

"... I admit that the documents in (Gutman's) possession relating to the purported d 81/4/123 NORTHERN OFFICE MICRO COMP v ROSENSTEIN are essential cons: Payen Components v Bovis Gaskets 94/2/470/W engaged in ref : Payen Comp v Bovis CC 95/4/448/A Since 18 Ap ref : Golden China TV Game Centre v Nintendo 97/1/412/A gaging in co ref : Marais v Bezuidenhout (p.991) 99/3/988/W estate and h insolvent estate. Only relatively few of these are relevant to the present dispute, but it requires combing through these with care to separate the relevant from the irrelevant and I have not been in a position to sacrifice my necessary work on the merits of the case to do the exacting work of going through all these documents. It goes without saying that an attorney preparing a discovery affidavit must do so with very great care and this work cannot be rushed.

In addition certain creditors, particularly a secured creditor, have numbers of documents relating to the case and these must be perused..."

Smith asked, should a postponement be granted, that defendant "be ordered to pay the costs thereof, and the wasted costs occasioned thereby, on the attorney and client scale, and (Gutman) should be authorised to tax a bill... and the defendant should pay such costs before the action proceeds."

No evidence was adduced on this issue. All I have before me that was not before De Kock J when he granted the postponement, is:

(a) Exh 20, a letter dated 1 May 1980 from Smith to Pearson:

"Since it is essential to know precisely what the issues are which may arise in the case under the 'non-insurable interest' plea, we hereby request you to advise us precisely what the various issues are under this head, so as to enable (Gutman) to make the fullest possible discovery."

(b) Exh 21, a non-committal reply dated 2 May placing the ball back where it belonged: in Gutman's court.

Pearson's attitude in attempting to shorten the proceedings and cut costs was not unreasonable in the circumstances of the present case. The supplementary Rule 37 minute handed in at the commencement of the trial before me proves what a large field there was in which there was no factual dispute. The attitude of plaintiff, in my view, was unreasonable: in not only countering defendant's suggestion with a deafening silence, but waiting until virtually the last moment to stand upon his rights under the Rules. Greater co-operation and less self-righteousness on his part would probably have made a postponement unnecessary, without prejudicing his client's rights thereby.

Plaintiff's claim succeeds. Judgment is granted in his favour in the agreed sum of R39 350,16 with costs which, since both parties were agreed that the matter merited the attention of two counsel, is ordered to include such costs. The costs reserved by De Kock J on 1 May 1980, of defendant (as applicant), and of the wasted costs occasioned by the postponement of the trial, are to be paid by the plaintiff.

Plaintiff's Attorneys: Smith, Benn & Co. Defendant's Attorneys: Reillys.

NORTHERN OFFICE MICRO COMPUTERS (PTY) LTD
AND OTHERS v ROSENSTEIN

(CAPE PROVINCIAL DIVISION)

1980 April 28; May 9; August 6; September 9;
October 14 1981 June 19 MARAIS AJ

Copyright—Computer programmes—Company trading in computers and computer programmes—Employee analyst programmer developing a suite of programmes—Employee entitled to copyright protection under Act as against employer—Extent to which confidentiality of employer's trade secrets entitled employer to restrain employee from exploiting his copyright—Act 98 of 1978 s 1 and s 2 (2) (b) prior to its amendment by Act 56 of 1980.

Trade and trade marks—Trade—Confidentiality of employer's trade secrets—Extent to which employer entitled to restrain employee from exploiting his copyright in a computer programme developed by him in course of his employment.

Third applicant, a company trading in computers and computer programmes, had commissioned one F to develop a suite of computer programmes as an accounting and administrative system for doctors and dentists. Its purpose was to provide doctors and dentists with a speedy, accurate and comprehensive source of information relating to all aspects of their financial affairs. Respondent, a qualified computer systems analyst programmer, was thereafter on 1 August 1979 employed to take over from F after the project had been conceived, its objectives defined and when work on its development had commenced. Third applicant ceased to trade on 22 September 1979 and second applicant took over from it, first applicant in turn taking over from second applicant. By the beginning of 1980 the programme was virtually complete. In mid-March 1980 respondent gave notice of resignation, after maintaining that the copyright in the programme vested in him and that he was entitled to have the first applicant sign a royalty agreement which first respondent had refused to do. On 28 April 1980 applicants were granted an order ordering the Sheriff to seize all listings, floppy discs and printouts relating to the programme which were in respondent's possession and a rule nisi was issued operating as a temporary interdict restraining the respondent from communicating any information relating to the programme to any third party. On the extended return day of the rule, the rule nisi was discharged and a fresh rule issued. On the return day thereof, applicants based their claim solely on the right of an employer to require an employee or ex-employee to respect and maintain the confidentiality of his employer's trade secrets, whilst respondent based his defence on the Copyright Act 98 of 1978.

Held, as to respondent's defence, that, as the amendment to s 2 of the Act by Act 56 of 1980 only came into operation on 23 May 1980 and was not retroactive in effect, the case had to be decided in accordance with the provisions in force prior to the amendment.

Held, further, that on the evidence the suite of programmes was a "literary work" within its meaning in s 1 of the Act and had been "written down, recorded or otherwise reduced to material form" within the meaning of s 2 (2) (b) of the Act.

Held, further, that respondent had extended sufficient effort or skill upon the development of the suite of programmes to give it a new and original character.

Held, therefore, that, as between the parties, the suite of programmes was entitled to copyright protection.

Held, accordingly, that it followed that respondent was, in terms of s 21 of the Act, the owner of the copyright (*aliter* in terms of the amending Act), but that that did not mean that the applicants could not restrain the respondent from exploiting his copyright, nor, on the other hand, that the programme was also a trade secret.

Held, further, that the mere fact that copyright was vested in an employee in certain circumstances did not mean that, even if the subject-matter was confidential and a trade secret, the employee could divulge it to whom he pleased.

