

REVIEWING THE DEFENCE OF FAIR DEALING FOR RESEARCH OR PRIVATE STUDY

This article discusses the defence of fair dealing for the purpose of research or private study in the law of copyright. A recent decision of the High Court has identified some of the operative problems with this defence, and has ruled that the defence applies to commercial research. This article supports the spirit behind the ruling. It is contended that a literal interpretation of this defence will give rise to serious problems, and that a purposive interpretation should be adopted. This article also urges legislative reform to clear up any possible doubts with this area of the law.

CREATIVE Technology (“Creative”) is a local computer company which has reached the enviable position of being world market leader for sound cards. The name “Sound Blaster” has almost become synonymous with sound cards and sound standards. The number two supplier of sound cards is also a local computer company, Aztech Systems (“Aztech”). So when Creative sued Aztech¹ for copyright infringement because Aztech reverse engineered² Creative’s sound cards to make its own cards Sound Blaster compatible, the decision of the trial judge TQ Lim JC in *Aztech Systems Pte Ltd v Creative Technology Ltd*³ was eagerly awaited. His Honour did not disappoint. In a 56-page judgment, his Honour sifted through the complicated technical evidence presented in a 14-day trial before ruling in favour of Aztech. His Honour arrived at the conclusion that Aztech did not, in the

¹ Aztech commenced proceedings against Creative in which it sought an injunction against Creative for making groundless threats of copyright infringement, and Creative counterclaimed for copyright infringement. The parties did not proceed with the first claim in the current proceedings. See the Singapore Academy of Law Academy Digest, Issue No 23/95, at 10.

² The process of “discovery by reverse engineering” is defined in the US Uniform Trade Secrets Act as the process of “starting with the known product and working backward to find the method by which it was developed.”

³ All references in the article are to the version of the judgment as reported in [1996] 1 SLR 683 (“the judgment”). The judgment was edited to remove portions which dealt with the evidence concerning confidential information pertaining to Creative’s firmware. The judgment was also reported in [1996] 1 FSR 54, but this version was edited to remove the portions which concerned a technical discussion of the workings of the Sound Blaster sound card.

process of reverse engineering Creative's Sound Blaster sound card, infringe Creative's copyright in its firmware on the Sound Blaster card. This was because the court found that Aztech had no access to Creative's firmware, which was protected by some security mechanism which prevented it from being easily accessible.⁴

But in reverse engineering the Sound Blaster card, Aztech had used one piece of Creative's software, TEST-SBC, which Creative had supplied to all its sound card purchasers. It is apparent from the judgment that Aztech ran TEST-SBC to observe the behaviour⁵ of Creative's Sound Blaster card, which it then sought to emulate to ensure Sound Blaster compatibility. This was for the purpose of investigating a particular command to which the Sound Blaster card was designed to respond, the E2H command.⁶ It would appear from the judgment that this command, which was described as "the password feature", was a critical feature of the Sound Blaster card. It would also appear from the judgment that Aztech successfully implemented this E2H command.

The statement of claim alleged that Aztech had copied the whole of the software program TEST-SBC in the course of investigating this mysterious E2H command. His Honour accepted this allegation, which, as it appears from the judgment, was not denied by Aztech. In the words of his Honour, "[t]o run a program it has to be downloaded to the PC,⁷ *ie*, copied to its memory."⁸ Thus *prima facie*, Creative had made out a case of copyright infringement.⁹ His Honour then proceeded to determine whether Aztech

⁴ *Ibid*, at 688I-692E.

⁵ *Ibid*, at 696H-699H. As described in the judgment, Aztech "observed the behaviour" of the Sound Blaster sound card by using a sophisticated logic analyzer to capture the high-speed electrical signals being sent between the Sound Blaster sound card and the computer.

⁶ *Ibid*, at 699A-699H. According to publicly available documentation, there are a total of 256 potential "first level" commands for the Sound Blaster sound card. These commands are really instructions which the computer sends to the Sound Blaster sound card to perform certain documented as well as undocumented functions. Part of the reverse engineering undertaken by Aztech involved the investigation of one of these commands, the E2H command. This should really be described as command 226 (E2 is the numerical representation of the number 226 in the base-16 number format, which is commonly used in computer engineering. In the base-16 number format, the letters A to F are used to represent the numbers 10 to 15, in addition to the use of the decimal numbers 0 to 9. The 'H' is derived from the first letter of the word "hexadecimal", which is another description of the base-16 number format.)

⁷ This is an abbreviation for "personal computer".

⁸ This conclusion would appear to be supported by s 17, Copyright Act (Cap 63, 1988 Ed). All references in this article are to sections in this Act.

⁹ However, it would appear that this point is certainly arguable. Since copying of the program into memory must constitute an essential step in the utilisation of the computer program in conjunction with a machine, Aztech can avail itself of the defence in s 39(3) (though as per the Report of the Select Committee on the Copyright Bill, at D-13, the Committee

had any valid defences for its actions. His Honour considered, in turn, the section 35 defence of “fair dealing for the purpose of research or private study”, the “spare parts” defence¹⁰ and the *Betts v Willmott*¹¹ defence. This article only concerns itself with a discussion of the section 35 defence.¹²

FAIR DEALING FOR PURPOSE OF RESEARCH OR PRIVATE STUDY

The defence of fair dealing for the purpose of research or private study is set out in section 35, which is reproduced here:

Fair dealing for purpose of research or study:

- 35.– (1) A fair dealing with a literary, dramatic, musical or artistic work, or with an adaptation of a literary, dramatic or musical work, for the purpose of research or private study shall not constitute an infringement of the copyright in the work.
- (2) For the purposes of this Act, the matters to which regard shall be had, in determining whether a dealing with a literary, dramatic, musical or artistic work or with an adaptation of a literary, dramatic or musical work, being a dealing by way of copying the whole or a part of the work or adaptation, constitutes a fair dealing with the work or adaptation for the purpose of research or private study shall include –

states that s 39(3) “will make it clear the reproduction of a copy of a computer program for the purposes of a Local Area Network does not constitute an infringement of copyright.”) Nonetheless, it would also appear that not only did Aztech run TEST-SBC for the purpose of testing a Sound Blaster sound card, it also ran TEST-SBC for the purpose of testing an Aztech prototype sound card, which was definitely not the use contemplated by Creative as the copyright owners of the TEST-SBC program. Arguably, this use is a use which falls within the qualification “and that it is used in no other manner” referred to in s 39(3) which will take Aztech’s reverse engineering outside the scope of s 39(3). This interesting point, however, did not appear to have been addressed by counsel in their submissions to the court. The reasons may be tactical for the reasons set out above.

¹⁰ As established by the case of *British Leyland Motor Corporation Ltd & Another v Armstrong Patents Co Ltd & Another* [1986] 1 AC 577.

¹¹ (1871) LR 6 Ch 239.

¹² A discussion of the other defences, as well as the s 35 defence, can be found in the articles by my colleagues, A/Prof George Wei in an unpublished paper (at the time of writing this article) entitled “Some Further Recent Developments in Intellectual Property Law” written for a seminar conducted at the Singapore Academy of Law and Ms Ng-Loy Wee Loon in “Legitimizing Reverse Engineering of Computer Programs in Copyright Law – How Far Have We Gone in Singapore?” [1996] 4 International Journal of Law and Information Technology 48.

- (a) the purpose and character of the dealing, including whether such dealing is of a commercial nature or is for non-profit educational purposes;
 - (b) the nature of the work or adaptation;
 - (c) the amount and substantiality of the part copied taken in relation to the whole work or adaptation; and
 - (d) the effect of the dealing upon the potential market for, or value of, the work or adaptation.
- (3) Notwithstanding subsection (2), a dealing with a literary, dramatic or musical work, or with an adaptation of such a work, being a dealing by way of the copying, for the purposes of research or private study –
- (a) if the work or adaptation comprises an article in a periodical publication, of the whole or a part of that work or periodical publication, of the whole or a part of that work or adaptation; or
 - (b) in any other case, of not more than a reasonable portion of the work or adaptation,
- shall be taken to be a fair dealing with that work or adaptation for the purpose of research or private study.
- (4) Subsection (3) shall not apply to a dealing by way of the copying of the whole or a part of an article in a periodical publication if another article in that publication, being an article dealing with a different subject matter, is also copied.
- (5) In this section, “research” shall not include industrial research or research carried out by bodies corporate (not being bodies corporate owned or controlled by the Government), companies, associations or bodies of persons carrying on any business.

