FROM DESIGN TO SOFTWARE
SOFTWARE, VIDEO GAMES AND COPYRIGHT
THE ANALYTICAL METHOD IN THE TEST OF TECHNOLOGY
BY
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The author of this new work, without having exhausted the subject, believed he had done his duty by publishing several studies which appeared to him to clearly illuminate the legal process and the methods of allowing comprehension of an informatics society from the viewpoints of protection of the author's work and of sanction for copying software. Two themes emerge from this work, the first tending to seek protection of a succession of instructions by copyright[1], and the second to protecting economic investment through the law of torts[2]. More specifically, two of the studies focussed on the problem of program protection, one in the industrial sphere and the other directed at the informatic sphere[3]. Since 1982 the need for action was acknowledged in theory insofar as there were most serious doubts about the chances of protecting software by copyright, and in the area of protection by the law of unfair competition, and more generally by the law of civil liability[4]. Overall, the growing case law has given the impression of moving towards protection of software by copyright. In fact, only two decisions can be considered to have undertaken a definite study of the application of copyright to software. The first is a decision of the Court of Paris of 2 November 1982, and the second in the judgment of the Tribunal of Higher Instance (TGI) in Paris on 21 September 1983 (these decisions are cited in Note 4). In the same period various articles appeared in Expertises and M. Bertrand published the most complete French language work to

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**Translated by R.Brown and M.Stewart.*

[1] For a study from the copyright point of view:
"Is a stage play an intellectual work? - With reference to the judgment in Paris 8 June 1971", RIDA 1973, p.43 and 134 (more particularly on the protection of software: p.75; "The Protection of 'Know-How' by Copyright", 5th Meeting on Industrial Property 1975 - "Know How", p.97ff, Lib. Techniques. On software, see the conclusion particularly.

[2] For a study from the civil liability point of view see:
"What legal protection exists for a 'functional' model, a design or a creation of some economic value personal to a business" (Gaz. Pal. 14-6-1981). In this study, it is appropriate to replace the word "design" with the word "Software".
"The Protection of Computer Programs, Copyright and Civil Liability', Report to the French group of the AIPPI, 1974; 'Software: Case Law takes a step forward "from property ... to civil liability"', Le Monde Informatique, 13/4/1981.

[4] In this direction, principally, P. Le Tourneau, "Variations on Software Protection", Gaz. Pal. 1982, no.2 p.370, and by the same author "Something New on Software protection and the protection of ideas", on the Apple Computer v. Segimex case, TGI Paris, Div.1, 21/9/83, Rev. jp. com. 1984 p.65ff; R. Plaisant "The Protection of Software by copyright" (computer program case Paris 2/11/82, Gaz. Pal. 3/3/83, note by Bonneau D.1982 IR 81, comment by Colombet), Gaz. Pal. 25/9/83, an article widely quoted by theorists; see also conclusion of J.-R. Bonneau note TGI Paris 21/9/83, Gaz. Pal. 25-26 Jan 1984, p.13; "Parasitism, Copying, Slavish Imitation" on protection of computer programs by the general law, by Bertrand in Expertises Dec. 1983, p.274ff.

date on the legal protection of software[5]. Approving this growing case law, this author more or less explicitly recognized the protection of software by copyright. On 29 February 1984 there was a round table discussion including academics and industrialists on the subject "Judicial Protection of Software", and its report witnesses the grave perplexity of the participants, and confirms the writer in the clear belief that copyright was not created for this science or the new technology of informatics. Ought not an appropriate law be passed as soon as possible?[6]

In the specific case of video games the situation seemed more straightforward. It was relatively well accepted that games realized in the form of films, audio-visual montages or video recordings could "quite naturally" constitute works within the field of application of the Statute of 1957, since that statute accords protection to cinematographic works, which can include video recordings[7].

On 8 December 1982 the Criminal Court of Paris was faced with the problem of protecting an application program in the video games' field, and indicated that a video game was "incontestably a work ... which can be included among cinematographic works" protected by the Statute of 11 March 1957[8].

Several new elements have recently been added to the dossier relating to copyright protection of software and video games. First, the National Assembly refused to include the word "software" in the classification of intellectual works appearing in Article 3 of the Statute of 11 March 1957[9]. Subsequently a decision was handed down by the Criminal Tribunal of Nanterre on 29 June 1984[10] refusing copyright protection to a video game. The carefulness of opinion and rigour of the Court's analysis could not leave unaffected those who consider the relationship between copyright and informatics. Finally, a recent study largely devoted to the decision of the court of Paris of 4 June 1984, ruling in a criminal case, calls for clarification[11]. The reported decision overruled the judgment of the Criminal Tribunal on 8 December 1982 and also denied copyright protection to a video game. More carefully reasoned, it begins from a

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[5] "Legal Protection of Software", Andre Bertrand, Parques, 1984.

[6] The report of this round table is published Semaine Juridique, Notes on business law, no.24 of 14 June 1984. It is followed by a study by Le Stanc, "The Legal Protection of Software" which appears to agree, in its approach to the problem through copyright and in its use of law, with the study "Protection of Know How through Copyright" which we presented during the 5th industrial property meeting (Montpellier 1975, refer n.1).
The same notes also contain "Proposals for the protection of software" by Y. Pontida, and "*" (OMPI).

[7] On this point see "Legal Protection of Educational Games - Formation - Technology Transfers", Y. Reboul, No.19, p.17, Dossiers Brevets, 1981, IV.

[8] *Expertises*, 1983, no.48, p.31. The peremptory style of this assertion is frequent in copyright.

