

## Federal Court of Appeal Decisions

Case name: R I S - Christie Ltd. v. Canada  
Date: 1998-12-21  
File numbers: A-710-96

Date: 19981221

Docket: A-710-96

**CORAM: STRAYER J.A.**  
**ROBERTSON J.A.**  
**SEXTON J.A.**

**BETWEEN:**

**R I S - CHRISTIE LTD.**

Appellant  
(Plaintiff)

- and -

**HER MAJESTY THE QUEEN**

Respondent  
(Defendant)

Heard at Toronto, Ontario on December 3, 1998

Judgment delivered at Ottawa, Ontario on December 21, 1998

REASONS FOR JUDGMENT BY: ROBERTSON J.A.

CONCURRED IN BY: STRAYER J.A.

SEXTON J.A.

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**BETWEEN:**

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Appellant

(Plaintiff)

- and -

**HER MAJESTY THE QUEEN**

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(Defendant)

**REASONS FOR JUDGMENT**

**ROBERTSON J.A.:**

[1] Section 37 of the *Income Tax Act* encourages the private sector to develop new products by offering attractive tax incentives to those willing to undertake or invest in "scientific research" of the kind outlined in Regulation 2900 of the *Income Tax Regulations*. The issue raised on this appeal is whether such taxpayers are obligated to adduce documentary evidence of test results in order to claim the tax benefits available under that legislation. The Tax Court Judge imposed such an evidentiary burden under the aegis of what he termed the "repeatability" criterion. Since the appellant failed to produce the necessary documentation, it was denied favourable tax treatment, in spite of findings by the Tax Court Judge that testing had been conducted and that a technological advance in the construction industry had resulted. In my respectful view, the learned Judge erred in imposing such an evidentiary burden on the taxpayer in the circumstances of this case. The relative brevity of the reasons to follow is a reflection of the clarity and comprehensiveness of the Tax Court Judge's reasons for judgment, reported at 97 DTC 99 (T.C.C.).

[2] In 1982, Leonid Slonimsky (a professional engineer) and Daniel Dorcich (a businessman) conceived of the idea of developing a concrete forming medium for cast-in-situ concrete construction (a "spatial membrane panel"), in order to decrease costs and increase the quality of insulation in the formation of concrete panels in the construction industry. In November, 1982, they drafted a research and development proposal and submitted it to a consulting firm which, in turn, approached the appellant. In December of the same year, the appellant invested \$230,000 in the project, through a numbered company. Slonimsky and Dorcich agreed to undertake the necessary research. The appellant claimed a deduction of \$160,000 in respect of scientific research under paragraph 37(1)(a) of the Act, a research allowance of \$80,000 under subsection 37.1(1), and an investment tax credit of \$40,000 under subsection 127(9) in respect of its 1982 taxation year. The Minister of National Revenue disallowed these expenditures for the 1982 taxation year and, consequently, reassessed the appellant's 1983 taxation year by reducing its small business deduction in accordance with section 125 of

the Act. Apparently, it is common ground that the research expenditures properly relate to the taxpayer's 1983 taxation year, not its 1982 taxation year as originally claimed by the appellant.

[3] Phase I of the project was undertaken in 1983, with a working prototype being developed by the end of that year. Additional funding for Phases II and III of the project was secured in April, 1984, and work continued in 1984 and 1985. The project culminated in an application for a Canadian patent being filed on January 31, 1986. A patent was issued on April 30, 1991.

[4] The issue before the Tax Court was whether the development work on the spatial membrane panel constituted "scientific research" within the meaning of Regulation 2900. This Regulation, as applicable to the taxation years in question, reads as follows:

(1) For the purposes of this Part and paragraphs 37(7)(b) and 37.1(5)(e) of the Act, "scientific research and experimental development" means systematic investigation or search carried out in a field of science or technology by means of experiment or analysis, that is to say,

(a) basic research, namely, work undertaken for the advancement of scientific knowledge without a specific practical application in view,

(b) applied research, namely, work undertaken for the advancement of scientific knowledge with a specific practical application in view, or

(c) development, namely, use of the results of basic or applied research for the purpose of creating new, or improving existing, materials, devices, products or processes ....