In this part of his judgment, his Honour first noted that pursuant to section 35(5), industrial research could not amount to “research” for the purpose of the fair dealing defence. However, his Honour ruled that if reverse engineering took the form of “private study”, even though it may be for commercial purposes, the defence of fair dealing under section 35 may still avail the engineers. His Honour reached this conclusion by interpreting “private study” to mean “the devotion of time and attention

to acquiring information or knowledge”, where such information or knowledge was “kept or removed from public knowledge or observation”.¹³

JUSTIFICATIONS

His Honour offered the following justifications for his conclusion.

First, his Honour observed that the legislature had chosen to qualify “research” and “study” differently. “Research” was qualified to exclude commercial research in section 35(5). But instead of choosing similarly to qualify “study” to exclude commercial research, the word “private” was used. This, in his Honour’s view, indicated that some forms of “private study” could amount to study for commercial purposes.

Secondly, his Honour conducted a brief examination into the legislative history of section 35. His Honour made the very important observation that when the original form of the Copyright Bill was presented before Parliament for its Second Reading, and before it was committed to Select Committee, the word “study” in the then clause 35 was not qualified by the word “private”, nor was section 35(5) there. His Honour noted that these qualifications were added when the Bill was read a third time, but otherwise felt that the Parliamentary materials yielded little assistance.

Finally, his Honour ruled that under section 35(2), since one of the matters to which regard shall be had in determining whether a dealing is fair dealing for the purpose of research or private study is whether such dealing is of a commercial nature, this indicated that the defence may apply to some forms of private study for commercial purposes.¹⁴

LEGISLATIVE HISTORY

Is the conclusion of the court supported by the legislative history of section 35? It ought to be emphasised that section 35 only took the form it did at the Third Reading of the Bill. In this regard, surely, the legislative materials would have yielded some clues as to the rationale behind the amendments.

The original Copyright Bill as presented to Parliament was based on the Australian Copyright Act 1968.¹⁵ Clause 35 of the Copyright Bill is, with some inconsequential modifications to the language,¹⁶ an identical reproduction of section 40 of the Australian Copyright Act 1968 (as

¹³ *Supra*, note 3, at 700E-701E. See the main text, *infra*, note 87, for a discussion of the viability of this view.

¹⁴ See the main text, *infra*, note 80.

¹⁵ See the Minister’s speech on the Second Reading of the Bill on 5 May 1986 (*Parliamentary Debates, Singapore: Official Report*, Col 12).

¹⁶ Such as the substitution of the words “shall not” for “does not”.

amended by Act 154 of 1980). There were originally only four paragraphs to the clause, which reads:

Copyright Bill, clause 35 – Fair dealing for purpose of research or study:

- 35.– (1) A fair dealing with a literary, dramatic, musical or artistic work, or with an adaptation of a literary, dramatic or musical work, for the purpose of research or study shall not constitute an infringement of the copyright in the work.
- (2) For the purposes of this Act, the matters to which regard shall be had, in determining whether a dealing with a literary, dramatic, musical or artistic work or with an adaptation of a literary, dramatic or musical work, being a dealing by way of copying the whole or a part of the work or adaptation, constitutes a fair dealing with the work or adaptation for the purpose of research or private study shall include –
- (a) the purpose and character of the dealing;
 - (b) the nature of the work or adaptation;
 - (c) the possibility of obtaining the work or adaptation within a reasonable time at an ordinary commercial price;
 - (d) the effect of the dealing upon the potential market for, or value of, the work or adaptation; and
 - (e) in a case where part only of the work or adaptation is copied – the amount and substantiality of the part copied taken in relation to the whole work or adaptation.
- (3) Notwithstanding subsection (2), a dealing with a literary, dramatic or musical work, or with an adaptation of such a work, being a dealing by way of the copying, for the purposes of research or study –
- (a) if the work or adaptation comprises an article in a periodical publication, of the whole or a part of that work or periodical publication, of the whole or a part of that work or adaptation; or
 - (b) in any other case, of not more than a reasonable portion of the work or adaptation,

shall be taken to be a fair dealing with that work or adaptation for the purpose of research or study.

- (4) Subsection (3) shall not apply to a dealing by way of the copying of the whole or a part of an article in a periodical publication if another article in that publication, being an article dealing with a different subject matter, is also copied.

At this stage, one notes some differences between clause 35 of the Copyright Bill and section 35 of the Copyright Act.

Firstly, clause 35 creates the defence of fair dealing for “the purpose of research or study”, but section 35 refers to this defence as one of fair dealing for “the purpose of research or *private* study”.

Secondly, section 35(5), which has no counterpart in clause 35, defines “research” as excluding industrial research and research carried out by bodies corporate.

Thirdly, clause 35(2) was revised in many respects by section 35(2). This key subsection sets out the matters to which regard shall be had in determining whether a dealing constitutes a fair dealing. In other words, this subsection defines the fair dealing defence for this section.¹⁷ There were originally five factors spelt out in clause 35(2). But after the Select Committee stage, only the first two and the last two factors were retained, with some changes to their language. The third factor was completely removed.

REPORT OF THE SELECT COMMITTEE

What was the rationale behind these modifications to clause 35? The Second Reading of the Copyright Bill took place on 5 May 1986. The House then resolved that the Bill be committed to a Select Committee. The Third Reading of the Copyright Bill, which was conducted on 26 January 1987, took a mere 1 hour and 24 minutes. There was no debate on the amendments to clause 35. On the other hand, notice of specific amendments was given by the Minister of Law in respect of certain other clauses in the Bill. It is not clear from the Hansard whether the House consulted the Bill as presented for its Second Reading, or the Bill as amended by the Select

¹⁷ In *Aztech v Creative Technology*, TQ Lim JC took the view that the factors set out in s 35(2) were not intended to be exhaustive (*supra*, note 3, at 702F). But his Honour did not say that the factors as set out should be disregarded. To the contrary, his Honour placed emphasis on the fact that these factors are explicitly spelt out by the legislature to guide the court in determining the scope of the fair dealing defence (at 701B, 703A).

Committee.¹⁸ But by comparing the version of the Bill which was passed with these two versions of the Bill, one can conclude that the House was referred to the latter version.

It is thus necessary to consult the Report of the Select Committee¹⁹ for the rationale behind the modifications to clause 35. Section 9A(2) of the Interpretation Act²⁰ permits the court to consult any material not forming part of the written law where it is capable of assisting the court in interpreting the meaning of the provision.²¹ While section 9A(3) refers to some materials such as Hansard or the Explanatory Statement, this enumerated list is expressed to be “without limit to the generality of subsection (2)”. This arguably includes not just our Select Committee reports, but also the Select Committee reports of other jurisdictions which have enacted provisions which are *in pari materia* to our legislation.

The Official Report of the Select Committee spells out the position taken by the Committee. As explained by Prof Jayakumar, amendments made to clause 35(1), (3) and (5) were made “to exclude the defence of fair dealing for research carried out by commercial organizations.”²² This statement calls for closer examination.

FAIR DEALING BY COMMERCIAL ORGANIZATIONS

The suggestion that the defence of fair dealing should not apply to research carried out by commercial organizations was first mooted by the British Copyright Council²³ and the International Confederation of Societies of Authors and Composers (“CISAC”)²⁴ in their written submissions to the

¹⁸ Bill No 8/86. But see the Official Report of the deliberations of the Select Committee, as set out in the Report, at D-1, where the amendments to the Bill appeared to be made subject to the Standing Orders of Parliament under Order 33.

¹⁹ Parl 9 of 1986, presented to Parliament on 22 December 1986. This Report will hereafter be referred to simply as “the Report”.

²⁰ Cap 1 S 9A was introduced vide Act 11/93 with effect from 16 April 1993. There appears to be no reason why s 9A should not be given retrospective effect, though the argument could be made that prior to the enactment of s 9A, the value of quasi-legislative materials in the interpretation of legislation is questionable since such materials were not drawn up with this objective in mind.