[9] JO 28 June 1984, Ass. Nat. 3837 and 3850, *Expertises* 84, No.65.

[10] See below *Expertises* 84, No.67, p.301.

[11] An article entitled "Software and Copyright: the dream of Icarus", P.-M. Dusausoy; *Expertises* 84, No.65 p.213; Paris 4 June 1984 (13th Ch. Corr) published in *Expertises* 64, July 1984. p.193. While this practice may be current today, one can understand the discretion shown in the commentary on this successful case.

different intellectual approach than the other above-mentioned decisions that have ruled in this area[12].

All these recent events invite reflection. Ten years ago the problems centred around the question of whether software could be classed as an "original form"; a positive response appeared very unlikely but analytically possible, and it was left to the courts to rule on the chances for such a classification. To qualify software as a protected intellectual work, one proceeds intellectually from the concrete form (expression) to the abstract form (composition or structure), and on the question of originality, from arbitrary and imaginative characteristics to individualised intellectual effort[13], but it remains for the future to say if in the light of future development of the still growing informatics phenomenon (at least for jurists) – the working hypothesis so elaborated would be verified in 1984. Examination of the development of judicial thought in this area has created some unsolvable contradictions[14]. Legal debate is so charged with ambiguities as to create fact situations that are utterly inconsistent. The present study makes no claims to reconciling copyright with industrial life[15], but aims to go beyond the traditional discourse, in a search into the origin of our beliefs. It seeks to reclassify the intellectual and economic product which constitutes software either generally, or as it applies to video games. The avenue followed by the Criminal Tribunal of Nanterre in its judgment of 29 June 1984 appears extremely appropriate to this subject[16]. The Tribunal's analysis breaks with the traditional approach, showing an unusual intellectual rigour in this area and describing minutely the facts that were submitted to it. It is this model that will guide[17] us in contrasting, from the copyright viewpoint, the techniques of informatics (I) and the conditions for protection of graphics (II).

I. CONDITIONS FOR THE PROTECTION OF INFORMATIC TECHNIQUES BY COPYRIGHT

The very title of this part invites the question why must this problem be re-considered? The answer is unequivocal; we wish as quickly as possible to

[12] The latest published decision, given by the Tribunal of Higher Instance of Paris (3rd Chamber, 1st Section, 30/5/1984) gives judgment for contravention of software on the basis of copyright without any reference to the protectable character of the software in question, since the court is not required to answer questions that are not put to it.

[13] X. Desjeux, "Preservation of Know How through Copyright", above, n.1. Note that the notion of individualized intellectual effort was proposed by E. Ulmer in "Copyright Protection of Scientific Works in general, and Computer Programs in particular", RIDA 1972, LXXIV, p.71.

[14] E.g. in copyright the generally accepted principle is that, if software is developed within a company, it is not the firm or the employer who is entitled to copyright, but the employee who "created" it. What is the case, then, between the employer and the company's client? See J.M. Mousseron's dynamically entitled article "Private individuals - look to your contracts ... legislators - look to your laws". The author concludes: "Every legal mechanism is an extremely complex system, and the activation of a legal pronouncement poses more problems that it solves at first sight. Let us hope that experience will prove less bitter in the case of software.", Semaine Juridique, Law notes, 14/6/84, p.6.

[15] For an attempt to reach a synthesis on this matter, see X. Desjeux, "Copyright in the Industrial Sector", (Conference ASPI, 28/11/74, published as an article RIDA July 1975, p.153ff.) on the protection of computer programs, pp.135-6; the analysis, quite novel for its time, suggests albeit prudently, the possibility of copyright protection. Software could have a form ("structure") which could be "original", certainly in the case of some programs. After a decade, it merits closer examination.

[16] See ref under n.10

ensure the protection of programs by the first reliable legal vestment that comes to hand; this is copyright. The statement which best summarizes the situation is the speech of a member of the National Assembly on 29 June 1984 seeking the inclusion of the word "software" in the classification of works protected by the Statute on copyright[18];

> "[A]t the outset I would underline our astonishment at not seeing the modernization of the Statute of 1957 extended to informatic programs, since French legislation on patents has expressly excluded software and computer programs from the industrial property regime. These are, however, intellectual works whose authors are just as much as others menaced by theft and privacy, and even more so when, by the fact of technical development, their creative work can only have a limited exploitation".

Such a statement undoubtedly reflects the concerns of those jurists and practitioners who have to confront this thorny problem of the protection of software and who are limited to trying to articulate around copyright and its concepts the protection of intellectual effort, and particularly that of the economic investment in software[19].

At this stage of its analysis, the Tribunal of Nanterre began by recalling clearly a principle of evidence that is too often forgotten:

> "it is not because there is a 'copy', however essential that may be, but because there is a copy of an 'intellectual work' in the sense of the said Statute (of 11th March 1957)".

A further fundamental observation must also be made; it is not just that software is not protected by copyright, it is not protected at all. One has only to look at the case law of the last ten years which systematically penalizes the copying of commercial records based on Article 1382 of the Civil Code[20]. A manufacturer of records is protected in his business. Why then is a manufacturer of software on diskette, cassette or other medium not protected? It is abundantly clear that the vast majority of industrial property law specialists are completely uninterested in this mode of protection, except for the traditional mention of violation of trade secrets and unjust enrichment, which have never been developed in this area.

However that may be, setting the problem of copyright protection of a realization technique in relief leads to a questioning on the one hand of the correct usage of vocabulary and misuse of language since the coming into operation of the Statute of 11 March 1957, and on the other, of the extent of the respective domains of copyright and the law of industrial property.