[emphasis added]

[5] The respondent's expert witness (Dr. Razaqpur) articulated the following non-controversial definition of scientific research as including: formulating the problem, constructing the model, testing the model, deriving a solution from the model, testing and implementing the solution. Both expert witnesses agreed that "scientific research and development is considered to be the application of scientific and engineering principles to the resolution of a scientific or technical problem". As in other cases involving scientific research and development, the Tax Court Judge relied heavily on expert testimony. The Tax Court Judge accepted counsel for the Minister's argument that "scientific research" expenditures should not receive favourable tax treatment under Regulation 2900 unless "it is possible to provide a recorded basis upon which others can perform the same experiments and are able to verify or disprove the hypothesis by setting up the exact same test parameters ..." (at 103). Thus, the Tax Court Judge adopted the Minister's position that an "essential attribute" of scientific research, as contemplated by the above provision, is "repeatable steps which are clearly noted". He supported this repeatability requirement by reference to his earlier decision in *Sass Manufacturing Ltd.*, 88 DTC 1363 (T.C.C.). As I understand the jurisprudence, the repeatability criterion flows from the legislated definition of scientific research, which states that "scientific research ... means systematic investigation ...".

[6] The Tax Court Judge noted that there were "substantial shortcomings" in the appellant's evidence relating to the criterion of repeatability. Whether the dearth of documentary evidence was due to the fact that Mr. Slonimsky (the engineer) had died prior to trial and Mr. Dorcich (the business partner) was in poor health and had to testify by affidavit evidence was never addressed. Apparently, there were relevant documents at the Slonimsky residence at Georgetown but, for some unexplained reason, they were not produced at trial. However, the Tax Court Judge expressly refused to draw any adverse inference from the appellant's failure to produce those documents (at 108); instead, he found that the Georgetown documents "reflected work done and tests carried out". Nevertheless, in his opinion, the fact that this information was incapable of making the tests repeatable was fatal to the taxpayer's position that "scientific research" had been conducted. Thus, its appeal was dismissed.

[7] In spite of his conclusions with respect to repeatability, the Tax Court Judge made the following findings of fact:

[i]n this case, there is some evidence that an engineering uncertainty existed, that a hypothesis was formulated and that by testing models and by observation of the results, 541185 [the numbered company] resolved the problem and created a practical product which embodied a technological advance [at 107].

....

Dorcich's testimony confirms that investigation and experimentation to develop a product was conducted in the taxation years in issue and that a new product was created [at 108].

[8] In summary, the Tax Court Judge accepted that research involving experimentation and testing had been undertaken, a new product had been developed, and a technological advance had been made in the construction industry. Against this factual background, I am unable to conclude that the taxpayer is not entitled to the benefits of the legislation because of its failure to adduce sufficient documentary evidence to satisfy the repeatability criterion, thereby enabling tests to be replicated by third parties.

[9] With respect to the above findings of fact, counsel for the Minister argued that no such findings were made by the Tax Court Judge. Counsel's argument hinged on the Tax Court Judge's statement that there was only "some evidence" of testing leading to a technological advancement. In response, I simply point out that when those words are read in context it is clear that the Tax Court Judge was satisfied with the sufficiency of evidence regarding testing and technological advancement. As expressly stated by the Tax Court Judge, the only factual matter in issue was with respect to the repeatability factor.

[10] The discrete issue raised in this case does not require a dissertation on the legal meaning of "scientific research" as used in the Act and Regulations; therefore, I have confined my analysis to a few self-evident propositions surrounding the evidentiary burden upon taxpayers claiming the tax deductions and credits associated with scientific research. [For a comprehensive analysis, see *Northwest Hydraulic Consultants Limited v. The Queen*, 98 DTC 1839 (T.C.C.)]

[11] As a preliminary matter, the parties raised the issue of the proper role of expert witnesses in interpreting the scientific research provisions of the Act. In light of Dr. Razaqpur's conclusion that repeatability is an essential element of scientific research, some guidance on this issue is required.

