TSRP Talk: Operation – What is it and what do I need to prove it?

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Nothing in the law is simple. If it were, we wouldn't need lawyers, and while some of you might like the sounds of that, I – for one – like being employed. The lack of simplicity applies even to a term like "operate" or "operation." Yes, I am talking about *that* operation: the one required to prove a crime under Maine's OUI statute. There's a lot to talk about there, like the fact that attempting to operate or even just admitting having operated is enough to prove the crime,[ii] but those are not the focus of this article. This article is focused on *actual, physical* operation. What is it? What is enough? Do the wheels on the bus have to go round?[iii]

I. STARTING AT THE BEGINNING: 1940S AND 1950S CASE LAW

Maine's seminal operation case is the 1951 case *State v. Sullivan*,[iv] but that isn't where or when our conversation is going to begin. It's going to begin about nine years earlier with *State v. Roberts.*[v] In *Roberts*, a truck was being towed. Its front wheels were *off the ground*, and yet . . . two people were convicted for operating it; those two people were Carl Roberts and William Howard. [vi]

Roberts and Howard were both drunk.[vii] Despite that fact, they chose to help with the towing of an "automobile" that was being towed up an icy hill.[viii] To help out, the two men took turns getting behind the wheel of the vehicle, which was running, and stepping on the gas.[ix] Here is what the judge told the jury:

> "It has been argued to you that they were not operating. I instruct you, . . . as a matter of law . . . that if you believe the evidence of the State that . . . one of these respondents was behind the wheel and put the motor in motion, had placed the car in gear, that the rear wheels, because of the motor being in motion, were whizzing, or something, and that the rear of that car swayed sideways when that was going on, . . . that the respondent who was doing that was operating that car."[x]

The law court found that instruction proper and upheld the conviction of the two men, despite the fact that they had no control over the course that the automobile took.[xi] In so doing, the Law Court gave us this rationale: "In the instant cases the motor was in operation and the power was not only being applied but was actually taking effect. It is not important whether the course or direction of either the towed car or the towing vehicle was affected by the application of its power."[xii]

Next came *State v. Jalbert*[xiii] in 1947. In *Jalbert*, officers witnessed a vehicle move forward a short distance and then stop.[xiv] The man in the driver's seat was tried and convicted; he appealed, and the Law Court upheld his conviction.[xv] In so upholding his conviction, the Law Court reasoned that "[a]lthough the officers did not see just how the automobile was set in motion, the inference is that this resulted from the respondent's manipulation of the gear lever or brakes."[xvi] The movement, the Law Court went on could not "be reasonably accounted for by motor vibration or a slight depression in front of the automobile."[xvii]

Then, in 1951, we got *Sullivan.* John Sullivan was charged in the Caribou District Court by complaint, and it was alleged that he, while intoxicated, attempted to operate a motor vehicle "by . . . starting the motor of said automobile, and releasing the brakes." [xviii] The evidence in the case showed that Sullivan's vehicle was parked on a grade in his mechanic's driveway, that the mechanic was working on the engine – including feeding it gas from under the hood of the vehicle, that the mechanic asked Sullivan to get in the car and start it, that Sullivan did those things, and that the car rolled backwards about a foot into the pickup behind it.[xix] The officers approaching the scene testified that the car's engine was "roaring" that it would be "far to say" that if the car was put in gear then there would have been a bigger and louder crash.[xx] Thus, it was factually found that "[n]o power was applied from the motor to the wheels" in this situation.[xxi] The law court found that this was not sufficient for operation and required the trial court to determine the defendant *not guilty* of OUI,[xxii] and in doing so, the Law Court gave us the seminal language for "operation" of a motor vehicle in Maine, which language is italicized in the below quote. It wrote:

> According to popular acceptance, the meaning of the term "to operate a motor vehicle" is the same as to "drive" it. It usually means that a person must so *manipulate the machinery that the power of the motor is applied to the wheels to move the automobile forward or backward*. The starting of the motor, however, may under existing circumstances be sufficient, if there is the intention to move the car. . . . Operation might be inferred from the fact that an automobile moved ahead a short distance with the engine running and with the respondent in the driver's seat, and the forward movement could not be accounted for by vibration or a slight depression in front of the automobile.[xxiii]

Now, throughout our great state, whenever a question of operation comes up, you will hear "power to the wheels." It's great language, but it isn't always clear. There has been an ambiguity as of late, and that ambiguity is caused by the underlined wording above. Does the power have to be applied to the wheels such that the vehicle is *capable* of moving under its own power or do the wheels have to move the car forward or backward under the power of the engine? That question is what this article seeks to investigate and resolve, but, first, let's look at the difference.

