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R. v. Wong

Between
Her Majesty the Queen, appellant, and
Wai Wong, respondent

[2000] O.J. No. 1442
Information No. 32975082

Ontario Court of Justice
Central East Region - Newmarket, Ontario
O'Hara J.

Oral judgment: February 28, 2000.
(49 paras.)

Offence: S. 128 Highway Traffic Act - Speeding

Counsel:

K. McCleave, for the Prosecutor's Office.
R. Dullege, for the defendant.

¶ 1 **O'HARA J.** (orally):— With respect to the appeal in Her Majesty the Queen and Wai Wong; this comes before me by way of an appeal from the decision of Justice of the Peace Leggate on acquitting the Respondent on a charge of speeding, based on the learned Justice's view that comparison tests between the laser device and the older technology were not done in a timely fashion.

¶ 2 Although that is the way in which the matter came before me, that is not exactly what I am dealing with now, because by agreement, fresh evidence was introduced. I am really being asked to substitute my judgment for that of the learned Justice of the Peace and the issues before me were somewhat expanded, on consent, to deal in my view with a twofold issue. One, is the technology sufficient generally to be accepted by the Courts as an adequate measure of the speed of motor vehicles for law enforcement purposes? And two, does there have to be any comparison test between the laser equipment and the older technology of radar, and if so, on what schedule?

¶ 3 In dealing with these two issues, I have relied, and again this is, I believe, on consent, on a number of different types of material, some of which are somewhat unusual for a Court sitting on an appeal. Therefore, I think I should clarify what the material is. First of all, I heard viva voce evidence from Professor Wyatt Killgallin who was retained by the maker of the LTI 20-20 Laser Device. He gave general evidence with respect to the reputation of this type of technology in the scientific community. It was apparent during the course of his evidence that he had not actually done any independent testing of laser speed measurement, either generally or the specific machine that was used here. And, as I took it in the end, his evidence was to support the appropriateness of this type of equipment and the science that led to the technology behind it.

¶ 4 Sergeant Lannigan also testified. He has indeed done a large number of comparisons between the laser device to measure speed in a law enforcement setting and the older technology of radar. I put a good deal of reliance on his personal experience in coming to my judgment. While he admits that his knowledge of the scientific principles behind the device is limited, the combination of his evidence and the evidence of Professor

Killgallin tend to combine to give a substantial body of expert evidence, which, taken together, I feel I can rely on to a considerable extent.

¶ 5 I have also been referred to a reference case from the Superior Court of New Jersey, entitled, "The Matter of Admissibility of Motor Vehicle Speed Readings Produced by the LTI Marksman 20--20 Laser Speed Detection System."

¶ 6 That material was put before me in my view for two reasons and I have used it for two reasons, both with respect to whatever legal principle I can glean from it. But I believe it was also agreed that I perhaps somewhat unusually could rely on the tests that were done leading up to that reference and that I would be entitled to put some weight on that testing. This appears to be necessary, I should say, because, as I understand how this technology comes before me, this is basically technology which is adopted by the Courts on a trial and error basis. Unlike, for example, a breathalyser machine, where governments legislate the accuracy of the equipment for the purposes of Courts, after presumably adequate testing. And different for example from the Provincial experience in Alberta referred to in one of the cases where a certificate a type of accuracy is required.

¶ 7 No such legislative imperative drives our Courts to accept the adequacy of this machine. It is done on a trial and error basis. This perhaps has the unfortunate tendency that we have seen in this case of divergent views from different Judges and different Justices of the Peace in adjacent jurisdictions.

¶ 8 Finally, I had before me as Exhibit Two and Three, two manuals with respect to the existence, technology and testing of the LTI 20-20. Exhibit Two entitled, "Operational Instructions Manual for the LTI 20-20 Laser Speed Detection System", published by Laser Technology Incorporated at 7070 South Tucson Way, Englewood, Colorado. It is marked "Second Edition" and was referred to I believe in the course of the evidence as the "Old Manual." I also have before me a manual entitled, "The Marksman LTI 20.20 Laser Speed Detection System Operator's manual." As I understand it, published from a similar source, Laser Technology Incorporated in Englewood, Colorado. I note the publication information appears on the second page of the Exhibit.

