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R. v. Brewer (Ont. Prov. Ct.)

Between
Christopher Brewer,Appellant, and
Her Majesty the Queen, Respondent

Ontario Judgments: [1988] O.J. No. 2531
Newmarket Registry No. 8610 131408

Ontario Provincial Court - Criminal Division
Newmarket, Ontario
Lampkin Prov. Ct. J.

May 19, 1988

Charge: Speeding.

E. Benaiah, for the Crown.
R. Dullege, for the Appellant.

LAMPKIN PROV. CT. J. (orally):— In this case, Christopher Brewer appeals against his conviction of the offence of speeding. He was charged that on the 4th of September, 1986, at 8:45 a.m. at The Queensway South in the Town of Georgina, he did commit the offence of speeding, 90 kilometres per hour in a posted 6O kilometre per hour zone contrary to The Highway Traffic Act.

The only evidence called was that of the police officer, Police Officer Whittington, who, in his sworn testimony, said that he was using a hand-held Muni Quip radar unit, model TC 3, serial number 6305. He said it was tested according to the manufacturer's specifications by two internal buttons as well as a tuning fork. He had been parked on the Mac's Milk Store parking lot on The Queensway South in Georgina at approximately 8:45 a.m. when he saw a gray pick-up truck southbound, at a high rate of speed, and he pointed the gun at the vehicle and obtained the reading with which the accused had been charged. He stopped the vehicle and made his investigations.

In his examination-in-chief, he said:

"I was trained as a new officer by an experienced officer at my date of appointment."

And when asked what was the nature of the training he received, he said:

"I was taken out in a vehicle and shown the operation of a radar."

That was the extent of the training indicated in examination-in-chief, but his training was seriously questioned in cross-examination. He was asked:

"Have you ever seen anything from the manufacturer?

Answer: "No, I have not."

Question: "Have you ever seen a list indicating what the tests are and how they should be carried out from the manufacturer?"

Answer: "Not from the manufacturer, sir."

Question: "I see, when you used the tuning fork, how far away from the radar did you hold the tuning fork?"

Answer: "I bang (sic) the tuning fork and put it directly in front of the radar."

Question: "What did you strike the tuning fork on?"

Answer: "The steering wheel, sir."

Question: "Do you have any indication from the manufacturer that that is a proper test for the tuning fork?"

Answer: "No, I do not, sir.".

Question: "Do you have any indication from the manufacturer that is the recommended position to be holding the tuning fork in front of the radar set?"

Answer: "I do not."

Question: "Have you ever seen a manual from the manufacturer for that radar set?"

Answer: "No, I do not, sir."

Following that line of questioning, the learned Justice of the Peace indicated at the end of some discussion that according to the evidence, the officer tested the radar in accordance with the manufacturer's instructions. He goes on:

"And he tested, according to his evidence, in accordance with the manufacturer's instructions, I assume which he learned through his qualifications because he has not read the manual."

And he then indicated that the question Mr. Dullege was putting to the officer as to whether he was operating the radar according to manufacturer's specification was not a fair question. Mr. Dullege continued:

"Officer, the officer who has trained you, is there anything before the Court today to indicate that that officer was qualified to operate that radar?

Answer: "No, sir."

At page eight of the transcript:, cross-examination continues:

"Where did you aim the radar when you were conducting the test with the tuning fork?" Answer: "Towards the passenger side of my vehicle?"

Question: "Were you given any indication during your training where, in fact, the radar should be aimed?"

Answer: "No, sir.".

Question: "So are you able to say that that test, aiming the radar set at the passenger side of your car, the tuning fork in front of it, is the manufacturer's test?"

And he wanted some clarification, but the ultimate answer was: "No, sir".

At the completion of the evidence, Mr. Dullege moved for a directed verdict that the charge be dismissed, and the learned Justice of the Peace did not agree with his submissions. At page 12 of the reasons, the learned Justice said in quoting the officer's evidence:

"I tested the radar in accordance with the manufacturer's specifications. I did an internal test and an external test, and the external test was done by a tuning fork".

And he gave the serial number.

"He indicated that he's qualified to operate that radar, has been for some two years. And he got his training by a senior officer. That the radar had been checked prior to this incident and subsequent to this incident, and on both occasions it's working accurately. He laid the charge.