A) On the correct usage of vocabulary and the misuse of language

Certain concepts and formulae are utilized in a context where they are devoid of sense, or used in contradictory senses.

a) The word "Aesthetic"

Classical theory is unanimous. Professor Desbois examining the aim of industrial models, writes, "To bring the Statute of 1909 into play it is still necessary that the form under consideration have an "ornamental" purpose, since the Statutes of 1909 and 1957 only concern themselves with creations of form

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[17] The short analysis of P.M. Dusausoy's article, and the Paris Court decision (13th ch. 4/6/84) - which displays less fruitful reasoning, are both investigated (ref n.11).

[18] See n.9

[19] In the same sense note a comment by M. Fournier at the round table of 28 February 1984 (referred to in n.6), "For what concerns industrialists, the actual idea is that there is an absolute necessity for protection because the number of cases that are going through software is becoming considerable." See also Dusausoy, op.cit., "Professionals are not seeking to partake of the glory of artists, but to ensure the protection of their investments."

[20] See reference to general law protection in its conclusion.

that have an aesthetic end, whether combined with a practical function or not[21]". In the same vein Professor Francon in his brief observations on the *Apple Computer* v. *Segimex* case comments that "literary property was first conceived to protect esthetic creations and it is ill adapted to the protection of technical creations", and asks if, rather, it is necessary to create "a specific law to protect software" and reports the work at INPI on this point[22].

Professor Plaisant in his study "Protection of Software by Copyright" explains this point of law;

> "In copyright it is considered that originality must be of an aesthetic character, even if the Statute of 11 March 1957 art. 2 protects it whatever its type, form of expression, merit or purpose. The judge thus avoids all evaluation of originality or aesthetic character. However, these must exist, otherwise, and this is the major criticism that one can form against the decision, copyright has hardly any limit and this powerful protection is improperly extended to the detriment of the public domain"[23].

Here then is the first difficulty to upset jurisprudential analysis; the concept of what is "aesthetic" is appreciated differently by different judges, whose attitude can be criticized when they apply a necessarily subjective esthetic appreciation, but which is plainly justified when they examine originality and note that it is of an aesthetic nature. The majority of decisions are confined to making simple statements of originality; none either protects or ascertains "technical originality" because technology is not itself protected by copyright.

These observations cannot be considered independently of those that follow. The case law is more or less plentiful, but sometimes perverse or contradictory. The report of an isolated decision given in a particular context and governed more by the restraint than by an examination of the characteristic elements of the protected creations, must be examined and interpreted in the light of the assembled body of positive law.

b) "Intellectual works" in the statute of 11 March 1957

All the writings on copyright, and a review of the collected case law on the application of the Statute of 11 March 1957, lead to a fundamental conclusion which goes well beyond the scope of this study but which reveals the subject's complexity. Chapter headings, the arrangement of tables of contents, and the intellectual approach of authors all reflect the fact that copyright in any object of study is in fact only concerned with the sphere of "fine arts". Concepts and ideas sometimes used by the courts, and especially by most theorists in areas other than "arts and letters" invariably find their source here. Thus the "intellectual work" is an "original work", itself defined as "reflecting the personality of its author". Academic, practicing and judicial jurists appear agreed on this point. But the notion of a "work" itself is never defined. In reality, theory and case law often operate on this point like the layman does: "To explain the nature of the work, one presupposes an object whose quality as a 'work' is already recognized, and one justifies a choice which has been made a priori"[24]. Professor Desbois' approach to the notion of an intellectual work is typical of the way in which copyright is generally perceived. In one of the

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[21] H. Desbois, "The Law of Copyright in France", p.126, no.102.
[22] RTD com. 1984, p.89.
[23] See n.4.
[24] Mikel Dufrenne, 'Phenomenology of aesthetic Experience', 1953, v.1, p.32.

early chapters of his important treatise entitled "The Influence of the Nature of Works on the Deduced Criterion of Originality", the eminent author attacks at the outset: "The notion of originality, which constitutes the touch-stone of copyright, is not constant within the three domains of forms of expression: literature, art, and music"[25]. This formula reveals the intellectual state of the theory, and more so general opinion. The problem is irritating: the "work" is the "work of art", an imperative that is somehow indefinable.

This is a fact of experience and not the subject of proof. Hence theory and case law have forged certain concepts to adjust the law to reality. To fall from here into the abuse of language and misuse of logic is only a single step. No-one can maintain that the expression "intellectual work" coincides completely with the act of intellectual creation protected by copyright[26]. Today, the analytic method is no longer adequate to ensure the proper application of the law of copyright.

c) "Merit" and "Originality"

Article 2 of the Statute of 11 March 1957, incorporating the provisions of she Statute of 1902, forbids the consideration of merit[27]. What does that mean? Quite simply that the judges are not to apply their personal tastes. The formula is prudent and is not discussed nor disputable in principle. But the practical use of this concept often gives rise to major confusion since merit is not originality. Before addressing the ultimate merit of a creation, the judge is bound to determine its originality, (i.e. at the very least, its lack of banality); this is the real condition of protection. When a judge refuses protection to an "intellectual work", has he sought to evoke artistic value or simply insufficient originality in the proposed "creation"?