¶ 9 It was generally conceded in argument by the Respondent in this matter, and I place a good deal of weight on that concession, that the technology was adequate generally for the purpose of detecting the speed of moving motor vehicles in a law enforcement setting. I am prepared, without reservation, to find that it does. I base my finding not only on the concession, but on reviewing the relevant technical manuals, reviewing the evidence of Professor Killgallin, to a tremendous extent and, perhaps mainly on the personal hands-on experience of Sergeant Lannigan and the actual on-the-job, in-use testing which he was able to put before me by viva voce evidence.

¶ 10 I also accept the testing and adopt as part of my judgment, the testing procedures which were used in the New Jersey test, and without going into those in detail, they are outlined in the conclusions reached by Superior Court Judge Reginald Stanton. He says at page 24 of the judgment, under the heading "Conclusion":

> "I end up being impressed by the fact that when we combine the results for comparisons with both the W.I.M. Systems and radar, we have only 16 cases of 1,908 in which the speed measurement produced by the laser detector exceeded the measure produced by the comparison device of more than one mile per hour. That amounts to 0.8%. I also note that the speed measurement produced by the laser speed detector never exceeded by more than one mile per hour the measurements produced by the track timer, the PEEK 241 or the fifth wheel."

I note in passing that while the major comparison device for the New Jersey testing was in fact radar, fifth wheel-testing, closed track testing over infrared was also used.

> "I am satisfied that the evidence presented in the proceedings which led to the issuance of my opinion of June 13th, 1996 and from the evidence presented during the recent hearings before me, that the general concept of using lasers to calculate the speed of motor vehicles is generally accepted within the relevant scientific community and is valid."

I adopt those conclusions.

> "Despite the fact that the testing conducted was far from perfect, it was adequate, and I am satisfied from the totality of the evidence presented to me that the laser speed detector produces reasonably uniform and reasonably reliable measurements of the speed of motor vehicles under conditions likely to be present on New Jersey highways when the detector is used for law enforcement purposes."

I digress here to note that I see nothing in the testing which suggests to me that the conditions on the New Jersey highways are in any significant way different from the conditions which would be found on Ontario highways and under law enforcement conditions.

¶ 11 I continue with his judgment:

> "The error trapping programs and mechanisms built into the detector are fully adequate to prevent unreliable speed measurements when used for law enforcement purposes. Accordingly, under the broad teaching of cases such as Romano v. Kimmelman, 96 N.J. 66 (1984), and the State v. Wojtkowiak, 170 N.J. Super 44 (Law Div. 1979), reversed, 174 N.J. Super 460 (App. Div. 1980), speed readings produced by the laser speed detector should be received as evidence of the speed of motor vehicles without the need for expert testimony in individual prosecutions arising under the motor vehicle laws."

¶ 12 I am prepared to rule based on all of the material before me that the LTI 20-20 laser instrument is adequate and accurate enough to be relied upon by the Courts for this purpose.

¶ 13 I now turn my attention to the issue of what is adequate ongoing testing to make sure that these instruments are operating accurately enough on a day to day basis that the Courts can rely on their operational level of accuracy, that is that they are operating in an acceptably accurate manner in a day to day basis under the law enforcement-conditions. Here I have more difficulty with the evidence before me and I believe more difficult issues arise. Justice Bogusky addressed in his judgment in Regina v. Taman, (unreported judgment) March 12, 1998 at Newmarket, Ontario, the issue of whether older technology is something which should be held as necessary for comparison to new technology. I note that a substantial and indeed perhaps the most substantial part of the testing which allowed the New Jersey Court to adopt the laser as being generally and scientifically reliable relied exactly on comparison to radar.

¶ 14 The suggestion of course before me on the part of the Respondent is that a Court should insist that the laser speed detection system be tested against a moving target and verified by radar. I have to decide whether that is necessary on some sort of reasonable schedule for the admissibility and indeed for - not so much for the admissibility, but for the test to be relied upon in a Court in Ontario.

¶ 15 Professor Killgallin spoke to this issue. He said that he could not see what such testing added to the reliability of the instrument. I attempted to find out from him the extent to which the testing that he did believe was necessary (that is the Self Test, the Display Test, and the Fixed Distance, Zero Velocity Check) was sufficient to confirm whether all of the error trapping methods inherent in the machine and which he urged upon me were part of the machine's inherent reliability could be tested by the Static Test. I was not satisfied with his explanation.