²¹ Of course, the argument could be made that s 35 *per se* neither ambiguous nor its language obscure, so there is no need to consult s 9A. But as will be demonstrated later, there are some problems in ascertaining the exact scope of s 35, especially the relationship between s 35(2) and s 35(5).

²² *Supra*, note 19, at D-1 to D-63.

²³ *Ibid*, Paper SC No 3, at A-9 to A-18.

²⁴ *Ibid*, Paper SC No 4, at A-19 to A-28. For all intents and purposes, this paper appears to be identical to Paper SC No 3.

Select Committee. The objection to the Bill as it originally stood was that since clause 35(1) omitted any reference to “private” or “personal”, “there is a real danger that large commercial enterprises might contend that they could supply their research departments and personnel with large numbers of copyright material without any copyright obligation”.²⁵

The Select Committee addressed these concerns in its examination of the CISAC representatives. Since this was the first occasion in its hearings on which the Committee addressed these concerns, and since other examinations were much more brief,²⁶ and appeared to be premised on the conclusions reached in the examination of the CISAC, it is useful to consider in some detail the following exchange between the representative from CISAC and the Second Minister for Law, Professor Jayakumar, which was the first exchange on this subject-matter:

28. As regards your representations on clause 35, could you clarify for us whether your main concern here is to exclude *research or study by non-individuals* from the operation of this fair dealing provision? – (Mr John Sturman) Yes, I think that is really our concern. If we could confine this to a *personal research*, we would be very happy, as, of course, it is *in the Australian legislation*.²⁷
29. What about *educational institutions which are conducting research in any particular area*? Is it your intention that you want them to be excluded also? Or are you really *concerned with commercial and profit-making bodies*? – (Mr John Sturman) We are chiefly concerned obviously with *profit-making activities arising out of this situation*.²⁸ [my emphasis]

²⁵ *Ibid*, at A-13, also at A-23. The submission also sets out a quotation from the Guide to the Berne Convention as prepared by the World Intellectual Property Organisation (WIPO), para 9.10, to support the contention that the defence “in principle does not cover any collective use and it assumes that the reproduction is not done for profit.” It is submitted that not too much should be read into this quotation, since the quotation was dealing with the defence of “personal and private use”, where the personal nature of such usage is undeniable. The US Government also submitted a paper, Paper SC No 16, but at A-107, there appears to be a mistake of some sort which makes the paragraph which deals with the fair dealing defence in clause 35 somewhat unclear. Not much reliance will be placed on this submission. See also A-124, which sets out the submission by the International Intellectual Property Alliance.

²⁶ *Ibid*, at B-24 para 137, B-49 para 258, B-53 paras 285-286.

²⁷ If this statement is taken to mean that the Australian legislation has a provision similar to our s 35(5), it is inaccurate. The Australian position does not unequivocally confine the fair dealing defence of “research” to personal research.

²⁸ *Supra*, note 19, at B-4 paras 28 and 29.

While this exchange ought not be treated as if it has the effect of legislation, it is noteworthy that, in the second reply, the representative made it clear that the concern of the CISAC was not really with “research or study by commercial and profit-making bodies”, but with “profit making activities” arising from dealings with the materials for research. In other words, there is no intention to discriminate between educational institutions or personal users and commercial and profit-making bodies.²⁹ If the Select Committee met this concern by inserting section 35(5), this exchange shows that the real intention of the section is to prevent commercial and profit-making bodies from exploiting the fair use defence for commercial gain, under the guise of “research”. This interpretation also explains the nature of the subsequent exchange between the Committee and the representative to the International Intellectual Property Alliance (“IIPA”), who was legally trained, where, it is submitted, the correct focus was placed on the objection to clause 35. The short exchange between the representative and Professor Jayakumar went as follows:

137. We will take note of those points. Your next representation is on fair dealing, clause 35, in which you suggest insertion of the words “private study”. We take your point. Basically, your concern is about *corporations and companies studying for profit?* – (Mr Eric Smith) *For profit companies*.³⁰ [my emphasis]

Since corporations and companies do not “study”, this short exchange obviously confirmed that the IIPA were only concerned with corporations “copying within a profit making context”³¹ under the guise of doing so for and on behalf of the corporations’ students who were actually studying the works in question. Otherwise, the representative would not have referred in this respect to “profit companies”, which would have been tautologous since all companies are set up to make profits. In other words, the phrase “for profit” referred not to the corporations, but to the studying activity. The examination of the British Copyright Council proceeded along similar lines:

258. Clause 35. I think your concern is with *study and research by corporations for profit*. So it would be met if we put the word

²⁹ More will be said about this later.

³⁰ *Supra*, note 19, at B-24 para 137.

³¹ *Ibid*, at A-124. Language to similar effect could be found in the other exchanges. See B-49 para 258.

“private” before “study”. It should read “private study”? – (*Mr Denis de Freitas*) Yes, largely. Thank you.³² [my emphasis]

But it is also observed that the focus seems to shift somewhat in the final brief exchange on the matter. In the subsequent examination of representatives from the UK Government, the exchange was as follows:

285. Your representation on clause 35. Here again, our clause 35 is modelled on section 40 of the Australian Copyright Act. But your concern, I take it, is that *corporations and profit-making organizations ought not to benefit from this?* – (*Mr Michael James*) Yes.

286. Would it meet your concern if we put the word “private” before “study”? So it will be “private study”? – (*Mr Michael James*) Again, my understanding is yes.³³ [my emphasis]

So there is support for the view adopted by TQ Lim JC in *Aztech v Creative Technology* that the Parliamentary materials were of not much assistance. It is submitted, however, that if one reads the final exchange with the UK Government in the context of the three previous exchanges, it becomes clear that the representatives were concerned with corporations dealing with works for commercial gain under the guise of pursuing research or study. To meet these concerns, the Select Committee suggested the insertion of the word “private” before “study” so that the defence would be one of “private study or research”. This suggestion was implemented and followed through with the necessary amendments being made to clause 35.³⁴

³² *Ibid.*, at B-49 para 258.

³³ *Ibid.*, at B-53 paras 285, 286.

³⁴ See the minutes of the Official Report, *ibid.*, at D-11. It may perhaps be noted in passing that this modification appeared to have been made very hurriedly, so much so that the marginal note to s 35 betrayed its original roots and still continued to read as “Fair dealing for purpose of research or study”. In as much as marginal notes almost always play a secondary role in statutory construction, and should not be permitted to derogate from the clear wording of the enacting section, marginal notes still remain of value as an aid to construction. See *Cross on Statutory Interpretation*, (3rd ed), Bell and Engle (editors) at 132-133.

UK POSITION

In the proceedings of the Select Committee, numerous references were made to the fair dealing defence for “research and private study”. This term of art was actually taken from the UK Copyright Act 1911,³⁵ a term which was retained in the UK Copyright, Designs and Patents Act 1988 (“CDPA”).³⁶ Unlike our section 35, the fair dealing defence in the UK copyright legislation is worded very generally. There is no list of factors to be considered, which we have in section 35(2). Most significantly, there are no qualifications to the defence excluding from its ambit commercial organisations undertaking research or private study. This point was confirmed in the UK Parliamentary debates.³⁷ In fact, the UK fair dealing defence has gone one step further by actually affirming that “copying by a person other than the researcher or student himself” can be fair dealing if “the person doing the copying does not know or has no reason to believe that it will result in copies of substantially the same material being provided to more than one person at substantially the same time and for substantially the same purpose.”³⁸ This is clear confirmation that a company can reproduce for its researchers materials for research purposes, subject to the limits as set out.

There are references in the submissions before our Select Committee that the UK Government “has acknowledged the necessity to make express provision to ensure that the fair dealing exemption does not apply to copying for commercial research”.³⁹ These refer to the UK Government’s 1986 White Paper,⁴⁰ which have in turn referred to the UK Government’s 1981 Green Paper.⁴¹ All these publications attributed to the Whitford Committee, the suggestion to restrict the scope of “research or private study” so as to exclude

³⁵ S 2(1), Imperial Copyright Act 1911 (1 & 2 Geo 5, c 13). The phraseology was reused in s 6(1), UK Copyright Act 1956 (4 & 5 Eliz 2, c 74) which reads:

“No fair dealing with a literary, dramatic or musical work for purposes of research or private study shall constitute an infringement of the copyright in the work.”