Reasons for judgment rarely provide information on this point. In this uncertainty, is it necessary to opt for "merit" (forbidden) or for "originality"? What was surprising at the end of the 19th century was that in practice the appreciation of merit only concerned works from the system of fine arts. The history of art criticism reveals the flourishing of artistic theories excluding other theories; the unenviable end of the impressionists or even, some time later, the scandal of the Pelleas of Debussy, or the battle of the Sacredu Printemps, reveal a cultural climate profoundly foreign to our time. Such "battles" are unthinkable today in the domain of fine arts. Art and industry were well separated domains. At the beginning of this century technology had only a limited contact with the era, sometimes called the era of informatics, into which we are moving. Pouillet, commenting that the new Statute of 1902 was only aimed at the artistic production of his times, said,

> "the Statute does not judge works; it weighs neither their merit nor their importance: it protects them all blindly ... every literary or artistic work is allowed to benefit from the provisions of the Statute"[28].

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[25] H. Desbois, "The Law of Copyright in France", 1978, no.8.
[26] On this point see the pertinent developments by Prof. Plaisant, op.cit. Under n.4 above, he notes that software, like a patent, undoubtedly constitutes an intellectual work.
[27] See Carreau, 'Merit and Copyright', thesis, Paris 1979.
[28] Cited by C. Colombet, 'Literary and Artistic Property', Dalloz Summary, 2nd ed., no.27.

In other words, it was possible to discuss the merit of a work, but the fundamental problem of recognition of the existence of the work insofar as that production was relevant to the law was not posed, it could only be a question of a work of fine arts, and therefore a priori new and personal.

Examination of originality hardly arose, and was capable of being easily resolved. The theory developing from certain court decisions appears to have applied the rule forbidding examination of merit (of literary or artistic creations) without exception, and relatively systematically, in situations where modern judges would have been able decide that an industrial or technical creation did not "merit" copyright protection because of its lack of originality.

It is often claimed today that "the author, or the creator, ought to be protected by the Statute of 11th March 1957", notably in the areas of publicity, design or software. That the creator ought to be protected is indisputable, but we too often forget to specify creator "of an intellectual work protected by the Statute of 11th March 1957". When the product comes from the sphere of fine arts, this goes without saying, as the law of copyright is tailored to this. When the product is not "literary, artistic or musical" but has an industrial or technical character, it is necessary to look more closely. An artistic activity can give rise to a value-judgment which evokes the concept of "merit"; an industrial or technical activity does not seem in itself capable of bringing into play the notion of "merit" introduced in 1902 by the copyright legislation and restated by art. 2 of the Statute of 1957. At the most, one could speak of "originality" supposing that this concept might be capable of use outside the legislative system which has created it. In effect "originality" is the originality of an "intellectual work protected by the Copyright Statute". Can one assert at the outset that software is a work of this type? Nobody seriously maintains it in this bald manner.

Consequently, to confine oneself to asserting that a program is a creation appropriate to copyright in spite of its industrial or technical character on the ground that the law does not take merit into consideration, makes no sense, and to limit oneself to examining whether software is original or not does not solve the initial problem either. Is it a question of a work protected by copyright? To classify "merit" as "originality" does not contribute to enlightening the mystery. The vague and falsely precise formulae of certain court decisions invite the commentator on such decisions to ponder on the notions of protected works and originality rather than launching himself onto the secondary problem of appreciation of merit to invoke protection.

(d) "Purpose" and the Industrial, Technical or Practical Character of a Work.

The same article of the Statute of 11 March 1957 also forbids any consideration of the "purpose" of the work. "Protection is assured whether or not the work has a practical or cultural purpose"[29]. Professor Desbois notes here that the Statute of 1957 has adopted and extended the principle laid down by the Statute of 1902: "the same law applies to sculptors and decorative designers, whatever the merit or purpose of their work". It is a question of the arts

[29] On this question, see H. Desbois, op.cit., n.36 ff. More particularly, the developments on computer programs which revel the subtlety of the subject and the undoubted influence of Prof. Eugne Ulmer whose concepts appear to have finally influence Prof. Desbois. He has never concealed his difficulty in getting involved in this field of informatics so foreign to juridical and cultural universe. The dialectic which he ultimately wrote on this topic is more remarkable even if it does not plainly indicate agreement. (and see p.000)

applied to industry. This example allows one to better understand the extent and limits of the principle: the practical object is never protected by copyright in itself, it is the ornamental form applied to the object which attracts copyright. In other words, purely technical material never attracts copyright; it is the non-practical, arbitrary imaginative and personal aspect of the work that is protected. For industrial models protected by the Statute what is covered by the same text is 'applied art'. The purpose of creating the work may be technical or scientific utility, but the form protected in industry must, according to the most classical theory and case law, be independent of the obtaining of any industrial result, or, at least, must not be purely practical.

The designer, who is often thought to be an artistic creator and who generally aims for an aesthetically satisfying result, meets grave difficulties when he tries to extend the protection of his "useful form" (which belongs to the now obsolete industrial aesthetics of the turn of the century) to the functional model; *a fortiori*, the same reservations apply for the informatician whose intellectual effort is always and exclusively practical and technical by nature. Comparison between design and software, and examination of the numerous studies and decisions in the field of models of industrial art, must needs lead to a first conclusion that the concept of technical or industrial "purpose" can have several meanings. A practical creation is certainly "destined" for a practical function. It is not protected if it is not an "intellectual work" in the statutory sense. What the legislators of 1902 and 1957 have sought to say is that when one is in the presence of a creation in the sense of the copyright Statute, its mercantile or industrial purpose does not make it lose its quality and nature as a protected creation.

