such a slow speed as to impede the normal and reasonable movement of traffic except when" ... [necessary for safety]. In his effort to get cyclists out of the way of motorists, the police officer ignores the limitation to motor vehicles. In a few states, California among them, the limitation to "motor vehicles" is not in the statute. However, even in those states, it has been held that if a lawful vehicle cannot go faster, its driver cannot be prosecuted for violating this statute.

The combination of the FTR safety superstition and the FTR law motivates police officers, and judges, to twist existing statutes into complying with what these persons think the law for cyclists should be, and falsely believe that it is.

## 12 Slow Traffic

There is an argument against allowing slow traffic on our roads. Transportation is a social good. It occurs when people desire to move themselves, or their goods, from place to place, in the belief that such movement is beneficial. Because our road system does not have sufficient capacity, it should be operated in the most efficient way. Therefore, bicycles, which move people much more slowly than do motor vehicles, should not be permitted wherever they might delay motor vehicles.

Well, we already allow motor vehicles in such numbers that they delay each other. As long as we permit that, there is no reason to prohibit bicycles for causing delay.

There are operational reasons also. Our road system could not operate if all vehicles were required to operate at the fastest safe speed. On all normal roads (those that don't have minimum speed limits) each driver has to allow that the driver ahead of him may be traveling at a slower speed. Slower speeds are required for turning movements at intersections and driveways, and for parking, and for looking out to identify one's location, and for working out how to manage some traffic complexity seen ahead, and just because the vehicle is not in condition to travel as fast as the speed limit. For the road system to operate at all, we have to allow for the presence of slowly moving vehicles. Therefore, there is no justification for prohibiting bicycles from normal roads on the grounds that they are slow.

## 13 Pure FTR Operation Is Impossible

Motorists and government made FTR operation the prime part of their treatment of bicycle transportation, arguing that it was necessary for safety and very easy for children to understand. One would think that all of this effort would have produced a reasoned description, even an instruction manual, for cycling in the FTR manner. No such description was ever produced.

"Bike safety" training pamphlets and such indicate that there was interest in teaching cyclists

the FTR system, but there never was more than that. There was great emphasis on stopping at stop signs and signaling for turns, which are still bugbears today. The description could not go beyond these very simple instructions because it was assumed that those persons operating FTR were incapable of judging traffic and negotiating with drivers. The instructions had to assume that if the cyclist stopped at a stop sign, the motorists would look after him, and if the cyclist signaled for a left turn the motorists would give way to his turn. Both of these assumptions are the dangerous opposite of traffic law, which requires yielding after stopping at a stop sign and yielding before making a turn, but the FTR cyclist was assumed incapable of understanding the yielding process.

This is not an exaggeration; we have the same going on today. Several of the NACTO bike-way designs are based on the assumption that the cyclist has no traffic judgment and therefore cause him to violate the rules of the road, with unknown consequences.

I know of no logical proof, but I conclude that it is impossible to safely operate the American traffic system when some roadway users are assumed to lack the standard traffic skills. I also conclude that changing the American traffic system to accommodate another class of roadway users operating under different rules will be difficult, expensive, and probably unsatisfactory.

## 14 Discourages Proper Instruction

The combination of the safety of FTR superstition, the assumption that FTR cycling was so simple that a child could understand it, and that FTR cyclists were unable to obey the rules of the road for drivers of vehicles (RRDV) led to complete official neglect of training cyclists. That just was not done, and, quite possibly, those in power did not want it done.

Club cyclists who recognized the benefit of obeying the RRDV trained the new cyclists who joined them. At least one club cyclist, Fred DeLong, in the late 1960s worked out a training course for new club cyclists. But it was not until the middle 1970s that the great furor about cycling traffic law produced a complete course for training all types of roadway cyclists. This was my Effective Cycling Course, first taught in 1974 and published as a book in 1976.

However, no similar course was adopted by the educational establishment. Problems with the

educational system are some reasons for this, but the largest one is outside that system. The safety of FTR superstition is so strong and prevalent over the nation that the public refuses to learn how to cycle by obeying the RRDV. The RRDV are regarded as being exceptionally dangerous rather than the safe method of having all drivers cooperatively moving together. That public belief in the safety of FTR and the danger of disobeying it is the greatest hindrance to improving cyclists' safety, skill, and usefulness.

## 15 Against Public Policy

The FTR law clearly discriminates against cyclists and their use of the roadway, in favor of motorists. Public policy regarding roadway use is that all users are to be accommodated provided that they obey the rules, do not unduly damage the roadway, and do not prevent the use by others. Bicycle traffic produces none of these effects. Bicycle traffic's nearest effect is that it is slower than most motor traffic, but, as we have seen, our road system has to allow for some traffic that is slower than other traffic. Therefore, the speed of bicycle traffic does not justify discriminating against its use on roads without low-speed limits (freeways are roads with low-speed limits).

That covers discrimination against cyclists, but there is also public policy favoring cyclists. American governments have policies favoring bicycle traffic and put money behind them. It is quite correct that much of the effort is misguided in that it implements further discrimination against cyclists by funding bikeways that are a further implementation of the FTR principle, but one of the prominently stated goals is the encouragement of bicycle traffic and switching trips from motor to bicycle transport. When there is public policy favoring bicycle transport over motor transport, in at least some situations, the FTR law goes against that policy by discriminating against the mode of transport that is desired.

The FTR law opposes public policy by discriminating against cyclists' use of the public roadways and by working against the public policy of encouraging bicycle transportation.

## 16 Conclusions

The cyclist FTR laws and the similar bikeways laws express only motorists' desire to get cyclists out of their way.

None of the supposed justifications, argu-

ments for the supposed benefits produced, is valid.

The FTR law encourages cyclists to ride in the FTR manner at those times when it is dangerous for them to do so.

The FTR law tells cyclists that they are second-class roadway users whose prime duty is to stay out of the way of motorists.

The FTR law tells motorists that cyclists are second-class roadway users whose prime duty is to stay out of the way of motorists. This causes motorists to make more traffic errors around cyclists, typically in the overtaking situation.

The FTR law operates on cyclists by creating exaggerated fear of same-direction motor traffic and feelings of guilt for using the roadway. Such emotions cause those who hold them to make more traffic errors.

These same emotions created by the FTR law prevent cyclists from learning to ride safely by obeying the rules of the road for drivers of vehicles.

The FTR law and its greatly exaggerated fear of same-direction motor traffic drive American policy regarding bicycle traffic. While this is proclaimed to be a safety program, by concentrating on the smallest danger while ignoring the much larger dangers, this is the opposite of a proper safety program.

The FTR law and its greatly exaggerated fear of same-direction motor traffic is a very strong discouragement to bicycle transportation, which is in opposition to the stated American policy of encouraging bicycle transportation.