II. MOTOR VEHICLES: HOW DO THOSE THINGS WORK?

Vehicles are complicated things, and they only get more complicated when you look deeper. When it comes to applying to power of the motor to the wheels, though, there is one part, or series of parts really, that does just that: the transmission.[xxiv]

All transmissions are not the same, and neither is their history. Many of us may be familiar with the concept of "automatic" and "manual" transmissions, but there are two other transmissions in the modern day: the continuously variable transmission (CVT) and the electric vehicle gearbox.[xxv] We are going to take quick look at those four transmissions: manual, automatic, CVT, and electric vehicle gearbox to see how and when they apply the power of the engine to the wheels of a motor vehicle.

A. MANUAL TRANSMISSION:

The manual transmission, though a dying option, is still sought after by American automotive enthusiasts.[xxvi] The transmission is connected to the engine with a flywheel and clutch plate assembly.[xxvii] The operator can disconnect the engine from the transmission at any time by depressing the clutch pedal in the car, separating the clutch plate from the flywheel.[xxviii] The clutch plate is attached to the transmission and the flywheel is attached to the engine. When the engine is running and the clutch pedal is not depressed, the flywheel spins the clutch plate, spinning the input shaft of the transmission. If the shifter in the vehicle is not in a selected gear, the internal gears of the transmission are not meshing, so there will not be power placed to the wheels.

If the operator places the vehicle into gear and appropriately increases engine speed and the clutch is engaged properly, the vehicle will begin moving (forward or backward depending on the selected gear). Once the vehicle is in motion, the transmission's gears are changed by manually moving the shifter inside the vehicle in a manner to select the gear deemed appropriate by the operator. The internal workings of the transmission are moved by the shifter and synchronized gears are meshed together in the selected ratio to propel the vehicle. When the vehicle is stopped, the transmission must be placed into neutral (not in a gear) or the clutch pedal must be depressed to separate the engine rotational power from the transmission, or the engine will stall.

All of this means that, for a manual transmission, the vehicle will generally be moving for the power of its engine to be applied to the wheels. The one exception is when small amounts of power are applied, in an opposite direction, to keep a manual transmission vehicle from rolling down a hill.

B. "AUTOMATIC" TRANSMISSION: HYDRAULIC PLANETARY AUTOMATIC TRANSMISSION:

The most common transmission in a passenger car in the United States is an automatic transmission, actually called a hydraulic planetary automatic transmission.[xxix] The automatic transmission utilizes a device called a torque converter to attach the engine to the transmission instead of a friction clutch.[xxx] When the vehicle is stopped, but the gear shifter is placed into a gear other than park or neutral, the torque converter allows the engine to remain running without the vehicle stalling.[xxxi] On the rear of the torque converter is a pump.

The pump pressurizes the automatic transmission fluid as the engine revolutions per minute increase.[xxxii] The transmissions hydraulic valve bodies, or in the currently utilized automatic transmissions electronic sensors, detect the changes in pressure due to the engine load and change the gearing ratios within the transmissions planetary gears by utilizing internal clutches and bands to select the most appropriate gear ratio for the engines input.[xxxiii] The power of the engine, after being converted through the transmission, is transferred to the wheels of the vehicle through a drive shaft to the rear axle, constant velocity axles in a front wheel drive vehicle, or a combination of the two, utilizing a transfer case to power all four wheels in a four wheel or all-wheel drive vehicle.