Held, further, that, as much work, skill and time were needed to produce a suite of programmes of this kind, that, if respondent were permitted simply to copy it, he would be unfairly nullifying the advantage of the long start over rival competitors to which applicants were entitled, and that, to that limited extent, the suite of programmes was a trade secret.

Held, further, however, that it did not follow from this that respondent might not again apply his mind to the development of a suite of programmes to cater for the accounting and financial needs of doctors and dentists, or that, if he did, he would have to wipe clean the slate of his memory: to accept the contrary view would halter respondent's use of his own training, skill and experience to an unacceptable degree, even if he were to be merely restrained from doing so for a limited period of time.

Held, therefore, that applicants were not entitled to confirmation of the rule *nisi* in the wide terms it had been cast, nor even to a more restricted form such as had been put forward on applicant's behalf during argument, but that applicants were entitled to have the respondent restrained from copying, or permitting to be copied, the suite of programmes or any part thereof, and interdicted from making use of, or permitting anyone to make use of, any existing copy of the whole, or any part, of such suite of programmes.

Return day of a rule *nisi*. The facts appear from the reasons for judgment.

L R Dison SC (with him *C W Rosenthal*) for the applicants.

K A B Engers for the respondent.

Cur adv vult.

Postea (June 19).

MARAIS AJ: This case has to do with the respective rights and obligations of employers and employees who work in the field of computer programming. And it calls for an answer to the question whether or not computer programmes enjoy the protection of the South African Copyright Act 98 of 1978.

The dispute arose in this way. Respondent is a qualified computer systems analyst programmer. He is a bachelor of science, having majored in computer science. On 1 August 1979 he entered the employ of third applicant. Prior to respondent entering third applicant's employ, third applicant had commissioned one Francis to develop a suite of computer programmes which may be styled an accounting and administrative system for doctors and dentists. Its purpose was to provide doctors and dentists with a speedy, accurate and comprehensive source of information relating to all aspects of their financial affairs. I shall refer to it hereafter as the programme.

Respondent was a full-time employee of third applicant. For reasons

which it is unnecessary for me to relate, respondent took over the task which had been assigned to Francis. Respondent thus became involved in the project after it had been conceived and its objectives had been defined, and when work on its development had commenced. Respondent continued with the development of the programme and, by the middle of January 1980, the programme was virtually complete. The work which respondent did in this connection was work which he was employed to do. All the materials which he required and used to evolve the programme were supplied and paid for by the applicants.

At this point, I should explain that third applicant ceased to trade on 22 September 1979. Its stock was sold to pay all its trade creditors, save second applicant which was its major creditor. Second applicant took over all the remaining assets of third applicant in settlement of third applicant's indebtedness to it. Second applicant then commenced trading in computers and computer programmes. After second applicant had traded for a month, it was decided to form a separate company for the purpose of trading in computers and computer programmes. First applicant was incorporated for this purpose and it took over from second applicant all the rights which second applicant had acquired from third applicant. Respondent worked successively for the three applicants and continued developing the programme for doctors and dentists.

The programme which respondent evolved was intended for use on a Datapac computer. Respondent was the only one amongst applicant's employees who knew the language of the Datapac computer, the way in which it functioned and how to programme it. After completion of the programme, respondent asked for a commission of 50 per cent upon each programme sold by first applicant. The request was refused, first applicant taking the view that respondent had done no more than what he had been employed to do.

Respondent's request prompted first applicant to ask him to sign a document in which he transferred to it any right, title or interest he might have had in any work done for first applicant. First applicant says that it did not admit that respondent had any such rights, but it wanted to put an end to any claims which respondent might make. Respondent refused to sign any such document.

First applicant had permitted respondent to work at his home. As a consequence, so first applicant says, respondent had the sole and original copy of the listing and source information relating to the programme in his possession. He was repeatedly asked to bring them to first applicant's offices. He undertook to do so but never implemented the undertaking. Respondent concedes that he was remiss in failing to deliver them to first applicant, but says that it was not impressed upon him that he had to deliver them and that it was crucial that he do so. In the light of respondent's asserted claim to benefit from the work which he had done, and the notice of resignation which he gave to first applicant in mid-March, I consider it far more probable that respondent's tardiness was deliberate. Renewed requests for the return of this material, after his notice of resignation had been received, met with no better response. What is more, respondent had always maintained

that the copyright in the programme vested in him, and had told first applicant that his attorneys had drawn up a royalty agreement which respondent required first applicant to sign. First applicant refused to do so.

A In paras 25 and 26 of the supporting affidavit of Mr P D Smith, the managing director of first applicant, the following allegations are made:

B "25. I wish to inform this honourable Court that the designing of computer programs is a highly competitive field where the passing on of confidential and privileged information regarding the composition of programs could render months of research and development nugatory and could well result in a competitor placing on the market a suite of computer programs ahead of or contemporaneously with the person who commissioned and financed its undertaking. Such is the nature of the listings and source material of computer programs that it is possible to make copies of the listings and source material of any program in a matter of minutes. The first person who is in a position to market a suite of programs is likely to establish himself in the market because C the research and development necessary to develop a suite of programs similar in type and kind would take months to complete and would involve considerable costs. Accordingly all details concerning any computer program are highly confidential and constitute a trade secret. This is especially true of the program which is the subject of this application.

D 26. There is every indication that respondent will after he leaves the employ of first applicant communicate the very confidential information relating to the program and endeavour to promote his own interests to the detriment of first applicant. Respondent could communicate the listing and source of material of the program to a competitor who will then be in a position to compete with first applicant and would not have to incur the time and expense involved in the researching and development of a similar program."

E In para 29 Smith said:

"... I verily believe that respondent has intimated that he will provide the listing and source material relating to the program to third parties who have undertaken to market the program and remunerate respondent accordingly."