[12] What constitutes scientific research for the purposes of the Act is either a question of law or a question of mixed law and fact to be determined by the Tax Court of Canada, not expert witnesses, as is too frequently assumed by counsel for both taxpayers and the Minister. An expert may assist the court in evaluating technical evidence and seek to persuade it that the research objective did not or could not lead to a technological advancement. But, at the end of the day, the expert's role is limited to providing the court with a set of prescription glasses through which technical information may be viewed before being analyzed and weighed by the trial judge. Undoubtedly, each opposing expert witness will attempt to ensure that its focal specifications are adopted by the court. However, it is the prerogative of the trial judge to prefer one prescription over another.

[13] Obviously, scientific research and experimental development, as outlined in Regulation 2900, envisages the introduction of a new or improved product or process. Thus, research must be directed toward a meaningful technological advancement and involve an element of creativity, rather than the mere application of routine engineering principles. At the same time, research objectives must be realistic. The committed alchemist who seeks to turn base metals into gold should not look to the *Income Tax Act* for tax incentives. Assuming that a research project is eligible for favourable tax treatment, there is no express or implied statutory requirement that such project actually culminate in a technological advancement. Regulation 2900 speaks of research undertaken for the advancement of knowledge and for the purpose of creating new products. It does not state that eligible research must actually achieve those ends. Otherwise, the very purposes for which the legislation was enacted would be undermined. Presumably, not all of Alexander Graham Bell's research initiatives bore fruit. To maintain that failed research efforts do not constitute scientific research under the Act is contrary to common sense and the goal of encouraging entrepreneurship.

[14] In addition to developing new products or processes, scientific research connotes the existence of controlled experiments involving the testing of models or prototypes. Thus, evidence of scientific research must be adduced by the taxpayer in order to demonstrate that such research (including testing) was undertaken and that it is eligible for favourable tax treatment: see, for example, *Progressive Solutions Inc. v. R.*, 96 DTC 1232 (T.C.C.). Not only must taxpayers establish that tests were performed, they must also demonstrate that they were conducted in a systematic fashion. In my view, the requirement that research efforts be "systematic" is a higher threshold than simply requiring that research, including testing, be conducted. Although both documentary and *viva voce* evidence are admissible, the only sure-fire way of establishing that scientific research was undertaken in a systematic fashion is to adduce documentary evidence which reveals the logical progression between each test and preceding or subsequent tests.

[15] Thus, it is reasonable to expect a taxpayer to adduce documentary evidence of systematic research, including testing. If, however, a taxpayer has a plausible explanation for the failure to adduce such evidence, it

is still open to the court to hold that, on a balance of probabilities, systematic research was undertaken. For example, where research notes are accidentally destroyed, it should be permissible for the trial judge to infer that systematic research was conducted, having regard to the totality of the evidence. During oral argument, counsel for the Minister accepted this proposition, if only because that scenario was inapplicable in the present case. However, in my view, it should also be permissible to infer that a taxpayer had conducted systematic research where it is established that such research led to a technological advancement. I say this because the whole foundation of the scientific research provisions of the Act and Regulations should not rest solely on the repeatability criterion. Otherwise, repeatability would negate the validity of all other evidence pertaining to scientific research.

[16] In the present case, the Tax Court Judge made two important findings. First, he found that testing had been undertaken and, second, that the research efforts of Slonimsky and his assistant constituted a technological advancement. In my respectful view, once the Tax Court Judge reached these conclusions, a rebuttable inference was raised that the testing conducted by the taxpayer was carried out in accordance with Regulation 2900. In the circumstances of this case, I see no need to impose an additional evidentiary burden on the taxpayer of having to adduce documentary evidence relating to the repeatability of testing data. If there were any doubt as to whether a technological advance had been achieved, then it would have been open to the Tax Court Judge to conclude that, on a balance of probabilities, "scientific research" had not been conducted within the meaning of the Act and Regulations. In this case, a technological advance was achieved in the construction industry. In *Sass Manufacturing*, however, there was no technological advance because the project had been abandoned and documentary evidence of testing could not be adduced because the records had been discarded. In my respectful opinion, the facts in the present case are materially different than those in *Sass Manufacturing*.

[17] For the above reasons, I would allow the taxpayer's appeal, with costs here and in the Tax Court, set aside the judgment below, and allow the appeal from the Minister's assessments.

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J.A.

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