However it is unacceptable syllogism to affirm "a creation has an industrial purpose, and the Copyright Statute forbids the taking of purpose into consideration, therefore the realization in question is a work protected by the Copyright Statute''. The protected intellectual work is an original form, and case law offers numerous examples of technical forms that are not protected. The notions of originality and utility do not sit well together in the positive law of France[30]. If the judge has taken care in his decision to deduce the absence or insufficiency of originality from the purely technical character of the form, he will be applauded by the most demanding theorist, but if he has confined himself to declaring the purely technical character of the realization as a ground for refusing protection, he will see himself immediately accused of having taken merit or purpose or both into consideration and will incur a censure whose lyricism of tone and severity of language cannot fail to astonish the uninitiated[31]. This summary study of concepts such as "aesthetics", "intellectual work", "merit and originality", and "purpose" must not make us forget the other equally complex notion of "form". The contradictions and the occasional incoherence of a case law as prolific as artistic or industrial intellectual productions, derives in part from the legitimate subjectivity of the judges called upon to give rulings, from the particularly relevant circumstances of the case (cultural context, more or less unjust facts ...), from the legal

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[30] See below developments on "technical plans" and "scientific works".

[31] The field of copyright is full of contradictions. One is tempted to exaggerate this fact by saying that it is ruled by passionate and powerful forces at work against a background of Talmudic interpretation; under the guise of protecting the creator, it gives protection instead, in the name of the law, to all sorts of people who are clearly no more than skilled craftsmen. And in the name of more or less strict adherence to the letter of the law, it refused protection to authentic creators who may be designers.

arguments presented by the parties (trials depend more often on the sole point of the existence or absence of a copy than on the conditions for protection of the copied creation), and finally from juridical concepts peculiar to copyright which non-specialist judges perceive in isolation or, more rarely, as integrated in the overall field of the Statute of 11 March 1957 - in fact in the totality of the field of intellectual artistic or industrial property.

(e) "Form".

The principle is that the Copyright Statute only protects creations of "form". In interpreting the Statute, theory and case-law have added to "form" the requirement of "originality" and, in applying the law, have abstained from appreciating merit and purpose. It remains to define "form". Following a certain logic, tradition has defined form as "that-which-is-not-an-idea"; it has endeavoured to define the idea, and a subtle and pragmatic present-day analyst has disturbed classical doctrine by analysing the passage from the idea to the form in legal philosophy in the field of protection of art[12].

One feels keenly that all this intellectual discussion and these problems are insufficient to integrate the processes of elaboration and realization of software into the circle of works protected by copyright. The use of traditional concepts and their contraries, applied outside the system of creations foreseen by the Statute, creates insurmountable confusion rather than clarifying our subject. The two abovementioned decisions of the Criminal Tribunal of Nanterre and of the Court of Paris, Criminal Chamber, closely limit the bounds of any analysis, and the development of an abstract logic which overlooks the origin and meaning of the concepts on which the law on literary and artistic property was founded and the construction of a general theory of intellectual property. Let us examine the four following propositions:

1) Form is in opposition to Idea[13]

Just as Plato defined the sun by the shadows it produced in the cave, form is defined by the idea. We are told that the idea is free-ranging; this is explained everywhere by the fact that the same idea can produce several forms.

In the area of patents only the concrete invention susceptible to being exploited is protected in order to favour technical progress. But this does not mean that all other forms are protected by copyright on the pretext that they represent an intellectual effort or an economic investment or that copying is penalized by a law relating to intellectual property. Studying classical theory gives us absolutely no indication of what seems to be the foundation of all legislation on literary and artistic property[14]. The form protected by the Statute does not favour progress. In the cultural area this is irrelevant and legislation on copyright does not protect all forms but only "living" forms.

> "In order to exist it is necessary that the work of art is separate, that it foregoes thought, that it enters extension, it is necessary that the form

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[12] R. Lindon, "L'Idee artistique fournie a un tiers en vue de sa realisation", JCP, 1970, I, 2295.

[13] This principle is not doubted in theory and case-law; for a fine analysis of the principle and its possible limits in protecting the idea, see Ph. Le Tourneau, op.cit.,Rev. Jur. Comm. 1984, p.72.

[14] One should recall the fiery formulae of the artisans of this legislation: "the most sacred of all property" (Le Chapellier) or "let us profit from this chance given to us to make a grand statute on copyright" (Prof. Escarra, travaux preparatoires on the Statute of 1957), etc.

measures and qualifies space. It is precisely in this exteriority that its inner principle resides ... the fundamental content of form is a formal content ... the verbal sign (the word) can also become the mould for various meanings, and promoted to form, can undergo some strange changes ... plastic forms present peculiarities that are no less remarkable. The foundation is based upon thinking that they constitute an order and that this order is animated by the movement of life".[35]

This analysis outlines the difference between the artist and the artisan; the former aims to impart a certain life (with greater or lesser success) to what he creates, the latter applies his technical ability and his know-how to carry out his work. This distinction persists, though certainly disputable and probably out of date, but it cannot be forgotten because it was taken into consideration in the cultural context of the law's development. It is fertile in that it obliges us to frame a question which puts life into this examination and relates to the exclusively analytic traditional approach, which today is quite sterile. At what point do knowledge or technical usefulness qualify the work for protection by the Copyright Statute? In the system of "arts and letters" the reply was relatively simple, it being sufficient to establish the "personal effort" of the execution. All theoretical works are founded in essence on this approach and on the cultural context that still accommodates it. In the industrial and technological system it is necessary to look closer, as such a response is unsatisfactory.