F The response of respondent to these allegations is ambivalent. He disputes that this type of programme is the first to be marketed. He says that another similar system for doctors and dentists has been marketed for approximately two years and is being marketed currently as well. He alleges that Smith had given to a programmer friend of his "copies of sample documents which would enable any qualified person to develop an identical programme". This, so he says, shows that applicants do not regard the programme as highly confidential G and as constituting a trade secret. He says, further, that applicants have launched their programme and demonstrated it, and are "comfortably ahead of any competition". Respondent claims that it would take him, the developer of the programme, at least three months to re-write a very similar programme from memory and he claims copyright for the programme which he developed while in first applicant's H employ.

There is no specific denial of the allegations in paras 25 and 26 which I have quoted. Nor is there any specific denial of the allegation in para 29 which I have quoted.

On 24 April 1980 respondent was again asked to return all listings, floppy discs and computer printouts and other material relating to the programme. He said he would do so the following day. By 28 April the material had not been returned and applicants launched an urgent

application in which an order was claimed which directed the Sheriff or his deputy to seize all such material in respondent's possession and to hand it to first applicant. No notice was given to respondent. On 28 April 1980 the Court granted the order but directed that the Sheriff or his deputy hold the material in his possession pending the return day A of a rule which the Court issued, calling upon respondent to show cause why he should not be restrained

"from communicating any information of whatsoever nature relating to the development and/or the content of the aforementioned suite of programmes to any third party".

B The rule was also to operate as a temporary interdict.

Pursuant to this order, the Deputy Sheriff seized the material on 28 April 1980. Upon 9 May 1980, the extended day of the rule, it was ordered, apparently without objection from respondent, that the material seized by the Deputy Sheriff be handed over to the first applicant. The rule *nisi* was discharged and a fresh rule *nisi* was issued in its place. It called upon respondent to show cause why he should not be restrained C

"from communicating any information of whatsoever nature relating to the development of and/or the contents of the suite of programmes referred to in terms of para 1 of the order dated 28 April 1980 (irrespective of the nature or type of computer in conjunction D with which the said suite of programmes may be used)".

Upon the return day of the latter rule, the matter came before me. After the matter had been fully argued and judgment had been reserved, Mr *Dison* sought leave to claim alternative and narrower relief. He asked for an order restraining respondent

E "from communicating all computer language instructions relating exclusively to the accounting and administrative requirements of doctors and dentists, whether in writing or otherwise, embodied in the suite of programs designed by respondent for the purposes of producing an accounting system for doctors and dentists irrespective of the nature or type of computer in conjunction with which such instructions may be used". F

Respondent opposed the prayer for alternative relief and this gave rise to a further day's argument on 14 October 1980.

G It was only after the issue of the rule dated 9 September 1980 that respondent prepared and filed his answering affidavit. His response to the allegation that he promised on 24 April 1980 to return the material by 25 April 1980 was that, because the material had been returned to first applicant, he did not propose dealing with the allegations.

Respondent contends, *inter alia*, that applicants are attempting unjustifiably to restrain him from using knowledge and skill legitimately acquired in the course of his studies and working experience.

H Mr *Dison*, who appeared for the applicants, based their case solely upon the right of an employer to require an employee or ex-employee to respect and maintain the confidentiality of his employer's trade secrets. That such a right and corresponding obligation exists in South African law is not open to question in the light of decisions such as *Harvey Tiling Co Ltd v Rodomac (Pty) Ltd* 1977 (1) SA 316 (T) and *Coolair Ventilator Co (SA) (Pty) Ltd v Liebenberg and Another* 1967 (1) SA 686 (W).

- But applicants must establish, upon a balance of probability, that what they ask the Court to restrain respondent from communicating to third parties are indeed trade secrets, that they are theirs and not respondent's, and that they are not seeking to prevent respondent from using his own knowledge, skill and experience to earn a living. Before I turn to these questions, I should mention that respondent has raised a defence based upon the Copyright Act 98 of 1978. His contention is that he, and he alone, is the person in whom the copyright in the programme vests, and that his former employer has no right whatever to complain of his use of the programme. This contention necessitates my answering two questions which do not appear to have arisen before in the South African Courts. The first is whether a computer programme can be the subject of copyright in terms of the Copyright Act and thus acquire the protection against infringement for which the Act provides. The second is whether, if copyright in a computer programme can exist, and it vests in an employee who was specifically employed by his employer to produce such a programme, the employer has any right to prevent the employee from exploiting his copyright by permitting third parties to copy the programme for a consideration. I find it convenient to deal first with these two questions.
- D Is the computer programme eligible for copyright?

Section 41 (4) of the Copyright Act 98 of 1978 makes it plain that, if *copyright* protection for a computer programme is to exist, it must be found within the four corners of the Act or some other enactment. It reads:

- E "Subject to the preceding provisions of this section, no copyright or right in the nature of copyright shall subsist otherwise than by virtue of this Act or of some other enactment in that behalf."

Two of the preceding provisions of s 41 (4) are irrelevant. The third, s 41 (3), reads:

- F "Nothing in this Act shall affect the operation of any rule of equity relating to breaches of trust or confidence."

I shall have to consider the ambit of s 41 (3) in due course, but, whatever rights it may save, they are not rights of *copyright*. They are rights *dehors* the Act. Rights of *copyright*, as I have said, can only arise from the Act or another enactment.

- G I was not referred to any other enactment which provides that copyright may subsist in a computer programme, so that the enquiry is confined to the Copyright Act 98 of 1978.

- Section 2 of the Act lists the works which shall be eligible for copyright. Amongst such works are "literary works". Mr *Engers*, who appeared for respondent, submitted that this is the category of works into which the computer programme with which I am concerned falls.
- H He conceded, rightly in my view, that the programme could not possibly be placed in any of the other six categories of works listed in s 2.