¶ 16 Sergeant Lannigan also dealt with this issue in his evidence, and did so in my view quite fairly. He acknowledged that one of the features of this machine which he relies upon in being certain that the machine is reliable enough for him to lay a charge is a combination of features which ought to eliminate errors in mobile testing. As I understand it, the machine sends out a number pulses every second and unless a preset percentage of those pulses are returned, the machine will not give a reading. And secondly, in a related reliability safeguard, unless a certain percentage of the pulses returned are consistent each with the other, the machine will not give a speed reading. Sergeant Lannigan very fairly stated in his evidence that that feature of the machine was one on

which he relied upon. It was also a feature that Professor Killgallin suggested made the machine inherently reliable.

¶ 17 I was unable to find any evidence before me that those features of the machine - and they are what I believe that the New Jersey Court is referring to among others, when it describes the error trapping programs and mechanisms built into the detector which the New Jersey Court found were "fully adequate to prevent unreliable speed measurements when used for law enforcement purposes" were in anyway tested by the Self Test, Display Test, or Fixed Distance, Zero Velocity Check recommended by the manufacturer and pronounced upon by Professor Killgallin as being adequate, at least in the sense that he said he could not see how a comparison with radar against a moving object would assist in assessing the reliability of the instrument.

¶ 18 I find on the evidence before me that there is no adequate testing of the error trapping mechanisms without a dynamic test being done on the instrument. I found myself haunted during the course of reviewing the material for this judgment by the manufacturer's manual. Time and again, as I attempted to wrestle with the issues of whether the type of testing contemplated by Justice of the Peace Leggate was necessary or added anything to the reliability of this information as considered by a Court, I kept returning to the words of the manual, Exhibit Two, on page 23. Having described the other testing that is recommended by the manufacturer, and I include particularly the Fixed Distance, Zero Velocity Check, the manual goes on to say under the heading "Confidence Check":

¶ 19 "If additional verification is desired," before describing a mobile test against a calibrated speedometer, which could in my view just as easily and in fact more accurately be done by radar mounted in a cruiser as I understand is common with respect to police cruisers in the jurisdiction of Ontario. I cannot reconcile the plain words of the manual with Professor Killgallin's evidence that it wouldn't add anything to it. The word, "additional" seems to me to very clearly suggest that that manufacturer feels there is an additional verification possible by this test.

¶ 20 Professor Killgallin's experience with this particular machine is, in my view, totally based on the manufacturer's material and his explorations of the use of the machine are totally dependent on the manufacturer's engineering and it being demonstrated to them by the manufacturer.

¶ 21 I cannot accept that an additional verification is not required. Surely the most accurate check of the existing technology possible is the least that a Court can expect in a law enforcement circumstance. I am buttressed in this view by the decision of New Jersey Court and Judge Stanton who in his Order, in my view, relied heavily on the existence of the error trapping programs and their adequacy to prevent unreliable speed measurements when used for law enforcement purposes. In my view, it is not unreasonable to demand a dynamic test as part of the indicia or reliability to a Court. Having come to this conclusion, I have more difficulty in trying to determine what if any schedule such testing should occur at. It is almost an impossible proposition. I cannot see the necessity of having a before and after test for each machine for each case. However, it seems to me that if the machinery were tested in a dynamic test on about a thirty day schedule, in the reality of our Court circumstance, that would mean there would always be a before and after test available. I suppose it is somehow conceivable that someone could lay a charge, get it to Court and the Court need the Information before the expiry of thirty days, but it is difficult for me to conceive a set of circumstances in which it really would happen.

¶ 22 It may very well be that this decision is going to cause some difficulty scheduling in terms of arranging the tests. It may be that the Court is going to have to consider whether or not it is necessary for the officer who conducts the investigation of the speed of the vehicle to have also been the one who conducted the tests, or whether that officer could rely on a monthly, impartial test conducted by someone else at the Department. That is something that is not before me and I can't at this point decide it.

¶ 23 Having regard to all of the circumstances however, in my view, generally speaking, the technology is more than adequate to accurately measure speed in law enforcement situations accurately enough for Courts to rely on. But, given the fact that other jurisdictions have used radar comparisons as the basis for its admissibility, given the fact that the manufacturer has suggested if additional verification is desired, it can be obtained from a

dynamic test, given that such additional verification, if available, in my view, ought to be required to have the most accurate result available in Court, and given that there is no evidence before me that the error trapping functions of the machine relied upon - suggested as being useful by Professor Killgallin and relied upon by Sergeant Lannigan - are caught by anything short of a dynamic test, it is my view that a dynamic test is required and that a thirty day schedule of such testing is not inappropriate.