Is software a work in view of the distinction between form and idea? Classical analyses in copyright which place form and ideas in opposition are not adapted to this subject. In fact software evokes first the notions of a series of instructions, of know-how, of methods and other mental processes. Seen this way, it relates rather to the idea (in opposition to the form), but one sees in the computer program more than a mental process,

"It presents itself certainly as a process to be followed, but this observation is valid, in the end, for all procedures. The essential point is that once an informatic process is set in train, its execution makes no call in any way on the intellectual capacities of the users. Designed to make use of 'hardware', the 'software' exercises a hold on the real world"[36].

The reference to the notion of process, adequate in this context, does not direct the reader to artistic property but rather, at this stage of the analysis, to the question of eventual patentability of the procedure, and the law of industrial property which is outlined on the horizon. Timidly the conscientious analyst will exhume the notion of form, but it is necessarily for him to establish that in the field of informatics, industrial activity does not tend to give life (however weak), to the "form" or program, neither in its exclusively technical graphical aspect nor in its verbal aspect. The organization of the program's language cannot be assimilated to the style - however mediocre it might be - that belongs to the poetic, philosophic or scientific writer.

The informatics engineer can of course reveal a certain personality in the creation of a program just as a taxi driver chooses his route to reach the address given to him; the choice of itinerary is bound up with the knowledge he has of his vehicle and traffic difficulties. It does not appear from the evidence

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[35] H. Focillon, "The Life of Forms", 1943, a classic work which appeared on the eve of the creation of the commission presided over by Professor Escarra.
[36] Lucas, The Protection of Abstract Industrial Creations, 1975, p.160.

that the expression of the programmer's personality has any association with the Copyright Statute; which programs would be involved?[37] Wherever it may be in the classical opposition between form and idea, it is probable that software is more than an idea but is certainly not the form conceived by even the least gifted artist. Software in not "an artistic idea in the course of realization" because it is neither the goal being pursued nor the method of work of the informatician, however ingenious he might be.

2) Form in "expression" or in "structure"[38]

It is unnecessary to re-examine the decades of jurisprudence from which theory has derived the rule following which an intellectual work is protected not only in its expression but also in its composition or structure, namely, the sequence of ideas and their development. A film maker cannot use the scenario of a stage play (independently of the literary text itself) to make the film without the playwright's consent. But all the examples illustrating this theory (henceforth, the classical theory) are drawn from artistic creations. When one examines a "composition" or a "structure", it is always the composition of a "literary work" but never of an industrial or technical realization. It is never doubted that, at the beginning of the examination of composition or structure, there pre-exists a protected work whose protection extends to its central element, structure.

A bold attempt was made in 1973 to protect through copyright a book devoted to a method of family budgeting. To do this the judges had to believe they were able to distinguish between the unprotected method in itself, and the structure of the method which would eventually reveal an "intellectual effort" protectable by the Statute of 11 March 1957. They nonsuited the plaintiff in that they denied the originality of her work.[39] The case appears to have been adjourned sine die. In summary, this was a case of a book, the cultural product par excellence, and certain decisions had protected by copyright all types of written productions whose "literary character" was at least debatable.[40]

Whatever it may be, software is not capable of being assimilated into the composition or structure of a protected work (except in the special case of artistic works produced by computer): its "structure" is "the work". If a written trace of the program exists, this writing necessarily attracts the provisions on patents of invention and, more precisely, patents of processes. In the area of patents and industrial processes, a discourse on form, expression or structure has an extremely foreign ring. The mark of the personality, touchstone of copyright, would not appear, a priori, in the presentation of a patent

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[37] On the absence of "originality" in software: X. Desjeux, The protection of Computer Programs - International Experts Seeking a Second Wind, Rev. Terminal, Feb., 1980, p.10; for a critique of the use of the expression "the mark of a personality" in the software field, and on the "industrial" character of the work of the informatician, R. Plaisant, op.cit., 25/9/83.

[38] On the application to "know-how" of this distinction, amply described by Prof. Desbois in the fields of literature and art, see X. Desjeux, The Reservation of Know How by Copyright, 1975, p.98: "From the 'Concrete' to the 'Abstract' Form", H. Desbois, op.cit, n.29 above.

[39] Paris 13/12/1973, cited by X. Desjeux, The Reservation of Know How, 1975, p.104.

[40] See below, pp

reflecting as faithfully as possible the invention it describes. In any case the described process is never protectable by copyright.[41]

3) Form "inseparable from function"

It is in the area of industrial art that this problem arises most often. In reality, the debate is at a much deeper level. It is appropriate to the elaboration of the Statute of 14 July 1909 on industrial designs and models to harmonize the provisions of that Statute, born from commercial and esthetic preoccupations, with the legislation on patents. The new provisions must not permit an industrialist to avoid the tax on patents by depositing, without expense, his invention as a model.

The text of the Statute has rapidly been interpreted very broadly by the case-law[42], by means of a quasi-systematic refusal of protection despite happy exceptions for "useful" or "functional" forms. One is therefore taking part in a movement for which the contrary elements are often difficult to harmonize: on one hand, the sacrosanct theory of the unity of art, which enshrines the protection of the famous salad bowl and illustrates the principle of the prohibition on taking the "purpose" of the work of art into consideration, and on the other, development of a debatable case-law which refuses protection to a useful work even if it is not "patentable" in the strict sense of art. 2, para. 2 of the Statute of 1909. However, it is apparently the same family of judicial thought, which has generated both bodies of case-law. From this perspective, the contradiction of the theses of these two schools is only apparent: the functional, useful or technical character of the work is never protected, while the ornamental form, the useless, arbitrary or imaginative aspect of the object, always is, at least so long as it does not consist solely of the technical effect, but is separable from it. Over nearly 30 years industrial esthetics have metamorphosed with the emergence of design and the generalised creation of functional forms. It is there a question of a cultural phenomenon of the most fundamental importance.[43]

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[41] Incidentally, it is necessary to recall that in very exceptional fact situations the court has protected the text and designs of a patent by copyright. This decision was justly the object of severe criticism by Prof. Francon who notes that the judges must have been able to satisfy themselves that "the text clearly bore the stamp of its authors' personality" (Tribunal Correctionelle de Paris, 17/1/1968 - noted, Francon RTD com. 1982, p.433). On the facts the defendant revue director had some very bad habitual business practices, and the desire to suppress them swayed the court.