The category "literary work" is defined in s 1 of the Act in the following way:

"Literary work" includes, irrespective of literary quality and in whatever mode or form expressed —

- (a) novels, stories and poetical works;
(b) dramatic works, stage directions, cinematograph film scenarios and broadcasting scripts;

- (c) textbooks, treatises, histories, biographies, essays and articles;
(d) encyclopaedias and dictionaries;
(e) letters, reports and memoranda;
(f) lectures, addresses and sermons; and
(g) written tables and compilations."

Section 2 of the Act was amended by the Copyright Amendment Act 56 of 1980 which came into operation on 23 May 1980. It is not retroactive in effect, so that this case must be decided in accordance with the provisions which were in force prior to 23 May 1980. Section 2 (2) of the Act then read:

- "A literary, musical or artistic work shall not be eligible for copyright unless
- (a) sufficient effort or skill has been expended on making the work to give it a new and original character; and
- (b) the work has been written down, recorded or otherwise reduced to material form."

These provisions make certain things quite plain. Thus, a literary work need not be of literary quality. Indeed, even so prosaic a work as an index of railways stations in a railway guide, or a list of stock-exchange quotations, qualifies as a literary work, if sufficient effort has been expended on compiling it, to give it a new and original character. See *H Blacklock & Co Ltd v C Arthur Pearson Ltd* (1915) 2 Ch 376 and *Exchange Telegraph Co Ltd v Gregory & Co* (1896) 1 QB 147. Not even the use of skill is essential. The use of the word "or" in the phrase "sufficient effort or skill" is the proof of that. Nor need the work have been written down to be eligible for copyright. It is sufficient that it has been "recorded or otherwise reduced to material form". But it remains true that

"copyright protection is not given to ideas or information, however novel or valuable, unless reduced into some form which can be characterised as literary work".

See Copinger and Skone Jones *Copyright* 12th ed at para 159.

The concept of "originality" in copyright law is sometimes misunderstood. While originality is a *sine qua non*, if a work is to be eligible for copyright protection, this does not mean that only truly inventive works are protected. There need be nothing original in the idea or thought which is father to the deed. What the concept of originality means in copyright law is explained by De Kock J in *Kalamazoo Division (Pty) Ltd v Gay and Others* 1978 (2) SA 184 (C). The learned Judge said:

"Originality in this regard refers to original skill or labour in execution, not to original thought or expression of thought. What is required is not that the expression of thought must be in an original or novel form, but that the work must emanate from the author himself and not be copied from another work. The question that then arises is what degree of labour or skill will suffice to create copyright in an original work. It is clear that it must be shown that some labour, skill or judgment has been brought to bear on the work before copyright can be claimed successfully for such work. The amount of such labour, skill or judgment is a question of fact and degree in every case. As was said by Viscount SIMON LC in the *Cramp & Sons* case *supra* at 94:

"Nobody disputes that the existence of sufficient "originality" is a question of fact and degree. Lord ATKINSON's observation in delivering the judgment of the Judicial Committee in *Macmillan & Co v Cooper* lays down the law on the subject in terms which are universally accepted. He said at 125:

"What is the precise amount of the knowledge, labour, judgment or

literary skill or taste which the author of any book or other compilation must bestow upon its composition in order to acquire copyright in it within the meaning of the Copyright Act 1911 cannot be defined in precise terms. In every case it must depend largely on the special facts of that case, and must in each case be very much a question of degree."

A (At 190A-D.)

The stage is set for the enquiry. Is this computer programme eligible for copyright protection? First, one must know whether it has been written down, recorded or otherwise reduced to material form. If the constituent elements of the programme have not been written down, recorded or otherwise reduced to material form, the programme in its entirety cannot be eligible for copyright. If parts of it have, those parts may qualify for copyright protection. But neither party in this case has asked me to consider any particular part of the programme. Each asserts the right to the entire programme. If the programme is to qualify for copyright protection, I will also have to be able to conclude that its production entails the expenditure of sufficient effort or skill to give it a new and original character.

The following is a distillation of the information which the affidavits contain. The programme is a

D "suite of computer programmes which may be styled an accounting and administrative system for doctors and dentists".

No details are given of the area which the programme traverses, but it is said to be extremely wide. The programme

"provides a speedy, accurate and comprehensive source of information to doctors and dentists relating to all aspects of their financial affairs".

E In order to program a computer, appropriate instructions must be devised and conveyed to the computer in a language which it understands. The Datapac computer understands a computer language known as "BASIC". The instructions to the Datapac computer are recorded and stored on a magnetic disc known as a "floppy disc". The instructions are encoded in a computer language which is unintelligible to anyone who is not able to interpret the language. In computer jargon, the set of instructions which constitute the programme or suite of programmes is referred to as a "listing". Any statement or report which the computer may print is referred to as a "computer printout".

F Respondent adds a qualification about the codes which are used in developing a computer programme. He says that two types of code are used, namely a "source code" and an "object code". The former, so he says, is intelligible to any computer programmer as it is similar to English; the latter is intelligible to the computer only. A listing, according to respondent, is a printout of the source code of a programme.

H In the course of developing the suite of programmes, certain formulae came into being. So did a computer printout of the source code which was used to encode the floppy discs. And, of course, there are the floppy discs upon which the instructions comprising the programme were recorded and stored.

The information about the specific programmes which comprise the suite of programmes is minimal. All that I am told about them is that there is a "Menu Programme" and a "File Create" programme. A

"Menu Programme" is one which displays upon a computer screen a selection of options, each representing a specific function and a separate programme, from which the user may choose a programme, for example, "enter names and addresses" or "print report". A "File Create" programme is one that reserves areas of magnetic storage space on a floppy disc and gives these areas "file" names for later reference. I do not read the affidavits to mean that these two programmes, namely the "Menu Programme" and the "File Create Programme", are peculiar to this suite of programmes. As I understand the position, these are generic names given to programmes which often form part of a suite of programmes. In other words, conceptually at least, they are general tools of the trade, rather than programmes designed *ad hoc* and employed exclusively in this particular suite of programmes. There is also a programme which produces debtors' statements of account.