³⁶ S 29(1), UK Copyright, Designs and Patents Act 1988 (c 48) which reads: “Fair dealing with a literary, dramatic, musical or artistic work for the purposes of research or private study does not infringement any copyright in the work or, in the case of a published edition, in the typographical arrangement.”

³⁷ UK Hansard, House of Lords, col 1153, 23 February 1988, where the statement was made that “research” includes “commercial research”.

³⁸ S 29(3)(b), UK CDPA 1988. See the detailed commentary on the position of this provision in Skone James, Mummery, Rayner James and Garnett, *Copinger and Skone James on Copyright* (13 ed, 1991), para 10-7 at 250-251.

³⁹ *Supra*, note 19, at A-14, A-24, A-124.

⁴⁰ Intellectual Property and Innovation, 1986 (Cmnd 9712), para 8.13.

⁴¹ Reform of the Law relating to Copyright, Designs and Performers’ Protection: A Consultative Document, 1983 (cmnd 8302), at 9-11, 45-46.

research carried out for the business ends of a commercial organisation.⁴²

However, the Whitford Committee⁴³ appeared to have made no such recommendations.⁴⁴ On the contrary, the Whitford Committee recommended the creation of a general “fair dealing” exception to the right of reproduction, where such a dealing “does not conflict with normal exploitation of the work or subject-matter and does not unreasonably prejudice the copyright owner’s legitimate interests.”⁴⁵ Such an exception would encompass all the separate exceptions for educational and commercial uses of works, including the use of works for criticism or review or for reporting current events. The Whitford Committee heard evidence from collecting societies, educational institutions, business representatives, libraries and publishers before arriving at this conclusion. It prefaced the section of its report dealing with the fair dealing defence with this oft-quoted statement from the Royal Society, which is worth reproducing here:

Science rests upon its published record, and ready access to public scientific and technical information is a fundamental need of scientists everywhere. All bars which prevent access to scientific and technical publications hinder the progress of science and should be removed.

Making single copies of extracts from books or periodicals is essential to research workers, and the production of such single extract copies, by or on behalf of scientists, is necessary for scientific practice.⁴⁶

The Whitford Committee observed that most copying within companies is of internally generated documents. But where there is considerable copying of copyright material in the industry for purposes of research, the Whitford Committee concluded that the dissemination of published information is a *sine qua non* for successful research and development work in the industry.⁴⁷ It was not disposed to stop such activities. Rather, the Whitford

⁴² *Ibid*, at 46 para 6.

⁴³ Copyright and Designs Law: Report of the Committee to consider the Law on Copyright and Designs, 1977 (Cmnd 6732).

⁴⁴ See generally *ibid*, Chapter 4 at 54-74 paras 204-291, Chapter 14 at 168-177 paras 657-696, and a Summary of Recommendations at Chapter 20 at 230-243, especially paras 927, 941 and 942. At best, there is a passing, and rather mysterious, reference to “private research or private study” at Chapter 14 at 173 para 677.

⁴⁵ *Ibid*, Chapter 4 at 238 para 941(i).

⁴⁶ *Ibid*, Chapter 4 at 55 para 213. See also similarly sympathetic statements from the Gregory Committee, Report of the Copyright Committee, 1951 (Cmd 8662), at paras 43, 45-46 and 51.

⁴⁷ *Supra*, note 43, Chapter 4 at 66 para 258.

Committee concentrated its energies on the development of some kind of blanket licensing scheme which it believed was the most equitable method of balancing the competing interests of authors and publishers on the one hand, and users of copyright resources on the other.⁴⁸

So, put at its highest, the position in UK is that copying for the purposes of commercial research has never been unequivocally excluded from the scope of the defence of fair dealing. Even though there were strong statements to that effect in the White and Green Papers, the suggestion was never taken up in the legislation.⁴⁹ The phrase “research or private study” itself could not support such a conclusion. As is sought to be shown from the legislative materials above, the UK defence of fair dealing for purposes of “research or private study” condones and the new CDPA actually encourages commercial research. If we choose to differ, there must be clear and valid reasons for so differing from the UK position.

AUSTRALIAN POSITION

Given that our Copyright Act is modelled on the Australian Copyright Act 1968, Australian legislative materials on the Act should be regarded as highly relevant and persuasive.

Prior to the amendments in 1980, the fair dealing defence as set out in section 40 of the Australian Copyright Act was for the purpose of “research or private study”. Pursuant to the recommendations of the Franki Committee on Reprographic Reproduction,⁵⁰ the Australian Copyright Amendment Act 1980 was passed to remove all references to the word “private” in section 40. Subsections (2) and (3), which were reproduced as sub-clauses 35(2) and 35(3) of our Copyright Bill as it originally stood, were also inserted *vide* the Amendment Act.⁵¹

Contrary to the suggestions by those who gave submissions before our Select Committee,⁵² the Franki Committee felt that “study” should not be limited by the word “private”, because the word “private” served no useful purpose. The view of the Franki Committee was that it was originally inserted to distinguish and to exclude from the scope of the fair dealing defence, use for classroom instruction by educational institutions as opposed to

⁴⁸ *Ibid*, Chapter 4 at 70-74 paras 274-291.

⁴⁹ The Copyright, Designs and Patents Act 1988 retained the simple formulation for the “fair dealing defence for purposes of research or private study” as was found in the Copyright Act 1956.

⁵⁰ Report of the Law Committee on Reprographic Reproduction, Canberra, 1976.

⁵¹ S 7, Copyright Amendment Act 1980 (Act 154 of 1980).

⁵² *Supra*, note 27.

private study. The Franki Committee noted that it was difficult to discriminate between private study and teaching and scholarship, especially since section 107, US Copyright Act⁵³ would permit fair dealing for purposes which would include teaching and scholarship.

The Committee was aware of the situation of copying in the business sector, but chose not to recommend any specific legislation to deal with such copying.⁵⁴ Instead, it was content with the conclusion that even with the removal of the word “private” from section 40, the rights of copyright owners would not be prejudiced. This was because to qualify for the defence, the defendant must still satisfy the factors as enumerated in section 40.⁵⁵ In other words, the enumerated factors in section 40(2) will determine whether the usage of such works for the purposes of “research or study” will constitute fair dealing.⁵⁶

Of course, it has been previously noted that our Select Committee chose to reintroduce the word “private” to meet the concern that corporations may abuse the defence by dealing with works for commercial gain under the guise of pursuing research or study.⁵⁷ However, this analysis seeks to show that the word “private” was really inserted out of an abundance of caution, since the Franki Committee considered the issue and correctly noted that section 40(2) will weed out such abuses.

COMPARING THE TWO FORMULATIONS

A deeper insight into the complexities of the fair dealing defence can be had by comparing the copyright legislation of these two jurisdictions. One first notes that two very different formulations of the defence are used. On the one hand, the Australian formulation, modelled on the US approach, uses the phrase “research or study” as another way of describing the fair dealing defence. The enumerated factors as set out in the section⁵⁸ guide the court in determining whether the dealing for purposes of “research or study” is fair.

On the other hand, the UK formulation uses the phrase “research or private study” as a term of art. Since there are no legislative guidelines as to what

⁵³ Upon which s 40, Australian Copyright Act was modelled.

⁵⁴ *Supra*, note 50, at 56 paras 7.04-7.07.

⁵⁵ *Ibid*, at 30 para 2.64.

⁵⁶ *Ibid*, at 29 paras 2.59-2.61. Granted that the enumeration uses the phrase “shall include” which indicates that the enumerated factors were not intended to be exhaustive. Nonetheless, there is no good reason not to recognise that s 40(2) was intended to set the scope of the fair dealing defence.

⁵⁷ *Supra*, note 34.

⁵⁸ S 40(2), Australian Copyright Act.

constitutes “research or private study”, the use of the word “private” is critical. Because the UK approach chooses not to lay down any factors to be considered,⁵⁹ the question of whether a dealing constitutes “fair dealing” is a question of degree. In *Hubbard v Vosper*,⁶⁰ on the issue of the fairness of the dealing for purposes of criticism or review, even in the absence of enumerated criteria, the court took into account considerations such as the number and extent of the usage of the work, the purpose for which they are used, whether the dealing is used to convey the same information as the author for a rival purpose, and the proportion of the work taken versus the length of the critique. In determining whether the dealing by way of criticism or review was fair, the court concluded that this was a question of degree which the court had to decide as a matter of impression.⁶¹ This approach is equally applicable to the defence of “research or private study”. And it is submitted that the court should likewise focus on the fairness of the dealing, which is a question of degree to be determined as a matter of impression.