All of that this means that the power of the motor vehicle is applied to the wheels of a vehicle with an automatic transmission so long as the vehicle is in gear (not park or neutral). This is regardless of whether the brake is being applied. Brakes, in an automatic transmission, combustion engine vehicle do not cut off the power from the engine. [xxxiv]

Why, then, doesn't the vehicle move when the brake is applied? They apply and equal or greater frictional force to stop the engine's power from moving the vehicle. [xxxv]

C. CONTINUOUSLY VARIABLE TRANSMISSION (CVT):

The most common CVT utilizes just two pulleys and a "V" shaped belt.[xxxvi] The CVT is an automatic transmission, but it differs from the hydraulic planetary automatic transmission. [xxxvii] The transmission does not use interlocking "gears" like a hydraulic automatic planetary transmission, instead the transmission uses conical shaped pulleys, one on the input (engine) side and one on the output (axle shaft) side. [xxxviii] The CVT uses a small clutch pack, on the input pulley, to allow the transmission to let the engine spin freely while the vehicle gear shift is in drive or reverse, without stalling. The clutch pack also allows the transmission to utilize small planetary gears to lock or spin freely to place the input pulley in forward or rearward motion.

As the engine RPMs increase, the pulleys two cones move together on the input pulley and move closer apart on the output pulley to essentially make infinite gearing possibilities. The CVT allows the engine to operate in the most ideal RPM range for fuel economy.

As far as applying power to the wheel of the motor vehicle, a CVT is like an automatic transmission: power is applied when the vehicle is running and not in park or neutral.

D. ELECTRIC VEHICLE GEAR BOX:

Common consumer electric vehicles, with few exceptions, utilize a single speed gearbox as opposed to the traditional multi-gear transmission of internal combustion engines.[xxxix] The single speed gearbox is constantly meshed gears to reduce the electric motor input speed to a usable output speed. Electric motors make constant torque, unlike internal combustion engines which need engine speed to create increasing torque.[xl] In an electric vehicle, even when the vehicle's "gear selector" is indicating "drive or reverse" there is not power being transmitted to the gearbox, thus there is not power going to the wheels.[xli]

When the operator presses the "gas pedal" electricity is sent to the electric motor, which spins the gearbox, propelling the vehicle forward or backward. The braking system in an electric vehicle is not overcoming the mechanical power of the engine/transmission combination when the vehicle is stopped and the operator is not pressing on the accelerator, which is what is occurring at a stop with an internal combustion automatic transmission vehicle.

So, unless the electric vehicle is moving, there is no power from the motor being applied to the wheels. Indeed, even if the vehicle is moving, but is slowing, there may be no power applied from the motor to the wheels.

III. MOTOR TRANSMISSIONS: THEN AND NOW

JD Power stated that 1.2% of vehicles sold in 2022 utilized a manual transmission and that transmission was an option in only 43 new vehicle models.[xlii] While current passenger vehicles in the United States utilize automatic transmission to transfer engine power to wheel power, this was not always the case. The automatic transmission in an automobile was first credited in 1904 with the Sturtevant Horseless Carriage and placed into a mass-produced passenger vehicle by General Motors for the 1940 model year (marketed as the HydraMatic), the automatic transmission did not overtake the American manual transmission in sales until the mid-1980's. Indeed, the automatic transmission's wide production and popularity didn't begin until after such transmissions were used in tanks during World War II,[xliii] and many manufacturers didn't begin producing vehicles with automatic transmission until the late 1940s or early 1950s.[xliv] That means, in the 1940s and 1950s, when the foundation of Maine's "operation" case law was being laid, there were more manual transmissions on the roadways than automatic. Remember, that, with a manual transmission, there is generally no power applied to the wheels without movement.[xlv]

With these foundational principles in mind, we can now evaluate "*to move the automobile forward or backward*." Is that language "to move" qualifying the qualifying the capability of the power that must be applied to the wheels or is it describing something that must happen? Is a vehicle with an automatic transmission that is in drive with the brake pressed being operated?

IV. MORE CASE LAW AND ANALYSIS

Sullivan's language comes most into when people are found passed out in their running vehicle, that is in gear. The vehicle has not moved because the unconscious individual has their foot on the brake, but have they operated nonetheless? This can be seen in parking lots, at stops signs, or even randomly in the driving lane.[xlvi]

This confusion – or at least potential confusion – is exasperated by the law court's own treatment of *Sullivan*. In *State v. Henderson*,[xlvii] the Law court cited *Sullivan* for supporting the following statement, contained in a parenthetical: "usual meaning of operation is to manipulate the machinery so that the power of the motor is applied to the wheels." Note that in such statement, there is no mention of a vehicle's motion – no note of moving the vehicle "forward or backward." If that were what the Law Court said in *Sullivan*, we would know for sure that having an automatic or CVT transmission in gear with your foot on the brake was operation, even without vehicle motion. This makes sense as a simple slip of one's foot from the brake pedal is all that the vehicle needs to move itself.