Now without evidence to the contrary, Mr. Dullege, you can make all kinds of supposes. We can suppose that that test is not in accordance with the manufacturer's instructions. We can suppose the tuning fork was not held in the proper position. We can suppose that the officer who trained him was not, in fact, qualified, but I find it difficult to believe that somebody unqualified would be trying to teach somebody else how to use something."

The crux of the appeal is that the officer's qualifications to use the radar unit were certainly not proved before the Court, and the motion for the directed verdict ought to have been allowed.

A number of cases have been referred to both by the Crown and defence. I don't think I need to review the cases in any great detail. I, myself, have looked at what I believe has come to be regarded, In these courts at least, as an authoritative work: "The Law on Speeding and Radar", a book which I commend to the Bar on both sides, defence as well as Crown, and indeed particularly to the police. It is authored by A. Shakoor Manraj, C.C., of The Middle Temple, London, England, barrister-at-law, Crown Prosecutor in The Provincial Offences Appeal Court at Old City Hall, Toronto; and Paul Douglas Haines, ph.D., formerly Consultant to both Canadian and United states Remote Sensing and Defence Research Establishments, now Vice president and Director of Research for Qualimage Incorporated, Gatineau, Quebec, and Research Analyst in Satellite and Airborne Image and Information Processing Systems. The book has been relied on in Toronto in the prosecution of Provincial Offences, end there are a number of points brought out with respect to the use of radar when the qualifications are seriously in dispute.

At page 45, the authors say this:

"A intelligent child can learn very quickly to operate some of today's new radar devices with the same ease and skill as the average police officer (which is to say, poorly, as we shall see). This is no unfavourable reflection on the ability of police officers, especially the very hlgh calibre officers that can make it through

today's difficult screening process and training programme. The problem is twofold. Today's modern sperd radar units arr, like today's automobiles with their automatic transmissions, deceptively simple to operate and consequently belie the real care they deserve in being operated. Secondly, for all intents and purposes, there does not appear to be an effective or meritorious training programme for teaching radar operation given by any police colleges or academies in Canada. Our judgment here is based entirely on the standard types of questions and responses by police officers in court and the prosecutor, (Crown or police) in the review of many cases involving speed detection hy radar over the last 35 years as may be appreciated hy the many cases cited in the first half of this book.

Police officers today do not have to hold a special type of licence or have any technical qualifications whatsoever to operate their radar units. When asked in court about his qualifications, the average police officer will usually testify that he had a given number of hours of instruction and practice in operating radar devices or that he completed some obscure course of instruction in radar operation. Sometimes the course is only just a short sales pitch from the sales representative of the radar unit. Manufacturers do, however, supply operating manuals with "do's and don't's", but just like automobile manufacturers who do not supply driving lessons to new car buyers, they do not supply operating lessons either. The truth is that today's radar units are so superbly crafted and designed to be used with such ease, that all a police officer is really required to do, to operate a unit effectively, is to follow a set of simple "do's and don't's" rigorously. Consequently, the real danger in using this equipment lies in a police officer becoming easily bored or complacent due to the repetitive nature of the operations. Moreover, the Court contends that a police officer need not be a radar technician but only a qualified radar operator, where surprisingly enough, the meaning of the word, "qualified', is totally undefined; it being understood to mean (perhaps) that the officer has been trained in operational procedures (regardless of how correct they are or how well an officer abides by them).

Therefore, it has become almost sufficient and quite acceptable for a police officer to state: "I am a qualified radar operator" in his address to the Court and never have to fear that the statement will be challenged.

In fairness to the Court, however, many thousands of dollars of taxpayers' money is spent training police officers. It is therefore not unreasonable for the Court to expect that every police officer in whatever matter of police business that has brought the officer into court, to be an "expert witness' with his or her testimony being accepted in preference to that of any defendant who has not been exposed to the equivalent training and discipline of that of a police officer." (Emphasis mine)

I move on to page 52 where they specifically address the question of hand-held radar.

"In the last several years, this unit has developed wide popularity because of the flexibility it gives a police officer in being able to track in a "changing line of sight" mode, small targets such as motorcycles. Because of its relative smallness, it can be easily hooked up and carried on a motorcycle being used by a police officer. It operates on a twelve volt power system that can be attached directly to the battery or, in the case of a cruiser, a cigarette lighter outlet. The transmitter, receiver and antenna are all encased in this unit, and a police officer has full control over its operation by means of a trigger which he can engage or disengage at will. A digital speed read-out as well as the controls are mounted on the back of the unit for ease in reading and adjustment.