So explained, the differences between both formulations appear to be minimal. It also deserves emphasis that neither formulation of the defence excludes, from its ambit, dealings by a corporation or by an educational institution for research purposes.

OUR FORMULATION

The formulation in our Copyright Act at first sight follows neither of these two formulations. Instead, it is an amalgam of these two formulations, coupled with one contribution of its own:

- it uses the term “fair dealing for the purpose of research or private study”;⁶²
- it contains a legislative formulation of the matters to be considered in determining whether a dealing with the work constitutes fair dealing,⁶³ and

⁵⁹ UK Government White Paper, *supra*, note 40, para 8.12.

⁶⁰ *Hubbard v Vosper* [1972] 1 All ER 1023 (Court of Appeal).

⁶¹ *Ibid*, per Lord Denning MR at 1027f-g.

⁶² See, s 35(1), (2), (3). Of course, it could also be argued that our Select Committee was cognisant of this, and thus when it inserted the word “private” in our Act, it did so for another specific purpose. But this author submits that the other reasons as set out in the article have to be considered.

⁶³ See, s 35(2).

- it defines “research” so as to exclude industrial research or research carried out by bodies corporate.⁶⁴

As the Minister explained in the Select Committee Report, our clause 35 was modelled on section 40 of the Australian Copyright Act. In spite of the subsequent changes, we have essentially retained the Australian formulation in our section 35. The outstanding characteristic is section 35(2). And in adopting section 35(2), we must have chosen to use section 35(2) as the operative provision in setting out the scope of the fair dealing defence for the purposes of research or private study.

If this assumption is correct, the term “research or private study”, whether with or without the word “private”, is not designed to meet objections to any abuse of the defence, objections which cannot also be met by section 35(2). And it also follows that section 35(5) is similarly placed. The peripheral nature of section 35(5) is evident not just from its marginal note,⁶⁵ but also from section 109, which makes explicit reference to section 35(1) and section 35(2), but excludes section 35(5) completely.⁶⁶

“RESEARCH”

Unlike the proposed alteration of the term “research or study” to read as “research or *private* study”, the suggestion that a new definition of “research” be put up to meet the objections that the defence could be used by profiteers under the guise of “research or study” was first mooted in the final meeting of the Select Committee.⁶⁷ The suggestion that “research” be qualified did not appear to have been tested with the representatives from the various interest groups in the course of their examination before the Committee.

A close scrutiny of section 35(5) also yields the following *prima facie* observations:

- “Research” does not include industrial research or research by bodies corporate, but “private study” is not qualified in the same manner.

⁶⁴ See, s 35(5). This is our indigenous contribution.

⁶⁵ The marginal note to s 35 describes the defence as one of “research or study”. Cf: The marginal note to s 109, which reads “research or private study”.

⁶⁶ One argument which can be made is that this appears to be deliberate, since there is a deliberate attempt to exclude s 35(3) and (4). An argument that s 35(5) must apply since s 35(3) and (4) are clearly not applicable to audio-visual items can be met by the observation that s 35(3)(b) can apply to audio-visual works. So s 35(3) is arguably applicable to audio-visual works, but just like s 35(5), it has been deliberately excluded.

⁶⁷ As late as 15 December 1986, after all the representations were heard. See *supra*, note 19, Official Report, at D-11.

- “Research” undertaken by individuals appear to qualify for the defence, as long as such research is not “industrial research”,⁶⁸ or as long as these individuals do not constitute themselves as “bodies of persons carrying on any business”.
- The definition of “research” in section 35(5) discriminates between bodies corporate in the private sector, and bodies corporate “owned or controlled” by the Government.

It ought to be pointed out that the US, UK and the Australian copyright legislations do not discriminate against industrial research. Nor do the Berne Convention⁶⁹ and the Universal Copyright Convention⁷⁰ make such a restriction necessary. In fact, there is uncontroverted US caselaw from the eminent 9th Circuit of Appeals which confirms the application of section 107, US Copyright Act 1976 (the fair use defence in the US) to industrial research for the purpose of reverse engineering.⁷¹ And US caselaw is, it is submitted, persuasive in this regard since the Select Committee took the enumerated factors for section 35(2), not from section 40(2) of the Australian Copyright Act, but from section 107, US Copyright Act 1976.⁷²

The fundamental objection to section 35(5) is that it engenders unmanageable distinctions. So *prima facie* there now appears to be a distinction between industrial research and “non-industrial research”. Section 35(5) also creates a distinction between research carried out by individuals “carrying on any business”, by individuals “not carrying on any business”, and by bodies corporate. As between bodies corporate, section 35(5) again creates a distinction between research carried out by bodies corporate “owned or controlled by the Government”, and bodies corporate not so owned or controlled.

⁶⁸ However, see the rest of the article for a re-examination of this observation.

⁶⁹ Berne Convention for the Protection of Literary and Artistic Works 1886, 1971 version, Art 9(2). See Art 10(2), which talks about the much narrower defence of use of copyrighted works for purposes of teaching.

⁷⁰ Art IVbis(2).

⁷¹ *Lewis Galoob v Nintendo* (1991) 22 IPR 379 (ND Cal, 1991), 964 F.2d 965 (9th Cir, 1992), *Sega Enterprises v Accolade* 977 F.2d 1510 (9th Cir, 1992).

⁷² However, while s 107 is “in many respects similar to those of s 35 of the Singapore Act ... [t]he notable differences are the absence of any reference to ‘study’ or ‘private study’ and of the equivalent of s 35(5) in the US legislation.” See *Aztech v Creative Technology*, at 703E. But it would be arguing in a circle if one contends that s 35(5) displaces the usefulness of any reference to the US cases. The issue here is simply which provision – s 35(2) or s 35(5) – should be seen as the key provision and should set the tenor for the interpretation of the section. This author submits that it should be s 35(2). See the points made in the main text of this article at *supra*, note 62.

These are all very difficult distinctions to draw. The difficulty is further accentuated by a singular absence of any definitions as to the meanings of all these terms. First, it is not always easy to distinguish between industrial research and non-industrial or “pure” research. Suppose researchers from an educational institution⁷³ such as the National University of Singapore undertake research into the chemical properties of a certain drug on rats. Does this research have industrial application? Is it “industrial research”? Would the research be more readily classified as “industrial research” if the research demonstrates that the drug can be used to treat human ailments? At what point in the research does the research cease to be “non-industrial research” and become “industrial research”? The researcher himself or herself would be unable to pinpoint the exact point in the research when this change takes place. Again, there appears to be no clear reason for penalising the researcher for seeking an industrial application for his research. Copyright law should certainly not be used as an instrument to penalise innovation and application of discoveries.

Secondly, there is also the attendant difficulty in distinguishing between research carried out by individuals and by individuals on behalf of a body corporate. Since the company can only act through human agency, one possible view to take is that all the acts of the company’s employees would be the acts of the company.⁷⁴ Does this mean that researchers employed by a body corporate always undertake research on behalf of their employers? Or is the distinction drawn between researchers as employees and as independent contractors? Taking the example above, if the research is by the researchers on behalf of the University as a body corporate,⁷⁵ would it make a difference if the researcher is a full-time staff of the University, or if the researcher is a doctorate student working towards his thesis? The author has more to say about this distinction in the latter part of this article.

⁷³ The Report (*supra*, note 19) at Appendix V, at D-1 to D-63, made it clear that s 35 was intended to apply to educational institutions. There is no expressed dichotomy between s 35 and the specialised licensing provisions in ss 51 and 52 as applied to educational institutions. In fact, there is Australian case authority which confirms that these provisions confer overlapping and complementary defences for educational institutions. See *Haines and Anor v Copyright Agency Ltd and Others* (1982) 42 ALR 549, 555-556 *per* Fox J, as applied in *Copyright Agency Ltd v Department of Education of New South Wales and Others* (1985) 59 ALR 172, 179 *per* Sheppard J.

