

The Law

by Joe Holzer

Those who know me may well wonder why they have not seen much of my ugly pan over the past few PCA seasons, nor over the past few events. Yet somehow I find the time to write these indecipherable and often incomprehensible diatribes John Hajny elects to put in the Redline. Must be a slow month for news.

Anyway, and especially for those who know me, I have not fallen from the face of the planet; I have merely had a career of late which placed substantial demands on my professional time, leaving me inadequate personal time for PCA unless it was WITH my family (ergo Parades) or fulfilling my need for a "fix" (ie. Track).

This is simply a reflection of one immutable law; if you can afford to do it, you don't have time. And Vice Versa. I am now managing a multi-state project converting a multinational product form. Nothing special, just what I've prepared a whole career for. But where it involves you, dear readers, is not merely in my inability to participate as much as I would like in the social goings-on of CNY-PCA, but in what I have learned along the way. In any week, I am likely to be in no fewer than four states, and over a month that becomes no less than nine. Adding recent Parades and other business trips, I have visited fourteen states recently, plus three other countries including Canada (which is more like another state than another country, except in Quebec, but more on that later). Anyway, my schedule requires me to spend enormous time studying boring roads.

In all that time, I have noted The Law, and its relative impact on behaviors. How many of you know that Montana has The Law, but it is vaguely written as "reasonable and prudent"? It did my heart a world of good to read how someone was judged by his peers to have been so when he was ticketed for 100+ ; made me think of the same scenario were I to insist on jury by my peers - I expect I'd see the charge reduced to OBSTRUCTING based on my peer group of Zone One Instructors. But I digress (as usual). Recently, New York got a little less silly when it decided to convert a limited few rural interstate sections to 65 mph, but of course not all highways so constructed are included. Even lowly Rhode Island, and that bastion of Liberalism (who ever dreamed of that term for a bunch of people who want everyone to have the right to do whatever it is THEY want them to have the right to do?); Massachusetts, treats its citizens as being somewhat more intelligent than those in Connecticut, where The Law remains as it had been before the Conservatives (another group bent on assuring the world can continue to bear arms and vice versa, and insists on "family values", unless your family happens to disagree with THEIR family) reversed The Law imposed by one of their own; Dick Nixon. But it seems to suggest to me that our "leaders" somehow view us as at least twenty percent more stupid than those in, for example, Oklahoma, where the posted limit is 75. Mind you, the roads and cars are all constructed to the same engineering standards. Working in Bethel, CT, but staying in Newburgh, NY, I get to drive I-84 for about 40 miles each way. I notice a frustrating tendency to forget the first rule of good driving; be invisible. That is not to say I want you to leave your lights off; rather to cause as little disruption to the natural flow as possible. For an example, consider this; Even if you are in violation of the prime directive re. maximum velocity (55 there), if you have a car behind and no car ahead, and you are not in the right lane, then you are in the WRONG lane. In Germany (yes, I know they are not perfect; but they at least have some idea what lane discipline looks like) The Law reads like this; if you are not in the right lane and you have a three pointed star rammed up your respective butt, it is your fault. Next case. There is no extenuating circumstance, and no legal mumbo-jumbo to protect you. You were going too slow to be there. Period. And that gets to my second saying; Keep right except to pass, and PASS is an ACTIVE verb. If you have't got the ponies, stay off the rail. That's where the rabbit runs. And if you simply MUST pull out from behind that truck up that hill, use the loud pedal on the right at Larry Lee's 914-6 cruise control setting (the STOP) until you are by,

and then get back right. AS soon as you clear the other vehicle. If you are afraid he might catch you, so you need more clearance, I refer you back three sentences, and a study of The Law of inertia. The fly in our soup here is instant-on radar which doesn't give a hoot for circumstances. And since EVERYBODY is over the limit anyway, it's a catch-22. But it creates bad situations where "good citizens" block us criminal element until one of us hardened criminals decides to do something stupid which endangers us all. But why 55 there, and not 10 miles west of Newburgh?

At the heart of all this jerrymandering and gamesmanship has been the argued essential truth; "speed kills". Repeated by the Naderites until it became a mantra, it was held as causal when statistics happened to coincide, and held in contempt when they happened to not. Unfortunately, truth is never so simplistic as a slogan would like to suggest, and statistics are a way of putting words to numbers which may have no relationship whatsoever. A simple thought experiment proves my point. Two people, intending to commit suicide, jump at precisely the same time from the same building; one from the 10th floor, one from the 20th. Because both intend to die, neither is startled nor terrified as the ground effectively rushes up toward them, and so do not die on the way, as it were, of heart attack, etc. The one from the 20th floor goes faster, but the slow one dies first. I know it's absurd; most people on the road have no intention of dying. But it IS still truth. Now imagine two parachutists, neither intending to die, jumping from ten and twenty thousand feet respectively. They, too, will suffer no heart attacks, etc. It is scientific fact that, although gravity diminishes minutely for the higher jumper, the air resistance will allow him to reach a slightly higher velocity than the lower jumper, but at the same altitude each will eventually reach the same terminal velocity of about 200 mph. Let us suppose they arrive at that point together. For the purposes of our experiment, at this point they are indistinguishable, except that the higher speed for one resulted in no implicit difference from the other, and both attained higher velocities than either of our earlier unfortunates.