C There were design notes for the programme and there were also file note specifications. These were written down. All the information pertaining to the programmes stored on the floppy discs was respondent's own creative work. He entered most of this information upon the floppy discs via the keyboard of the Datapac computer. The suite of programmes consists of 20 or so programmes. The average number of computer statements per programme is approximately 1600. One computer statement is the equivalent of one instruction to the computer.

E In my view, it can be said that this suite of programmes has been written down, recorded or otherwise reduced to material form. The formulae which were evolved were written by hand on paper. The source code which was used has been recorded upon a computer printout. In my opinion, there can be no doubt that a computer printout is a reduction to material form of the information which it contains. If the printout is in a language such as English, the information which it contains has been written down within the meaning of s 2 (2) (b) of the Act because "writing" is defined in s 1 as including "any form of notation, whether by hand or by printing, typewriting or any similar process". If the printout is in the form of a series of markings such as apertures of varying geometrical shape, and these constitute a code which is decipherable to those familiar with it, the information which it contains has been "reduced to material form" within the meaning of s 2 (2) (b) of the Act. It has long been held that, to qualify for copyright protection, it is not necessary that what is written or recorded should express a meaning in language. That is why copyright protection has been accorded to a list of meaningless words used as a telegraph code (*Anderson (D P) & Co Ltd v The Lieber Code Co* (1917) 2 KB 469; *Ager v Collingridge* (1886) 2 TLR 291 and *Ager v P & O Steam Navigation Co* (1884) 26 Ch D 637), and a system of shorthand (*Pitman v Hine* (1884) 1 TLR 39).

H As for the floppy discs, once the instructions to the computer have been recorded upon them, I think one can say rightly that the instructions have been reduced to material form. It may also be (I need not decide the point) that they may be said to have been recorded within

the meaning of s 2 (2) (b) of the Act. The residual doubt in my mind about this point stems from the definition of the word "record" in s 1 of the Act. It means

A "any disc, tape, perforated roll or other device in or on which *sounds* (my emphasis) are embodied so as to be capable of being automatically reproduced therefrom or performed".

As I understand the evidence before me no *sounds* are stored upon the floppy discs. It may therefore be suggested that the instructions which have been encoded upon the floppy discs have not been recorded upon them. I think that the answer to this suggestion is that the definition of "record" is confined to the noun and does not necessarily restrict the meaning of the verb "recorded". Alternatively, the definition applies only where the context does not indicate the contrary, and the context in which the word "recorded" appears in s 2 (2) (b) of the Act may well indicate the contrary. But, as I have said, it is not necessary for me to decide this point. I am satisfied that there has been a reduction to material form of the information contained upon the floppy discs.

In England, the expression "writing" is defined in the Copyright Act 1956 in precisely the same way as it is defined in the South African Copyright Act 98 of 1978. In *Copinger and Skone Jones on Copyright* D 12th ed the learned authors say:

"On the other hand, because some form of notation is sufficient, there seems no reason why items of computer software such as punched cards, punched tapes, magnetic tapes and even magnetic cores should not be protectable as 'literary works' apart from the more obvious literary works, such as printouts and so on."

E (At para 154.) See, too, *Tapper Computer Law* at 18.

In my opinion, that view of the matter is sound.

Respondent has thus cleared the first hurdle in asserting his claim to copyright for the suite of programmes. To surmount the next, he must establish that sufficient effort or skill has been expended upon the development of the suite of programmes to give it a new and original character.

F A computer programme which does no more than produce the multiplication tables, or the alphabet, cannot lay claim to copyright protection. That is because the amount of skill or effort entailed in such an exercise is too trivial to render the resultant work something which is new and of original character. Cf *G A Cramp & Sons Ltd v Frank Smythson Ltd* 1944 AC 329. On the other hand, I think that a computer programme which provides a general medical practitioner with the trade names of all drugs and medicines appropriate for the treatment of particular complaints will qualify for copyright protection because the compilation of such a programme will require the expenditure of considerable effort and perhaps skill. But there is a grey area between these two extremes and the dividing line between the effort or skill which is sufficient to justify copyright protection, and that which is not, is sometimes difficult to draw.

H *G A Cramps & Sons Ltd v Frank Smythson Ltd* 1944 AC 329 illustrates how opinions may differ. There protection was claimed by the publisher of a pocket diary for various tables such as inland postal rates, Empire and foreign postage rates, equivalents of metric and

imperial weights and measures, sunset table, percentage table and the like. They had been copied by a rival publisher. The Court of first instance rejected the claim, saying:

"I cannot see that the selection of lists and tables and the arrangement of the diary are anything other than a commonplace selection of gobbets of information and a commonplace arrangement, neither of which involved any real exercise of knowledge, labour, judgment or skill. In my opinion, therefore, the work is not entitled to copyright."
(At 330.)

The Court of Appeal split upon the issue. Lord GREENE MR and MACKINNON LJ disagreed with the Court of first instance and held that the tables were properly the subject of copyright. LUXMOORE LJ dissented. He agreed with the Court of first instance.