¶ 24 MS. McCLEAVE: I would like a point of clarification, if you will permit me. Your Honour indicated that you didn't see the necessity of a before and after test. You indicated at a later juncture that a thirty day schedule is not inappropriate. I wonder if you could provide some clarification; it would be appreciated.

¶ 25 **THE COURT**: In terms of clarification, I am not prepared to rule that in every case as long as the machine is tested at a reasonable schedule before the test that evidence of a subsequent test has to be put before the Court before a Court can accept that the machine was accurate on the date of the test - the investigative test was made. I am sorry, that's not .... Before the investigation was made. I will leave test out of it. We don't for example require that once the Breathalyser Operator has made a test of the operation of the machine at the time that he then test it to see if it was working a month later or a week later or anytime later before that evidence is presented in Court. I can't see any justification for that in this. However, I think that if a thirty day schedule is adopted that, because of the limitations on trying things more quickly than thirty days anyway, it would seem to me that the continuous accuracy of the machine as verified by a dynamic test would always be available to the Court in a realistic sense. Does that clarify what .... I don't know if I can clarify what I meant anymore than that.

¶ 26 MS. McCLEAVE: As I understand, Your Honour is saying then that your ruling is setting out that approximately at some point thirty days prior to the offence date in question, there should be some evidence of comparative testing between a ....

¶ 27 **THE COURT**: A dynamic comparison test.

¶ 28 MS. McCLEAVE: A dynamic - radar and laser on a moving object.

¶ 29 **THE COURT**: That is right, or I suppose any other, if you want to get a fifth wheel. I suspect radar is readily available, so I think radar is the most useful.

¶ 30 MS. McCLEAVE: But that it is not a requirement that there be evidence of after the offence testing.

¶ 31 **THE COURT**: I don't see how I can require or any Court can require after the offence testing. It does not fit in my view within the scheme of other mechanical or scientific tests used as evidence in other types of prosecutions.

¶ 32 MS. McCLEAVE: Just one final point, if you will permit me, because I expect this judgment is going to be carefully read and applied and I would appreciate when you state, thirty days for dynamic testing antecedent to the offence date, is that a fixed period of days, or what if it was thirty-five? Is there a time line here that is being drawn?

¶ 33 **THE COURT**: Well, I am suggesting a thirty day. Basically, I am suggesting that since it is not really before me, but it seems to me if the machines are tested about every thirty days, it would be a continuous check that that particular instrument is, in addition to everything else, fulfilling the error trapping capabilities that are relied upon.

¶ 34 MR. DULLEGE: Just with regards to the before and after scenario, I just want to let Your Honour be aware that has all come from radar manuals that have all said before and after, but since the laser hasn't taken that position ....

¶ 35 **THE COURT**: This isn't a radar and you can't test it in the same way.

¶ 36 MR. DULLEGE: Absolutely, but just so Your Honour is aware that is why the Justice of the Peace have always ....

¶ 37 **THE COURT**: I gather that in addition it came from other places. It came from the certificate ruling in the western jurisdiction, but I can't see that it applies here.

¶ 38 MR. DULLEGE: Right.

¶ 39 **THE COURT**: I think it is more like a case of for example a breathalyser where you don't require that it be tested afterwards.

¶ 40 MR. DULLEGE: Thank-you, Sir.

¶ 41 **THE COURT**: Although, as I say, practically speaking, if a log is maintained of the testing, it is probably always going to be available to the Crown anyway or the Prosecution.

¶ 42 MS. McCLEAVE: With respect then to the result of this appeal as I understand Your Honour is ruling, in part the Justice of the Peace was upheld and in part he wasn't. I am not for the purpose of this appeal standing before you and vigorously advocating that a new trial be ordered.

¶ 43 **THE COURT**: I think in the result, taking into considerate on the length of time which has elapsed and the burden placed on the Respondent, that I am simply going to dismiss the appeal and not order a new trial.

¶ 44 MS. McCLEAVE: Thank-you. I expect however it will be noted on the record that it would have been allowed in part.

¶ 45 **THE COURT**: Yes.

¶ 46 MS. McCLEAVE: But balancing against the principles ....

¶ 47 **THE COURT**: Balancing the interests, which I have attempted to balance and given the very fair position taken by the Appellant in this matter, I think we ought not to pursue the matter further and I decline to do so.

¶ 48 MS. McCLEAVE: Thank-you.

¶ 49 MR. DULLEGE: Thank-you Sir.

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