[42] Art.2 para.2 states: "But if the same object can be considered both as a design or new model, and as a patentable invention, and if the constituent elements of the novelty of the design or model are inseparable from the invention, the aforesaid patent can only be protected in conformity with the Statute of 2 January 1968."

[43] On this point: X. Desjeux, Which legal protection for the functional model, the design ..., above n.1. For a painstaking and documented analytic approach, see the works of Prof. Perot-Morel, particularly "The difficulties of applying Article 2 para.2 of the Statute of 14 July 1909 on designs and models", JCP 1966, I, 2045; "The Respective application of the regime for protection of industrial designs and models, and of patentable inventions", RTD comm. 1976 p.23; see also the works of Profs Chavanne and Azema on incorporeal property, designs and models, RTD comm.; Also Prof Francon, "Recent case-law in the field of designs and models, ten years of intellectual rights", Patent files, 1979, I, 39.

Although this theory of the "multiplicity of forms" permits the creator of a form to claim intellectual property in it, the conrts have given this theory limited application, as witness a recent decision:

> "A model of waterproof decoration is worthless insofar as the forms of this model are imposed by functional and technical imperatives. It matters little that there are a multiplicity of possible forms, a creation being able to comply with multiple variants whose forms are purely imposed by technical imperatives".[44]

Can one conclude from this formula that, if the forms had been dictated by oruamental eoncerns, the model would have been protected? The same judges replied with a slightly different approach some months later:

> "The law will protect a deposited model of a loudspeaker with grille, because the armature designed to support the grille could have taken a completely different form, and quite separate from the technical or essentially funetional elements of the model".[45]

The form dissociable from its technical elements is not therefore "useful" or "funetional" and can be protected. Incidentally, it is necessary to underline the fact that this in no way controls the fortunes of designers and works of applied art with a functional character. The courts will need a little more time to understand that the creativity of these people, before being applied to choice of forms, participates in the search for the best technical solution from which, incidentally but necessarily, is born the aesthetic form taken in consideration with the technical analysis of the problem to be resolved (for example to create a product which is most reliable or most economic, cheapest ... and acceptable to the eye because "ugliness doesn't sell"). Such an approach is certainly not revolutionary. Even in 1904 the aestheties scholar Paul Sonriau was forunulating in his work "Rational Beauty" the thesis of industrial functionalism.

> "Each thing is perfect in its own way when it conforms to its purpose ... it is then not possible for there to be confliet between the Beautiful and the Useful. The object possesses beauty since its form is the manifest expression of its function".

At the same time Loos was developing his crnsade against ornamentation, and the idea was being born that art can be reconciled with modern society provided it rests on values supplied by the internal logic of techniques.[46]

Theory and ease-law have not interpreted art. 2 para. 2 of the Statute of 1909 in this way. There are theories elaborated around 1850 by Ruskin whose spirit one finds today in the content of certain decisions or commentaries. In this epoch the distinction between the beautiful and the useful was insisted upon. Ruskin snggests "that to useful objects one 'adds' a little beauty, - that

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[44] Paris (4th Ch.) 23 March 1982 Ann. Ind. 1982, 224.

[45] Paris (4th Ch.) 13 July 1982 Ann. Pr. Ind. 1982, 216; but equally Cass. com. 19 January 1982 Ann. 1982 p.225 (flagrant imitation of a cigarette vending machine).

[46] Tnese ideas are drawn from Francastel's fundamental work, "Art and technique", pp.28-9. The theory of "the unity of art" has been mentioned above, but this functionalist theory evokes rather "the unity of technique".

which will give birth to a 'fin de siecle' style, in which decoration will contribute to the general ugliness".[47] When the case-law adds to the text of the Statute of 1909 and assimilates to the "patentable" industrial model, i.e. excluded from protection, the "useful" or "functional" model, it gives the impression of being influenced by two considerations: to refuse protection the judge may consider that the "useful model" submitted to his consideration is a minor patentable invention or comes from insufficient inventive activity. It would then be illogical if he were to accord a greater protection to that which the Statute on patents refuses.[47a] The step is relevant but no more justifiable if the "functional" industrial model is the work of a designer who has conceived a form whose aesthetic character is inseparable from its function. On this final hypothesis does not the judge become a disciple of Ruskin and think like Cyrano, "but it is the more beautiful because it is useless"? Art. 2 paragraph 2 of the Statute of 1909 has not been developed to exclude "useful forms" from copyright.

From the foregoing it appears inconsistent to systematically refuse copyright protection to functional forms when these are made concrete by industrial models, yet to accord this protection to software, whose form is "utilitarian" par excellence, the more so when one might hesitate in front of a model before assessing if it has a marked artistic predominance or an exclusively technical character.[48] For software the situation is very much simpler because the engineer (called "creator" for argument's sake) is operating solely on the values provided by the internal logic of informatics techniques. If his language can be classified as a "form" it cannot be a question of a form that is "living" in the sense of copyright legislation[49]. If any form is particularly "useful" this is especially so of software, and if one establishes its technical character, it is not its "purpose" that is in question nor even its "merit", but the actual nature of the "work". It is therefore impossible, if one wishes to write about the "form" of software to trample upon the entire cultural background and difficulties of integrating utility into art; this overruns quite substantially the extent of Art. 2 para. 2 of the Statute of 1909 with reference to the word "patentable" and to the formula "inseparable from function".