The House of Lords unanimously endorsed the view of the Court of first instance. The judgments of the learned Law Lords are instructive and I shall quote liberally from them. Viscount SIMON LC re-iterated what Lord ATKINSON had once said, namely that the precise amount of knowledge, labour, judgment or literary skill or taste which the author of a book or compilation must bestow upon its composition to acquire copyright cannot be defined in precise terms, that it must depend largely upon the special facts of each case, and that it is very much a question of degree. His Lordship then said this:

"A summarised statement of the most important of the postal charges, inland, imperial and foreign, is part of the ordinary contents of any pocket diary. There would, indeed, as it seems to me, be considerable difficulty in successfully contending that ordinary tables which can be got from, or checked by, the postal guide or the Nautical Almanac are a subject of copyright as being original literary work. One of the essential qualities of such tables is that they should be accurate, so that there is no question of variation in what is stated. The sun does in fact rise, and the moon set, at times which have been calculated, and the utmost that a table can do on such a subject is to state the result accurately. There is so far no room for taste or judgment. There remains, I agree, the element of choice as to what information should be given, and the respondents contend that the test of originality is satisfied by the choice of the tables inserted, but the bundle of information furnished in the respondents' diary is commonplace information which is ordinarily useful and is, at any rate to a large extent, commonly found prefixed to diaries, and, looking through the respondents' collection of tables, I have difficulty in seeing how such tables, in the combination in which they appear in the respondents' 1933 diary, can reasonably claim to be 'original work'. There was no evidence that any of these tables was composed specially for the respondents' diary. There was no feature of them which could be pointed out as novel or specially meritorious or ingenious from the point of view of the judgment or skill of the compiler. It was not suggested that there was any element of originality or skill in the order in which the tables were arranged. My own conclusion is that the selection did not constitute an original literary work."

(At 335-6.) Lord MACMILLAN said:

"The sole merit which the respondents claim as entitling them to copyright is represented as residing in the selection by them of the seven tables in question for publication in their diary. They maintain that in choosing these particular seven tables they showed knowledge and skill and expended labour sufficient to entitle the collection to qualify, in the words of the Copyright Act 1911 s 1, ss (1), as an original literary work, which by s 35, ss (1), is defined to include 'compilations'. Now, I do not doubt that, as the annals of literature show, a high degree of skill and knowledge may be displayed and much labour and judgment expended in gathering from the wide fields of non-copyright material at the disposal of the public specialised collections of extracts

designed to meet particular needs or particular tastes, but it must always be a question of degree. Not every compilation can claim to be original literary work even in the pedestrian sense attributed to these words by the law. Thus, to take a familiar example, it has been held by this House that to compile from the official time tables of the railway companies a local time table showing a selection of trains to and from a particular town is not to compose a work entitled to copyright. Such a compilation may be convenient and useful for the inhabitants of that town, but it does not require either such labour or such ingenuity in its preparation as to render it fit subject-matter for copyright: *Leslie v J Young & Sons*.

In my opinion, the respondents, in selecting the seven tables in question for inclusion in their diary, did not bring into existence a copyright work. There is no evidence available to show how or why the particular selection was made, for the original compiler of the series is dead. To my mind, the collection is of an obvious and commonplace character, and I fail to detect any meritorious distinctiveness in it. Everyone expects to find in his pocket diary some useful general information about rates of postage, weights and measures, significant dates and the like. Probably no two series of diaries contain precisely the same collections of tables, for they will vary according to the compiler's ideas as to what is likely to be useful to the purchasers whom he seeks to attract, but there must be a number of items, such as rates of postage, common to them all. The inclusion or exclusion of one or more of the tables constituting the ordinary stock material of the diary-compiler seems to me to involve the very minimum of labour and judgment. As I have said, and as the authorities remind us, the question must always be one of degree and on questions of degree different minds may naturally reach different conclusions. For myself, I should say that, if any compilation could be held to fall short of displaying the qualities requisite to attract copyright, the respondents' collection of seven tables is such a one."

(At 337-8.) Lord PORTER said:

"Whether enough work, labour and skill is involved, and what its value is, must always be a question of degree. Different minds will differ, as may be seen in the present case from the divergence of opinion in the Courts below." (At 340.)

On which side of the line does this suite of programmes fall? There is very little detailed information in the affidavits about the contents of the suite of programmes. What each of the constituent programmes is, I do not know. All that I know is that they cater for the needs of doctors and dentists in relation to their financial and administrative affairs. In precisely what respects, I cannot say. Consequently, I am unable to judge for myself whether or not it is the product of sufficient effort or skill to give it a new and original character, and so entitle it to copyright protection. But I cannot ignore the fact that the parties concur in saying that the research and development necessary to produce a suite of programmes like this would take months. If that is so, it must follow that the production of this suite of programmes entails the expenditure of effort and some degree of skill. I must bear in mind too that the applicants' own case is that the suite of programmes is highly confidential and a trade secret. As for the need for a new and original character, it seems more probable than not that a programme which takes months of "research and development" is one with a new and original character. I think, therefore, that, as between the parties, I am justified in finding that the suite of programmes is entitled to copyright protection. It follows that respondent is, in terms of s 21 of the Copyright Act 98 of 1978, the owner of the copyright. (*Aliter* in terms of the amending Act which I referred to earlier, but, as I have said, it

is not retroactive.) But does that mean that the applicants cannot restrain respondent from exploiting his copyright? That is the question to which I now turn.

May the employer prevent the employee from exploiting the copyright?

At the outset, it is necessary to emphasise two things. Firstly, applicants' case is not based upon any claim to copyright in the programmes. Their case is based solely upon the threatened exploitation by respondent of their trade secrets. Secondly, the mere fact that a particular computer programme may qualify for copyright protection, does not mean that the programme is also a trade secret. Whether it is a trade secret, depends upon different considerations and is another enquiry altogether. If the result of such an enquiry is that the programme is found to be a trade secret, I fail to see how the fact that copyright in it vests in an employee, gives him the right to disregard the obligation which the common law imposes upon him to respect his employer's trade secrets. Section 41 (3) of the Copyright Act provides that nothing in the Act shall affect the operation of any rule of equity relating to breaches of trust or confidence. While it is so that this provision cannot be read as introducing in South African law principles of the English common law which do not exist here (*Dun and Bradstreet (Pty) Ltd v SA Merchants Combined Credit Bureau Cape (Pty) Ltd* 1968 (1) SA 209 (C) at 215), it is plainly intended to have some effect in South Africa. If it does not save the express or implied rights of employers to have their employees respect their trade secrets, it is difficult to conceive of any field of application which it might have.