Now let us suppose that they arrive at the fail-safe point and they attempt to deploy their respective chutes. One opens, the other sounds like a Chatty Cathy doll. The former survives, the latter; not. By the simplistic sloganeering, both should be dead, and compared with the building jumpers, their likelihood of doing so should be higher. Yet clearly, they had a lower probability from the outset; the suicides INTENDED death, the chutists certainly not. But something went wrong, and that is The Law of which I write. No, not murphy; physics.

Realistically, with the possible exception of A. Einstein's value for C, the speed of light, there is no intrinsic or actual "speed limit". The issue of increasing the ultimate speed we attain is more a question of the sum of thrust less drag and what it costs to improve either. And relative to a point in space, you dear readers are ALWAYS traveling at about 800 mph at our latitude, which makes another 55 one way or the other somewhat inconsequential (think about the 25,000 mile circumference of the earth divided by 24 hours, and you see my point). But again I digress. Of the four persons in our thought experiment, only one survived. But if we suppose that he was originally jumping from the highest altitude, then one could with total statistical accuracy argue he is alive because he went faster than the rest. See how absurd the government gets with reading numbers? Figures may not lie, but liars figure. Causality and coincidence are often incorrectly attributed.

The TRUTH is that TIME, not VELOCITY, could be described as causal of his survival. And except for the need for attaining some minimum threshold, speed has no bearing in the fatalities whatsoever. But I prefer to lobby for something which can also be argued as causal, but which I have the ability to impact, because absent getting close to A. Einstein's magical color shifts, I don't see any chance I will impact time very much. That causality is CONTROL. Think about it. A Navy jet approaches a carrier deck intending to land. If the deck suddenly rises, the pilot will no longer control the stop; the fantail will. And in doing so, the sailor will likely become shark bait. However, if the deck does not rise, and

the pilot places the hook where it will grab the wire, he will sustain what is ruefully referred to in some circles (especially around landing-gear engineering groups) as a “controlled crash”, during which time he will decelerate at rates we Porsche Pushers can only drool about. And he will loosen his belts and climb out and walk away unhurt. The obvious truth here is that, in the case of all the aforementioned fatalities, the sudden uncontrolled stop is what killed them, because your body has stuff which keeps moving even after the shell which contains it has stopped. And that is also true for the automobile within which that body rides. The secret to survival, then, is to limit the rate of deceleration so as not to exceed the acceptable threshold of your body’s tolerance. And you can only do that by exercising some measure of control DURING that deceleration.

Obviously, jumping from a building in a Hugo Boss suit is inadequate. But stunt men have successfully made such jumps without injury by controlling the deceleration rate at the bottom through air cushions. Much as I hate the things, airbags certainly provide the potential to control the same thing in a horizontal mode. But no stuntman in his right mind would ever contemplate a car stunt without a full safety roll cage, to assure the rest of the metal around him will deform to dissipate the kinetic energy without deforming anything into HIS space, nor without a safety harness. And that is where the mighty mystery of science has been undervalued. We all know that belts will hold you in place, giving you at least some modicum of opportunity to exert dynamic avoidance loading (steering, dummy) on what would otherwise be a lethal carriage steered precisely toward the worst target by a hapless hanger-on. But few understand that the “long chain” which James Burke wrote about in his excellent series “Connections” is used in its most benevolent way almost by accident (if you’ll pardon the pun).

There is a reason seatbelts are made of a woven polypropylene or polyester, instead of cotton or linen. Under stress, the natural fibers will elongate to only a small fraction above their natural state before accumulating high structural loading, immediately followed by ultimate yield. That’s engineer speak for “they break”. Synthetics, however, especially in a woven form, will elongate to well past 200% of original length, and will build stresses in a much more linear fashion, therein distributing the load over longer TIME, ergo deceleration rate.

And now the secret wonder. But first, think about airbags as we know them. Excepting the minor (and non-selectable by user) manufacturing variations in propellant response, an airbag pretty much exerts a certain force in a certain time on whatever it finds there. Ergo kids being killed thereby. Now picture the difference between a 50 lb child, and my fabulous 350 lb of downforce physique. A loose equivalency would be comparing a limited partnership with a multinational corporation. But the lowly SEATBELT is in large measure self adjusting, simply by the expedient of the physical body structure it restrains. A child will have the shortest extension of the belt, while a man of my girth will have a long extension to reach around me. Since the elongation of the webbing, otherwise identical in cross section for all, is a function of load distributed over length, you can see that the time base for elongation in either case is very similar for similar impact velocities. But a belt at half the length will deform the same percent with half the mass at the same velocity as a belt twice the length will with twice the mass. An automatic, self regulating, ten dollar bit of excellent engineering, even if noone actually engineered it that way to begin with. Which is another Law, but we’ll suffice it to say we’d rather be lucky than good if we must select between them.

And now that you’ve almost finished reading this trash, is there really anything you didn’t know about The Law? Yes. Even in Quebec, where you would swear the language differences must account for misreading those 100 KILLometer speed signs, The Law is the same. Wear your belts, and prove the others wrong.