With this extreme flexibility, however, comes extreme sensitivity, and herein lies the unit's greatest deficiency. In learning to shoot any firearm, much experience is required to be able to hit the bull's-eye consistently. It requires considerable talent as well as practice, no matter how fine the precision and balance

that has been built into the gun, to prevent what is called muzzle wavering. Most people just do not have that necessary combination of skill and patience to develop cven a moderate capability of shooting a target. Those police officers operating a hand-held radar gun are no exception, and, in fact, given the many anomalies that occur when using radar per se, even being an Olympic gold medalist in shooting would be no guarantee that in using such a gun one would consistently target the correct speed of any vehicle at which one aimed. Furthermore, the radar gun's accuracy is still subject to the external factors of such things as power lines or moving tree branches that hamper the accuracy of car-mounted stationary radar. The difference is that the hand-held gun's operation is under the total control of the police officer, and as we see, if it is improperly used, it provides no advantage over a stationary radar (in fact, the results can be even worse).

Because of the extreme sensitivity of the hand-held gun, great care must be exercised not to trigger the gun while it is in motion. In the process of raising or sighting the gun to a target, the slightest jerk of the trigger prematurely creates a "sweep" that can translate into a high velocity. While such a motion may be entirely unintentional, or not even recognized by the police officer, it is a major cause, apart from all other anomalies, in giving artificially high speed readings. In fact, a police officer can very quickly learn how to make any speed reading appear on his unit by coordinating the triggering action with the motion of his arm. This, of course, makes a form of cheating very easy and quite impossible to detect except to the eye of the experienced observer. For a manufacturer to attempt to make the hand-held radar less responsive would be to defeat the fine precision that this unit is capable of when it monitors speed.

In order that this unit contain all the necessary components, it is at present heavier than a Clint Eastwood 49 Magnum, and thus difficult for most people to hold out at arms length without translating some muscular spasm to the unit as it is being operated.

In Summary, although a radar hand-held unit is entirely under the control a police officer, it is nonetheless the most difficult to control of all types of radar units in current use today."

(Emphasis mine)

At page 58, they speak about tuning forks which are used, to test the radar.

"Tuning forks are precision instruments and are extremely delicate. If dropped by accident, micro-sized fractures can occur in its interior leading to slow crack propagation which is most difficult to determine. This is metal fatigue and is a condition that every tuning fork, however handled, eventually develops over prolonged usage. Dropping them only accelerates the process. Consequently, all tuning forks should be routinely checked by a certified technician with the proper gauging instruments. A surface scratch of only 1/20,000 of a centimetre is enough to cause an inaccurate reading by eight kilometres. The reason for the importance of keeping tuning forks well protected is that such small fracturing and scratching of them sets up secondary harmonic frequencies. In a vibrating tuning fork this alters the stroking behaviour of the fork's tines as they compress the reflected wave returning to the transmitter."

And this following paragraph is what is important.

"Striking a tuning fork against a surface of nonuniform density such as a police officer's boot that has nails in it will produce secondary harmonic frequencies also. However, this method of setting the tuning fork in vibration by police officers is most common. Ideally, a surface of uniform density that is slightly less hard than the material the turning fork is made of should be used. There is probably no police officer that carries such a surface object around for this purpose only, and there are very few surfaces inside or on his cruiser or

on his person that are reliable enough." (Emphasis mine)

It is to be remembered that in this particular case in order to use the tuning fork, the officer said he banged it on the steering wheel, and there I have staring me in the face is an authoritative statement that there is practically nothing inside the cruiser or on his person that he can bang it against in order to get those tines to operate properly.

I agree that if the evidence had stayed simply as it had been given in-chief that "I am a qualified radar operator", that he had some basic training by an experienced officer, that would have been sufficient. But his qualification was seriously questioned and attacked under cross-examination. He had read absolutely nothing at all from the manufacturer. He couldn't event say whether the person who trained him had read anything from the manufacturer. He couldn't really confirm that the tuning fork was activated by use of an appropriate surface. He said he used the steering wheel, but he couldn't confirm that that was an appropriate method in which to activate it. He really could not confirm that what he did to use that radar unit was according to the manufacturer's specifications.

I agree with the defence, indeed, that when attacked in that fashion, the police officer could not have been regarded as a "qualified radar operator" and therefore that a prima facie case was not made out. The appeal will be allowed, the conviction will be set aside and any fine paid will be ordered to be remitted.