But, even if s 41 (3) had not existed, I would have been of the same opinion. It would be contrary to well-known principles of statutory construction to read the Copyright Act as abolishing, or derogating from, the common law rights of an employer unless express language, or the clearest of necessary implications, compelled such a reading. In my view, the mere fact that copyright is vested in an employee in certain circumstances does not mean that, even if the subject of the copyright is confidential and a trade secret, the employee may divulge it to whom he pleases. I do not think that the adoption of this view emasculates or nullifies the employee's copyright. He will still have *locus standi* to protect his copyright against infringement by third parties. Indeed, he will even be able to protect it against infringement by his employer, to the extent that the employer's use of it goes beyond what was expressly, or impliedly, authorised by the contract of employment. It is true that he will be hampered in his exploitation of the copyright if he has to respect his employer's trade secret, but I do not think the Legislature intended otherwise. To make copyright protection available to an employee is one thing. To strip an employer of his common law right to have his trade secrets respected is another. And, of course, if the subject of the copyright is not a trade secret, the employee is free to exploit it.

If I am right in so thinking, it follows that, if the suite of programmes in issue is a trade secret, it is no answer to the claim for an interdict for respondent to say that he is vested with the copyright. The critical question then is whether the applicants have established that the suite of programmes is indeed a trade secret and, if so, to what

extent respondent should be restricted in dealing with it. That computer programmes may qualify for the protection which the common law accords to confidential matter and trade secrets seems to me to be plain. In his work *Computer Law* (1978) Tapper says this of computer programmes in the context of trade secrets and confidentiality:

"So far no reported cases on this topic in the United Kingdom have concerned computer programmes, but here too there can be no reasonable doubt that in principle such programmes are eligible for this sort of protection as soon as they have progressed beyond being merely a general idea and have been transmitted into a set of instructions."

(At 30.) I agree with this view of the matter, provided, of course, that the programme is not commonplace.

The dividing line between the use by an employee of his own skill, knowledge and experience, and the use by him of his employer's trade secrets is notoriously difficult to draw. An employer's trade secret may be no more than the result of the application by an employee of his own skill, knowledge and experience. But, if the employee was engaged to evolve the secret, it remains the employer's trade secret for all that. The employee may not simply copy it if, by copy, one means that literally. For example, if he has conducted a confidential market survey for his erstwhile employer to establish what demand, if any, exists in a particular area for a particular type of product, he cannot simply copy the survey and hand it to his new employer. But *non constat* that the employee may never again set out to establish the market demand for that particular type of product in the same area. Generally speaking, he cannot be prevented from using his own skill and experience to attain a particular result, merely because it is a result which he has achieved before for a previous employer. I say, generally speaking, because one can conceive of cases where the result sought to be achieved is so elusive that only a solution of the kind which legend has it prompted Archimedes to say "Eureka" will do, and the employee has been engaged specifically to find it. In such a case, it may well be that the employee who has evolved the solution may have to refrain from solving it in the same way for a future employer.

What have we here? The respondent is qualified in a particular technology, namely computer programming. He has learnt a computer language which is the *lingua franca* of the Datapac computers. It is not suggested by the applicants that the language of the Datapac computer is a trade secret. While in applicants' employ, respondent worked upon a particular project, namely the development of a suite of programmes which provide an accounting and administrative system for doctors and dentists. The object of the computer programme was to provide them with

"a speedy, accurate and comprehensive source of information . . . relating to all aspects of their financial affairs".

The use of computer technology to achieve this purpose can hardly be described as inspired. This is the kind of thing which computers are vaunted to be able to do. Their field of application is virtually limitless. Programmes can be devised to cater for the needs of almost anybody, from banks, building societies and insurance companies to engineers, astronomers, and mariners. All this is common knowledge. That being so, I am unable to see that the *concept* of a computer programme of this kind for doctors and dentists is confidential to the

applicants and so, a trade secret. Particularly when it is not disputed that some of applicants' competitors are already marketing, or have advertised their intention of marketing, computer programmes for doctors and dentists. (Applicants stress that the other systems are different, but the remarks which I have made are confined to the broad *concept* of a computer programme attuned to the needs of doctors and dentists.)

To pass from the general to the particular. What is there in this particular suite of programmes which gives it a quality of such confidentiality that respondent should be restrained

"from communicating any information of whatsoever nature relating to the development and/or contents of the suite of programmes"

or, alternatively,

"from communicating all computer language instructions relating exclusively to the accounting and administrative requirements of doctors and dentists, whether in writing or otherwise, embodied in the suite of programmes designed by respondent for the purposes of producing an accounting system for doctors and dentists irrespective of the nature or type of computer in conjunction with which such instruction may be used?"

In my view, the evidence before me does not enable me to conclude that what has gone into the development of this suite of programmes is of so confidential a character that respondent should be restrained in either of these ways. I emphasize that I am not here referring to the copying of the suite of programmes. That respondent plainly cannot do. It is common cause that much work, skill and time is needed to produce a suite of programmes of this kind. If respondent were permitted simply to copy it, he would be unfairly nullifying the advantage of the "long start" over anyone else to which applicants are entitled. To that limited extent, the suite of programmes is, in my opinion, a trade secret. *Harvey Tiling Co (Pty) Ltd v Rodomac (Pty) Ltd and Another* 1977 (1) SA 316 (T) at 324D-E. As Lord GREENE MR said in *Saltman Engineering Co Ltd v Campbell Engineering Co Ltd* (1948) 65 RPC 203 (CA) at 215:

"... (It is perfectly possible to have a confidential document, be it a formula, a plan, a sketch, or something of that kind, which is the result of work done by the maker upon materials which may be available for the use of anybody; but what makes it confidential is the fact that the maker of the document has used his brain and thus produced a result which can only be produced by somebody who goes through the same process. What the defendants did in this case was to dispense in certain material respects with the necessity of going through the process which had been gone through in compiling these drawings, and thereby to save themselves a great deal of labour and calculation and careful draughtsmanship. No doubt, if they had taken the finished articles, namely the leather punch, which they might have bought in a shop, and given it to an expert draughtsman, that draughtsman could have produced the necessary drawings for the manufacture of machine tools required for making that particular finished article. In at any rate a very material respect they saved themselves that trouble by obtaining the necessary information either from the original drawings or from the tools made in accordance with them. That, in my opinion, was a breach of confidence."