Indeed, *Roberts* itself, a predecessor to *Sullivan*, would seem to agree with *Henderson*. Remember that, in *Roberts*, the defendants' pressing of the gas pedal did not move the vehicle forward or backward, though it did "slew it from side to side."[xlviii] The court did not care, finding that the "motor was in operation and the power was not only being applied but was actually taking effect."[xlix] The Court continued, "It is not important whether the course or direction of either the towed car or the towing vehicle was affected by the application of its power."[l]

Not only does the Law Court, then, acknowledge the difference between applying the force of the motor, and it taking effect (via movement), but it also indicates – as it did in *Sullivan* – that the deciding factor is whether the power was applied (not whether such power has an effect). Thus, one cannot take *Sullivan*'s language to mean that the car must literally move forward or backward. Instead, *Sullivan* should be interpreted as qualifying the capability of the power of the engine. Indeed, a District of Columbia Court cites *Sullivan* as indicating "a broader meaning" than "working the mechanism of a motor vehicle and thereby producing its movement."[li]

Noteworthy is the fact that our Law Court, itself, qualified its statement in *Sullivan*. It did not say that "[operation] means . . . ." It said that "[operation] *usually* means . . . ." Thus, "operation" can, at least sometimes, mean something different than what was stated in *Sullivan*.

V. CONCLUSION

The bottom line is that our law on something as simple as "operation" is not clear and is even outdated. For officers, I urge you to talk to you district attorney's office. Determine what they are going to need for proof of operation before you encounter the problem on the road. Remember that with an electric vehicle or a manual transmission, you are "*usually*" not going to have operation unless the wheels spin under their own power.

For prosecutors, I urge you to at least consider charging the cases involving the stationary, in drive, automatic transmission vehicle. The power of that motor vehicle has been applied to the wheels, regardless of whether it has taken effect. The argument to the court here is that the operational language of *Sullivan's* statement is that the power was applied and not that the vehicle moved; to bolster this argument, you have *Roberts* and the District of Columbia case noted above. You also have the fact that even the Law Court seemingly acknowledged, in *Henderson*, that *Sullivan's* important language is that dealing with the power of the engine being applied (and not such power being effective and causing forward or backward movement). Remember, too, that even *Sullivan* qualified "operation" as "usually meaning."

When making these charging decisions, take the hypotheticals to the extreme. It's what we all do, anyways. Imagine this: a person is driving down the road and, for no known reasons, skids and veers left into a pedestrian, causing serious injury, before coming to a stop on a lawn. The pedestrian is killed, and the operator is found unconscious with a needle in their arm. To prove the OUI causing serious bodily injury, does the state need to prove that the operator injected

themselves and remained conscious for a period of time thereafter before the braking and skid and started the skid? Or, is the fact that power is being applied during the braking enough?

What if the vehicle is electric, whereby only pressing the accelerator with cause power to go to the wheels? A manual transmission? I ask these questions so that they can be decided before the extreme case. Maine's operation case law is outdated and unclear. It comes from a time when most vehicles had manual transmissions and could not move without someone stepping on the gas. It's only through your work that this case law can be updated and clarified. In doing so, you will interpret Maine's OUI law as the Law Court said it should be in *Roberts*: "with the idea in mind of reducing the hazard created by operating under the influence []."[lii]