⁷⁴ *HL Bolton (Engineering) Co Ltd v TJ Graham & Sons Ltd* [1957] 1 QB 159, 172 *per* Lord Denning MR, *Tesco Supermarkets Ltd v Natrass* [1972] AC 153, 170 *per* Lord Reid. These cases have been approved in the local cases of *E v Comptroller General of Inland Revenue* [1970] 2 MLJ 117 and *Yue Sang Cheong Sdn Bhd v PP* [1973] 2 MLJ 77.

⁷⁵ Since the National University of Singapore is a body corporate by the National University of Singapore Act (Cap 204) s 3.

Thirdly, section 35(5) as literally interpreted would confer serious advantages to bodies corporate “owned or controlled” by the Government. To begin, bodies corporate are not “owned”, since they are separate legal entities. Rather, their shares are owned. And there is again an absence of any definition as to what constitutes “ownership” or “control”. Would ownership mean 100% ownership of all the shares? Or could the Government “own” a company if it only owns 50% of the shares of the company? Attaching a quantitative figure to the definition of “ownership” can be arbitrary, especially since share ownership fluctuates. But attaching a qualitative test can be just as arbitrary. Can the Government “own” a government-linked corporation because of the “golden share” which it retains?⁷⁶ In the Companies Act,⁷⁷ the concept of an “interest in shares” instead of “ownership in companies” is used and has clearly been set out to include the exercise or control of the exercise of the voting rights of the shares.⁷⁸ The Copyright Act contains no such definitions. In the absence of such definitions, the concept of “ownership in companies” will be further complicated by the hierarchies in which companies can constitute themselves: parent companies, subsidiaries and associate companies.

Furthermore, the Government does not directly own the shares in many companies. It primarily holds these shares through one of the holding companies set up under the umbrella of the Ministry for Finance.⁷⁹ However, this is a technical objection because the Government exercises “control” over these bodies corporate through its holding companies. By section 35(5), “control” over the body corporate suffices. But in the example as set out above, is the University “owned or controlled by the Government”? What type of control is envisaged in section 35(5): is it limited to control in terms of voting rights, or does it include administrative control? If it includes administrative control, what form should this administrative control take? And if the Government “controls” statutory bodies, would this not violate a cardinal principle in public and administrative law that statutory bodies are to operate independently from the Government?

That being said, section 3 of the Copyright Act states that the Act shall bind the Government subject to the clearly set out exceptions in Part X. This reinforces the submission here that where possible, section 35 should be construed in a way which minimises any discrimination between Government “owned or controlled” bodies corporate, and other bodies

⁷⁶ The “golden share” is the share which the Government retains in government linked corporations or GLCs giving it an overriding voting right.

⁷⁷ Cap 50, 1994 Ed.

⁷⁸ S 7(4), Companies Act. This presupposes that the definitions in the Companies Act have some bearing on these terms as used in the Copyright Act.

⁷⁹ S 2(2), Minister for Finance (Incorporation) Act (Cap 183).

corporate. Thus from the illustration above, if the National University of Singapore is able to claim the benefit of section 35 as a body corporate “owned or controlled” by the Government, it would be strange if the University loses this benefit which it most needs when it sets up a subsidiary company with private shareholding to further explore and exploit the research, but not if it otherwise retains 50% shareholding in this company.

Finally, of the list of enumerated factors set out in section 35(2), section 35(2)(a) contemplates that the dealing for the purpose of research or private study is of a commercial nature. In other words, it appears to be presupposed in section 35(2) that there can be some dealing with a work for “research or private study” which is of a commercial nature.⁸⁰ This is so despite the express exclusion of corporate research from the ambit of section 35 by way of section 35(5). There appears to be a contradiction between section 35(5) and section 35(2). It has been ingeniously suggested that section 35(2)(a) is necessary to qualify corporate research undertaken by bodies corporate “owned or controlled” by the Government.⁸¹ But since all industrial research is excluded by section 35(5) from the ambit of this defence, this suggestion only works if Government bodies corporate undertake “pure” and not industrial research.⁸²

More importantly, section 35(5) calls for a distinction to be maintained between *industrial research* and *research carried out by bodies corporate or bodies of persons carrying on any business*. The first phrase characterises the nature of the research, and the second phrase characterises the identity of the agency carrying out the research. Neither formulation really bears on the *nature of the dealing of the work* used pursuant to the research, and the effect which *such dealing may have on the potential market for or value of the work or adaptation*,⁸³ which is what section 35(2) requires the courts to take into account. In this sense, there is no contradiction between section 35(2) and section 35(5). This is because section 35(2) requires the court to concern itself with the nature of the dealing, *ie*, the copying of the work, but section 35(5) is concerned with the characterisation of the corporate work undertaken, pursuant to the dealing, by corporations. Caselaw has clearly established that if an organisation – commercial or otherwise – reproduces for profit multiple copies of materials for use by

⁸⁰ See *supra*, note 14.

⁸¹ See Ng-Loy Wee Loon’s article, *supra*, note 12, at 58.

⁸² In s 35(5), the phrase “not being bodies corporate owned or controlled by the Government” qualifies the term “bodies corporate” in second limb of s 35(5), *ie*, “research carried out by bodies corporate”. It does not qualify the term “industrial research” in the first limb of s 35(5).

⁸³ S 35(2)(d).

a number of its students or researchers, it is not engaging in research or private study, and hence it cannot avail itself of the defence.⁸⁴ This analysis demonstrates that the formulations in section 35(5) are many times removed from the concerns of those representatives examined by the Select Committee as to the scope of the fair dealing defence, namely the large scale and systematic reproduction of works by business organisations for commercial gain, under the guise of undertaking research or private study for their customers. Clearly, it is the copying of the work which the copyright owners are concerned with, not the purpose for which the work will be used.⁸⁵

GUIDELINES FOR THE INTERPRETATION OF THE FAIR DEALING DEFENCE

Based on the above reasons, any suggested interpretation of section 35⁸⁶ must be guided by the following principles:

- there ought not be any discrimination between industrial research and any other kind of research; any discrimination must be minimised;
- whether the dealing with the work is for profit-making purposes and whether the dealing will affect the market or value of the work should ultimately guide the court in determining whether such dealing is a fair dealing; and
- where there are any other factors which do not bear on the nature of the dealing of the work, these ought to be read restrictively.

⁸⁴ *Longman Group Ltd v Carrington Technical Institute Board of Governors* (1990) 20 IPR 264 (New Zealand), *University of London Press Ltd v University Tutorial Press Ltd* [1916] 2 Ch 601, *Sillitoe v McGraw-Hill Book Co (UK) Ltd* [1983] FSR 545. See *supra*, note 38 for the new, more relaxed position in UK law.

⁸⁵ Aside from the purposes such as whether such copying will permit the copyist to make commercial gains and whether such copying will affect the market or value of the work.

⁸⁶ Of course, it may be possible to just adopt a literal interpretation of s 35(5) and effectively exclude all research from the ambit of the defence in s 35. If so, perhaps this defence should be better described as the defence of fair dealing for the purpose of “private” study. A literal interpretation will yield this as the net effect of s 35(5), since research includes all forms of research carried out by bodies corporate, and not just industrial research. The qualitative bulk of research undertaken in Singapore is undertaken by bodies corporate, educational institutions and statutory boards. The typical modern scientist is no longer one who toils in his shirtsleeves in the cramped and converted laboratory in his backyard, and writes equations on used envelopes.

FIRST APPROACH: DISTINGUISHING BETWEEN
“RESEARCH” AND “PRIVATE STUDY”

It must have been for these reasons that the High Court in *Aztech v Creative Technology* embarked on a *tour-de-force* in seeking to reconcile section 35(5) to section 35(2). TQ Lim JC’s approach is to accept that “research” can never include industrial research, but “private study” can take on shades of some aspects of industrial research. Both “research” and “private study” involve the acquisition of knowledge and information. But unlike “research”, “private study” involves the study, information and knowledge kept or removed from public knowledge or observation, even though the purpose may be of a commercial nature.⁸⁷

The objection to this distinction is that it connotes that “research” involves the acquisition of information in the public domain, thus creating an overlap since “study” or “private study” can also involve the acquisition of public information. In support of this approach, however, it can be said that with the definition of what constitutes “research” in section 35(5) comes the necessity for distinguishing between “research” and “private study”. If there is no escape from this need, one should not flinch from this distinction. Thus the issue before the courts is: how to maintain a working distinction between “research” and “private study” which will give effect to the rights of the authors, preserve the efficacy of the defence without introducing unnecessary inequities, and yet accord some kind of meaning to section 35(5).