But it does not follow from this that respondent may not again apply his mind to the development of a suite of programmes to cater for the accounting and financial needs of doctors and dentists, or that, if he does, he must wipe clean from the slate of his memory (as if that were possible) any recollection he may have of the things which it seemed to him were appropriate for inclusion in such a suite of programmes, or of appropriate formulae, or the like. To accept the contrary view

would halter respondent's use of his own training, skill and experience to an unacceptable degree. This remains so whether he is restrained permanently, or for a limited period of two years such as Mr *Dison* suggested. As CROSS J said in *Printers and Finishers Ltd v Holloway* (1964) 3 All ER 731 at 736F:

"The law will defeat its own object if it seeks to enforce in this field standards which would be rejected by the ordinary man."

MEGARRY J has spoken eloquently on this topic as well in *Coco v A N Clark (Engineers) Ltd* which is reported, regrettably, only in 1969 RPC 41.

In the result, therefore, I remain unpersuaded that applicants are entitled to the confirmation of the rule *nisi* in either its existing form, or in the more restricted form put forward as an alternative by Mr *Dison*. The existing rule is therefore discharged. But, as I have said, I think that applicants are entitled to have respondent restrained from copying, or permitting to be copied, the suite of programmes, or any part of it. They are entitled to have respondent restrained from making use of, or permitting anyone to make use of, any existing copy of the whole, or any part, of the suite of programmes. In saying this, I include, within the concept of copying, translating the programmes into any other computer language.

It may be suggested that the order which I propose to make is uncalled for because the relevant material had been seized by the Deputy Sheriff, and handed to applicants, before the answering affidavit by respondent was filed, so that respondent is no longer in possession of any material which he could copy. The answer is that respondent did not hand *all* the material to the Deputy Sheriff. Some three days later he came to the offices of first applicant and handed over further floppy discs which stored vitally important information relating to the suite of programmes. Applicants point out that he would therefore have had adequate opportunity to make copies. Although these allegations were made in the replying affidavit, they did not constitute new matter because they concerned events which occurred after the grant of the rule *nisi*. No application was made by respondent for leave to file an answer to these allegations. There is accordingly no explanation from respondent as to why he did not hand these floppy discs to the Deputy Sheriff. Respondent has never expressly disavowed any intention of copying the suite of programmes, or any part of it. Nor has he tendered not to do so. On the contrary, his attitude throughout has been that, as the holder of the copyright, he is free to do with the programmes what he will. In these circumstances, I think that applicants are entitled to some protection, and I propose to give it to them.

The question of costs remains. Applicants have failed to obtain an interdict in the terms which they claimed. But they have obtained an interdict which prevents respondent from simply copying, or permitting anyone else to copy, the suite of programmes, or any part of it. That cannot be regarded as trifling success. But, on the other hand,

this aspect of the matter did not loom large in the arguments presented by the parties. The vast bulk of the time taken by the argument of the case, upon the first day of the hearing before me, was devoted to applicants' attempt to secure an interdict in the wide terms which I have refused. Respondent has successfully resisted the attempt. But he made no tender of any kind, so that the day's costs had to be incurred by applicants. The second day's argument before me was devoted entirely to applicants' alternative prayer which I have also refused. Those additional costs would not have been incurred if applicants had raised the alternative claim at the first hearing.

In the particular circumstances of this case, I do not think it appropriate that respondent should be ordered to pay all the costs. In my view, the following orders should be made, and it is so ordered.

The rule *nisi* dated 9 May 1980 is discharged; respondent is hereby interdicted from copying, or permitting to be copied, in whole or in part, the suite of programmes relating to the accounting and administrative requirements of doctors and dentists evolved by respondent while in the employ of applicants. Respondent is also interdicted from making use of, or permitting anyone to make use of, any existing copy of the whole, or any part, of such suite of programmes. This interdict shall apply irrespective of the nature or type of computer in conjunction with which the whole, or any part, of such suite of programmes is intended to be used. Respondent is ordered to pay the costs of the application including the costs of the hearings on 28 April 1980, 9 May 1980 and 9 September 1980. Applicants are ordered to pay the costs incurred by respondent in relation to the further hearing on 14 October 1980. The costs which respondent has been ordered to pay shall include the costs of two counsel.

I have allowed the costs of two counsel, despite Mr *Engers'* opposition, because the principles of law involved in the application are notoriously difficult to apply, and their application in the field of computer programmes is something relatively new. Indeed, the problems to which the law will have to address itself in this computer age are awesome. Some of them are canvassed in J W K Burnside's intriguing article entitled "The Legal Implications of Computers" in 1981 *Australian Law Journal* vol 55 at 79-92. A useful bibliography which includes references to various articles upon the protectability of computer technology as intellectual property will be found in Tapper's *Computer Law* 1978.

Respondent was ordered by my Brother GROSSKOPF to pay the wasted costs of a postponement on 6 August 1980. The question whether such costs should include the costs of two counsel was reserved for later decision. In my view, the application for a postponement was made so late that applicants could not have known, when they retained senior counsel to appear on the return day of the rule *nisi*, that the matter was unlikely to be heard. I have already indicated why I consider the matter to have been one in which the employment of two counsel by applicants was justified. It follows that respondent should be ordered to pay the costs of two counsel for that day, namely 6 August 1980, and it is so ordered.

Applicants' Attorneys: *Bloomberg & Co.* Respondent's Attorneys: *Frank, Bernadt & Joffe.*