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[ii] 29-A M.R.S. § 2401(6); 29-A M.R.S. § 2431(4).
[iii] Checking to see if you are awake.
[iv] 146 Me. 381, 82 A.2d 629 (1951).
[v] 139 Me. 273, 29 A.2d 457 (1942).
[vi] *See id.*, 139 Me. at 274, 29 A.2d at 457 ("Respondents' counsel does not challenge the factual findings that at the pertinent times his clients were 'intoxicated' . . . .").
[vii] *Id.*
[viii] *Id.*
[ix] *Id.*
[x] *Id.*, 139 Me. at 275, 29 A.2d at 457-58.
[xi] *See id.*, 139 Me. at 275-76, 29 A.2d at 457-58.
[xii] *Id.*, 139 Me. at 276, 29 A.2d at 458.
[xiii] 142 Me. 407, 53 A.2d 336 (Me. 1947).
[xiv] *Id.*, 142 Me. at 407, 53 A.2d at 336.
[xv] *Id.*
[xvi] *Id.*
[xvii] *Id.*
[xviii] *Sullivan*, 146 Me. at 382, 82 A.2d at 630.
[xix] *Id.*
[xx] *Id.*, 146 Me. at 383, 82 A.2d at 630.
[xxi] *Id.*
[xxii] *Id.*, 146 Me. at 386, 82 A.2d at 631.
[xxiii] *Id.*, 146 Me. at 386, 82 A.2d at 631-32 (citations omitted) (emphasis added).
[xxiv] *See* Dustin Haley, *What is a Transmission in a Car?*, JD POWER (December 21, 2020) (available at: https://www.jdpower.com/cars/shopping-guides/what-is-a-transmission-in-a-car) ("[The transmission] is roughly analogous to the gear shifter and chain system that bicycles use. These components are always mounted straight on the engine so that their attached belt and gear system can effectively convert the combustion power produced by the engine into physical momentum."); M. Kuchta, *Do Electric Cars Have Transmissions?*, TREEHUGGER (September 20, 2022) (available at: https://www.treehugger.com/do-

electric-cars-have-transmissions-5198199) ("A vehicle transmission transmits the rotating power of the energy source, whether an electric motor or an internal combustion engine (ICE), through a set of gears to a differential, the unit that spins the wheels.").

[xxv] *See What You Should Know About Your Car's Transmission*, Synchrony, (January 24, 2021) (available at: https://www.mysynchrony.com/blog/automotive/what-you-should-know-about-your-cars-transmission.html); David M. Kuchta, *Do Electric Cars Have Transmissions?*, TREEHUGGER (September 20, 2022) (available at: https://www.treehugger.com/do-electric-cars-have-transmissions-5198199) ("hat is in the gearbox is what some people call a transmission since it is indeed a set of gears that transmits the rotation of the motor to the rotation of the wheels.").

[xxvi] *See* Rachel Wolfe, *The 20-Somethings Fueling a Stick-Shift Renaissance: Think the manual transmission car is dead? Not yet*, THE WALL STREET JOURNAL (March 1, 2023) (available at: https://www.wsj.com/articles/manual-transmission-stick-shift-cars-929dc155).

[xxvii] *What Is A Transmission And How Does It Work?*, UNIVERSAL TECHNICAL INSTITUTE (July 11, 2020) (available at: https://www.uti.edu/blog/automotive/transmission#:~:text=and%20output%20shafts.-,How%20does%20a%20manual%20transmission%20work%3F,are%20connected%20to%20the%20engine.)

[xxviii] *See id.*

[xxix] Hearst Autos Research, *How Does an Automatic Transmission Work?*, CAR AND DRIVER (last viewed March 19, 2023) (available at: https://www.caranddriver.com/research/a31862769/how-does-an-automatic-transmission-work/)

[xxx] *See id.*

[xxxi] *Id.*

[xxxii] *See id.*

[xxxiii] *See id.*

[xxxiv] *See How Do Car Brakes Work?*, LAND ROVER, (February 28, 2019) (available at: https://www.landroverfreeport. com/ how-do carbrakeswork/#:~:text=When%20you%20press%20down%20on,to%20reduce%20your%20vehicle's%20speed.)

[xxxv] *Id.*

[xxxvi] *See* Jessica Shea Choksey, *What is a CVT, or Continuously Variable Transmission*, J.D. POWER (March 15, 2021) (available at: https://www.jdpower.com/cars/shopping-guides/what-is-a-cvt-or-continuously-variable-transmission)

[xxxvii] *Id.*

[xxxviii] *See Id.*

[xxxix] *See The Past, Present, and Future of Electric Vehicle Transmissions*, CURRENT AUTOMOTIVE (last viewed March 19, 2023) (available at: https://www.currentautomotive.com/the-past-present-and-future-of-electric-vehicle-transmissions/).