The first approach accepts the need to draw this distinction, and uses as its starting point, the case of *De Garis v Neville Jeffress Pidler Pty Ltd*.⁸⁸ In this case, the court defined “research” as:

[the] diligent and systematic enquiry or investigation into a subject in order to discover facts or principles,⁸⁹

and “study” as

[the] application of the mind to the acquisition of knowledge, as by reading, investigation or reflection; ... a particular course of effort to acquire knowledge; a thorough examination and analysis of a particular subject.

⁸⁷ *Supra*, note 13.

⁸⁸ (1990) 18 IPR 291 (Federal Court of Australia).

⁸⁹ *Ibid*, at 298.

The Oxford English Dictionary defines “research” as:

A search or investigation directed to the discovery of some fact by careful consideration or study of a subject; a course of critical or scientific inquiry.⁹⁰

and “study” as:

To apply the mind to the acquisition of learning, whether by means of books, observation, or experiment.⁹¹

The relationship between research and study is a close one, as can clearly be seen from the OED which defines “research” as a species of “study”. Thus “study” merely refers to the application of the mind to the acquisition of knowledge, but “research” refers to the acquisition of knowledge *with a view to the discovery of some fact*. In other words, “study” involves understanding and committing to memory existing information, whereas “research” requires the student to discern new and unstated information.

Even with these definitions, it appears that “study” may lead into “research”, since the acquisition of existing knowledge may lead one into the discovery of new and hitherto undiscovered knowledge. What may be undiscovered knowledge to one person may already be known to another.⁹² Perhaps to remove this element of subjectivity from any test which seeks to distinguish between the two, an objective test akin to that applied to the test of “novelty” for patents⁹³ should be adopted. The clearest indication of whether any kind of acquisition of knowledge involves “research” or mere “study” is whether the acquisition is of any information not yet made available to the public anywhere in the world, by way of description, use or any other method.

Support for this interpretation comes from a rather comprehensive legislative definition of what constitutes “research”. In section 2 of the Income Tax Act, “research and development” is defined to mean:

any systematic or intensive study carried out in the field of science or technology with the object of using the results of the study for the production or improvement of materials, devices, products, produce, or processes, but does not include –

⁹⁰ Vol VIII, at 507.

⁹¹ Vol X, at 1182.

⁹² So, in Laddie, Prescott and Vitoria, *The Modern Law of Copyright and Designs*, (2nd ed, 1995), at 133 para 2.155, footnote 6, the authors note that “there may be research in finding a needle in a haystack”.

⁹³ S 14, Patents Act (Cap 221, 1995 Ed.)

- (a) quality control or routine testing of materials, devices or products
- (b) research in the social sciences or the humanities;
- (c) routine data collection;
- (d) efficiency surveys or management studies; or
- (e) market research or sales promotion;⁹⁴

“Research” in this context clearly focuses on scientific or technological advances. This explains why “research” in the social sciences or humanities is excluded. And perhaps the better word for describing “research” activities in the social sciences or humanities is “study”. One should not be misled by the use of the word “production” in the phrase “production or improvement of materials, devices, products, produce, or processes”. “Production” here connotes advancement and innovation, as opposed to routine and investigative testing which the exceptions in the definition seek to exclude. Applying this theme to the use of the word “research” in section 35 of the Copyright Act, this definition has the merit of considerably narrowing the concept of “research”, and with it, the potential for any kind of “research and investigative” work carried out in the industry to fall into “industrial research”. Admittedly, so defining the meaning of “research” would put a premium on original and innovative industrial research into the state of the art, since such research would be caught by section 35(5).⁹⁵ But the net result of such a distinction is that it would preserve and encourage applied industrial “research” (and encourage researchers in “non-industrial” research to seek industrial application for their research). Such research will not, by definition, advance the state of the art. Since it utilizes existing information and does not lead to any discoveries or acquisition of new knowledge and information, by the definitions above, this activity would be characterised as “study”.

Applied to the facts of *Aztech v Creative Technology*, it cannot be argued successfully that what Aztech was doing was “research”. This is because Aztech’s engineers were performing an investigation into Creative’s sound card. There is no evidence to suggest that what Aztech’s engineers were doing was to advance the science or technology in sound cards or sound reproduction.

⁹⁴ S 2, Income Tax Act (Cap 134, 1996 Ed.)

⁹⁵ This usually takes the form of “pure research”, not undertaken with a view to industrial application, and not carried out by bodies corporate for business purposes. For instance, research into mathematics and physics usually takes the form of “pure research”, as opposed to “applied research”.

But Aztech's engineers could very well have been engaged in the "study" of Creative's sound card when they duplicated TEST-SBC.⁹⁶ They were "applying their minds to the acquisition of learning" – they were trying to learn about Creative's elusive E2H command using TEST-SBC. Were they, however, engaged in "private study"? It is submitted that if "study" means the acquisition of learning, the qualifier "private"⁹⁷ is used in contradistinction with "research" which, as is submitted above, means the acquisition of information beyond the boundaries of *public knowledge*. This qualification was made necessary because the Select Committee in section 35(5) introduced a new definition for "research", but also sought to maintain a clear distinction between "research" and "study". So "private" as applied to "study" simply refers to the quality of learning from restricted pools of knowledge, and not beyond the information in the public domain.⁹⁸

SECOND APPROACH: CORPORATIONS MAY NOT DEAL WITH WORKS FOR COMMERCIAL GAIN

The second approach uses, as its starting point, the conclusion arrived at after close analysis of the exchanges in the Select Committee Report. It is that the amendments were introduced to prevent corporations from dealing with works for commercial gain under the guise of pursuing research or study.⁹⁹ This statement expresses the legislative purpose or intention behind the insertion of section 35(5) into the scheme of section 35. It is submitted that this statement is a less compendious but more accurate form of the statement in the Official Report to the Select Committee Report that the amendments were made "to exclude the defence of fair dealing for research carried out by commercial organizations."¹⁰⁰

If this assertion is correct, the first conclusion arrived at is that in section 35(5), the phrase "industrial research" must mean corporate research with industrial application. Thus there is no intention to apply the exclusion in section 35(5) to "industrial research" (or for that matter, any form of research)

⁹⁶ See the main text at *supra*, note 5 for an explanation of what TEST-SBC does.

⁹⁷ Admittedly, the Franki Committee felt that the word "private" was unnecessary. But some meaning has to be conferred on this word since it was specifically inserted by our Select Committee.

⁹⁸ Thus the Select Committee in their Report (*supra*, note 19) at D-11 confirmed that the amendments were made to s 35(2) to address the concerns of the Consumers Association of Singapore (CASE), which had argued strongly for a defence to permit students to photocopy large portions of books and other materials to aid them in their acquisition of existing knowledge from the various sources of learning.

⁹⁹ *Supra*, note 34.

¹⁰⁰ *Supra*, note 19, at D-11.

carried out by individual researchers. The phrase “bodies of persons carrying on any business” is clearly a reference to sole proprietorships and partnerships.

Secondly, the statement of statutory intention focuses one’s attention, not on the character of the research, but on the character of the dealing. In other words, section 35(5) does not qualify “research” *per se*, but qualifies the *dealing* with the work “for the purpose of research”. This is because the ultimate purpose of section 35(5) is not to define “research”, but to qualify the defence of fair dealing for the purpose of research or private study. One has to be reminded about the context in which this qualification came into being. As has been explained above, corporations cannot successfully rely on the fair dealing defence if they are dealing with such works for commercial gain, even though the ultimate user of such works is a student or a researcher.¹⁰¹ One possible view consistent with the second approach is that this subsection could simply be intended to make this point clear beyond doubt, especially to refute a possible retreat from such a view as was eventually taken under English law by the UK legislature, which was to permit corporations to deal with works for the research activities of its employees.¹⁰²

In *Aztech v Creative Technology*, Aztech’s employees were duplicating TEST-SBC for the purpose of investigating Creative’s sound card. If, contrary to the conclusions reached under the first approach, such an activity constitutes “research”, the second approach will require the court to examine, as is called for in section 35(2)(a), “*the purpose and character of the dealing*”, the dealing here being the *duplicating* of TEST-SBC. As has been explained above,¹⁰³ to characterise the *nature of the use* for which such a dealing is undertaken requires the court to focus its attention on the purpose or intention behind such research. This is objectionable. Research is often open-ended: very frequently the researcher does not know where his investigations will take him.¹⁰⁴ Nor is it easy to ascertain the true commercial nature or potential behind such research when the research and the dealing are first undertaken. And it is easy to allege that the research is done for commercial gain or towards commercial ends with the benefit of hindsight.

Characterizing the nature of the use will also lead to difficult distinctions. So there may be arguments about the characterisation of the research and

¹⁰¹ *Supra*, note 84.

¹⁰² See s 29(3), UK CDPA 1988 and the discussion in this article at *supra*, note 38.

¹⁰³ See the discussion in the main text at *supra*, note 84.

¹⁰⁴ For a brief description of this “hit-and-run” investigative process in *Aztech v Creative Technology*, please consult the reported judgment (*supra*, note 3) at 699F-H.

its remoteness to its commercial potential. The commercial angle of Aztech's research may be arrived at by characterizing it as the development of a rival sound card to capture Creative's market share. On the other hand, Aztech's research was not just confined to TEST-SBC. Arguably, a lot of other research work was undertaken as well,¹⁰⁵ and the duplication of TEST-SBC only represented a small portion of its investigative and research efforts.

If, for these reasons, the second approach is to be preferred, it is submitted that the court should focus its attention on the narrow question of whether Aztech's duplication of TEST-SBC constitutes a "fair dealing for the purpose of research or private study", instead of the broader question of whether Aztech's research was for the purpose of commercial gain. That, it is again submitted, appears to be what TQ Lim JC has done admirably in *Aztech v Creative Technology*.¹⁰⁶

THIRD APPROACH: DISTINGUISHING BETWEEN RESEARCH BY A CORPORATION AND INDIVIDUAL RESEARCH

The second approach raises for consideration again the distinction between research undertaken by a corporation and research undertaken by an employee of the corporation. But the problem will be rendered less acute if it is accepted, as is argued above, that section 35(5) does not *per se* preclude corporations from relying on the fair dealing defence. If, however, contrary to the submissions above, it is felt that section 35(5) is intended to operate as a blanket exclusion of all corporate research from the scope of the fair dealing defence, one last approach which still adheres to the guidelines set out above can still be used.

This third approach calls for a clear distinction to be made between research carried out by a corporation and research carried out by an individual. A company can only act through human agency. But a company is not liable for all the actions carried out by its employees. For actions which carry civil liability,¹⁰⁷ the company will be liable as long as its employees act within the ostensible authority conferred by the company on its employees. For actions which carry criminal liability, the company will only be liable for its employees' actions if they are so exercised by

¹⁰⁵ The judgment (*ibid*) at 687F-I describes Aztech's Sound Galaxy card as being designed to be "compatible with all four [sound] standards", including Creative's.

¹⁰⁶ *Ibid*, at 701F-702B.

¹⁰⁷ This approach does not concern itself with issues of vicarious liability.

¹⁰⁸ These people are usually directors or managers since they exercise managerial discretion. See the cases cited at *supra*, note 74.

the “directing mind and will” of a company.¹⁰⁸ Copyright infringement carries both civil¹⁰⁹ and criminal liabilities.¹¹⁰ So there is a nice question here as to which approach to take in deciding how to bring home to a company the actions of its employees which result in copyright infringement.

Though a company can only act through human agency, not every action of the company’s researchers in dealing with a work for the purpose of research will necessarily be the company’s “dealings” with the same work for the purpose of research by the company. The actions of the researchers will more clearly taint the company if the dealings with the work are profit-oriented. If the narrower, criminal liability approach is taken, even in an action for civil liability,¹¹¹ whether a researcher’s dealing with a work is the dealing by the company will depend on whether the researcher is a “directing mind and will” of a company. This will in turn depend on all the circumstances of the case.¹¹² And a researcher who is a directing mind and will of a company for the purpose of this dealing with the work will find that the company is precluded from relying on the fair dealing defence in section 35.

On the facts of the case of *Aztech v Creative Technology*, there is no adduced evidence to suggest that the engineer who was primarily responsible for investigating the E2H command and thus using and “dealing with” the program TEST-SBC for this purpose, was doing so as the “directing mind and will” of Aztech. But another possible view is that since he was also the head of Aztech’s research and development department and a director of the company at the material time, he must have ostensible authority to conduct such dealings for and on behalf of Aztech. The resolution of this question will require further evidence.

LEGISLATIVE REFORM

If, in view of the submissions made above, legislative reform is urgently needed for section 35, several methods are possible.

¹⁰⁹ See ss 31, 32, 33, 103, 104, 105.

¹¹⁰ S 136. Of course, it can also be argued that copyright infringement carries with it civil liability. Thus a company is liable for the actions of its agents when its researchers as its agents, act within their apparent authority. But it is submitted here that since the elements of civil liability and criminal liability are equated in the Copyright Act, it is correct that a higher test applicable to criminal liability be applied.

¹¹¹ Since the mental elements for the commercial dealing provisions (ss 32, 33, 104, 105) are the same and it would not make much sense to apply different tests for what is effectively the same act of infringement. See *PP v Teo Ai Nee & Anor* [1995] 2 SLR 69. The difficulty is, of course, that s 35 and ss 32, 33, 104 and 105 appear to be mutually exclusive.

¹¹² *DPP v Kent and Sussex Contractors Ltd* [1944] KB 146, *R v ICR Haulage Ltd* [1944] 1 KB 551.

The first, and simplest (if not the best) method, calls for the repeal of section 35(5). As is argued above, the concerns so deeply felt by the representations before the Select Committee could easily be met by the application of section 35(2), which calls for judicial determination of whether the dealing was fair dealing on a case by case basis.

If Parliament is of the view that some forms of corporate research should not be permitted to rely on section 35, these instances being where corporations make use of section 35 to make multiple copies of works under the guise of “research or private study”, these concerns can be met by implementing a subsection in place of section 35(5) along the lines of section 29(3), UK CDPA 1988. The second method calls for a new section 35(5) which will contain reasonably clear guidelines as to when an agent may make copies of a work for another for purposes of research or private study.

And to make matters absolutely clear, Parliament could consider removing the qualifier “private” from section 35, and clearing up the reference to section 35 in section 109. Of course, the marginal notes will have to be corrected to reflect these amendments.

A third, and the most radical approach, calls for the abolition of ss 35, 36, 37, 109, 110 and 111 and for the three separate and discrete fair dealing defences to be subsumed under one common defence of “fair dealing”, containing precisely the same factors as set out in section 35(2). This is the approach adopted in section 107, US Copyright Act, and was the approach advocated by the Whitford Committee.¹¹³

CONCLUSION

This author is the first to acknowledge that the approaches suggested above are not the best. For one thing, a literal reading of section 35(5), shorn of all the above explanations, clearly leads one to conclude that Parliament intends to exclude almost all forms of research from the scope of the section 35 defence. And on the face of it, there is no inconsistency between section 35(5) and section 35(2), since each subsection is concerned with different aspects of the dealing to which the fair dealing defence is sought to be applied. However, this article seeks to demonstrate that a closer examination of the policy and rationale behind section 35 leads one to conclude that a literal reading is untenable, and that section 35(5) does not fit well into the scheme set out in section 35 itself. It is submitted that the judicial pronouncement in *Aztech v Creative Technology* itself demonstrates that the time has come for a legislative review of section 35(5). And we have to thank his Honour TQ Lim JC for that impetus. But before this review

¹¹³ *Supra*, note 45.

is undertaken, and while section 35(5) is on the books, to narrow the literal scope of section 35(5), the courts may choose to adopt any of the three approaches set out above, with the first approach being preferred as it tampers least with the language of section 35. It is hoped that this article has shown the need to make our copyright laws accord with the purpose for which all copyright laws are enacted – namely to ensure the fair balance between remuneration for copyright owners and the promotion of innovation, progress and development.

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