[xl] *See id.* ("'The dual motor Model S will quickly torque sleep a drive unit when torque is not needed and instantly wake it up as the accelerator is pressed to command more torque,' said JB Straubel, Tesla's former Chief Technical Officer, in a 2014 blog post. 'It continues spinning while asleep and the digital torque wake up is so fast that the driver can't perceive it.'")

[xli] *See* Save On Energy, *How Does an Electric Motor Work* (last updated June 16, 2022) (available at: https://www.saveonenergy.com/resources/how-does-electric-car-motor-work/) ("In an electric car, there is no alternator. So, how does the battery recharge then? While there is no separate alternator, the motor in an electric car acts as both the motor and an alternator. That's one of the reasons why electric cars are so unique. As referenced above, the battery starts the motor, which supplies energy to the gears, which rotates the tires. This process happens when your foot is on the accelerator – the rotor gets pulled along by the rotating magnetic field, requiring more torque. But what happens when you let off of the accelerator? When your foot comes off the accelerator, the rotating magnetic field stops and the rotor starts spinning faster (as opposed to being pulled along by the magnetic field").

[xlii] Wolfe, *supra*, note xxvi.

[xliii] Aaron Severson, *Hydra-Matic History: GM"s First Automatic Transmission*, ATE UP WITH MOTORS (May 29, 2010) (available at: https://ateupwithmotor.com/terms-technology-definitions/hydramatic-history-part-1/3/).
[xliv] Wolfe, *supra*, note xxvi.
[xlv] The exception would be when an operator is on a hill and applying just enough gas to keep the vehicle from rolling: the power from the engine is being used to offset the gravitational force that would have made the vehicle roll).
[xlvi] For those of you who want to argue that passing out in the roadway constitutes OUI because there is an *attempt* to operate, please keep in mind that attempt requires both the intention and a substantial step. *Sullivan*, 146 Me. at 384, 82 A.2d at 631. Keep in mind also that the intent and substantial step must be present at the same time, and that such intent and substantial step must be present while the person is under the influence, *id.* ("Where an attempt to operate is charged, there must be an intent to commit the offense of operating. Unless the acts done were done with the intent to operate the motor vehicle while under the influence of liquor, no offense is committed")). I would argue to you that a person who is unconscious is unable to form an intent. *See*, *e.g.*, *Tenn. v. Scott*, 275 S.W.3d 395, 400-01, 410 (Tenn. 2009) (state arguing at page 410, "it is common sense that persons cannot act intentionally while they are asleep."). I would further argue to you that ingesting drugs or alcohol while in a vehicle does not express intent to commit OUI (or else every drinking while driving case would be an OUI – cases where drinking and driving not OUI).
[xlvii] 416 A.2d 1261 (Me. 1980).
[xlviii] *See Roberts*, 129 Me. at 274, 29 A.2d at 457 ("This recital aptly describes the factual situation presented to the jury as applicable to both respondents, but it may be noted in addition with reference to the respondent Carl Roberts that while he was occupying the driver's seat in the towed car, the two vehicles jackknifed to some slight extent. The record makes it clear that at the time of the alleged offenses the operator of the truck was attempting to tow the automobile occupied by the respondents up an icy grade, and that power was applied to the driving wheels of the towed vehicle, at separate times by the respective respondents, for the purpose of aiding progress.").
[xlix] *Roberts*, 129 Me. at 276, 29 A.2d at 458.
[l] *Id.*
[li] *Richardson v. District of Columbia*, 134 A.2d 492, 492-93 & n. 3 (D.C. Court of Appeal, 1957) (citing *Sullivan* as support for the following sentence: "On the other hand, there appears to be a trend towards giving a broader meaning to the word when used in statutes and regulations such as the one here involved.").
[lii] *Roberts*, 129 Me. at 276, 29 A.2d at 458; *See also State v. West*, 416 A.2d 5, 7 (Me. 1980) ("The Legislature, in enacting this statute, obviously recognized the dangers inherent in the operation of motor vehicles by persons whose faculties are impaired by the use of alcohol or other drugs and it intended to prohibit such operation under any and all circumstances.").