4) The "original form"

Let us examine the logic of this expression that one sometimes finds in theoretical writings but which is hardly mentioned in the case-law. In the Statute of 11 March 1957 the notion of an intellectual work is defined by that of

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[47] Règine Pernoud, History of the Bourgeoisie in France: 2 – Modern times, pp.378-9. Francastel adds in this connection "Insofar as Ruskin seems to have ceased to act on our contemporaries in a direct manner, his spirit still hovers among us", op. cit., p.24.

[47a] See particularly Prof. Chavanne RTD com. 1981, p.536, and the collection of case-law there cited: "The solution appears a happy one. Certainly it runs in opposition to the letter of the text but it is infinitely more logical... ". Note that it was a question of whether a model of a cheese in cylindrical form bearing a stem of several centimetres inserted in its centre was "more or less patentable". Will it be necessary to generalise this pointed solution?

[48] The numerous efforts – justified or not – to reform the law on industrial models stumble over this difficulty of distinguishing art from utility in the industrial form. The horizon is obscured when one discovers that no-one has yet explained or tried to explain the real foundation of protection of the industrial model. Are we going to get bogged down in the same manner with software when it is clear that the shadow of "design" falls on "software", and that the same causes produce the same effects?

[49] On the life of forms see above n.35.

"original form"; an original form is a form which is personal in its expression or composition (its "structure"). A personal structure is basically an "individualised (or personalised) intellectual effort", hence the individualised individual effort is a work of the intellect in the copyright sense. Or again: "structure" is the arrangement of a succession of events, and software is a succession of instructions or of operations, so software is a "structure". Since two informaticians may create different structures, these structures are "personal". The personal structure is therefore synonymous with "original form" and original form is the definition of intellectual work. The Statute of 1957 protects intellectual works, therefore software is an intellectual work and benefits from the Statute of 11 March 1957. Logic has functioned with apparent rigour and the knot is tied.[50] However, even while in an examination of the conditions of protecting the work, utilitarian purpose does not spare one from examining the protectable character or pure technique of the form (in its essence), the refusal to take "merit" into consideration does not spare one from ascertaining "originality", the determination of the aesthetic character or even (a different concept from that of "aesthetic merit") nor revives consideration of merit, but on the other hand qualifies "originality" more precisely. In the same way, examination of originality does not save one from the initial ascertainment of "form" or the "intellectual creation" in the statutory sense and neither does it at all permit the pure and simple assimilation of "personal form" or "personal intellectual effort" into the creation - however modest it might be - in the sense of the Statute of 11 March of 1957. Like the texts and treatises relating to copyright, the judges who have ruled in the two abovementioned cases (see note 50) have not tried to define "the protected work" but have taken as given that which precisely is the most debatable in the area of copyright. Certainly the theory in the area of copyright law departs immediately from the notion of "originality" to define the protected work; this is hardly troublesome since the entire discussion participates unconditionally with the system of fine arts be it in the headings of chapters, the choice of examples, in the various references to esthetic relationship from which it is not even excluded the stamp of Ruskin thoughts (see note 47). Common sense does not define protected creation but recognizes it in the prevailing cultural context. The situation is quite different in technical areas: it is not irrelevant to decide that the first two decisions (criticized by almost all theorists) were given by judges ruling in the civil area; the two recent decisions refusing copyright protection to companies marketing video games were given by criminal court judges.[51] It seems obvious that the first decisions have as their principle objectives to ban copying while the second two, seeking to apply the criminal law, examined more closely the corpus delicti which enabled them to bring greater intellectual rigour to their examination of the text and the organization of the copyright statute.

Just as the Court of Paris on 4 June 1984 demonstrated a robust good sense and a clear-cut logic which has the merit of never departing from reality, so also the tribunal in Nanterre on 29 June 1984 appears to have shown great accuracy of analysis and has set in place the cornerstone of the theoretical

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[50] This reasoning which saves the notion of "individualised intellectual effort" seems to have influenced the judges in Babolat v. P. as well as in Apple v. Segimex, at least by the assumption that everyone possesses it so as to make a judgment – see Mikel Dufrenne, n.24 -- software may impinge on the consciousness of the judges as a "creation" of the law *in essence*, apart from controlling originality.

[51] See notes 10, 11.

edifice[52] by describing accurately the facts that were submitted to it from a point "upstream" of the previously cited jurisprudential analyses.

The tribunal proceeds with method and clarity. Before analysing the basis of the case it recalls opportunely that every copying is not necessarily the copying of an intellectual work in the sense of the Statute of 1957, that audi-visual support of a game is not necessarily a work, and that a game is not by itself a work, but is to be analysed as "a system of abstract characters". By doing this the court focusses on three presumptions that are very frequent in the area of artistic counterfeiting: the proof of copying attracts a penalty, that the presence of an audio-visual production evokes automatically the notion of the cinema, and the "presumption of originality" which applies to a new production of this type; the "game" visible on the screen becomes a "spectacle" and a spectacle is original by its very nature. The case-law contains few examples of such a rigorous and objective approach.

> The court makes deductions from its initial approach:
> "It is therefore necessary to examine if the allegedly counterfeited copy is in fact a copy of a protected work, in other words, if the game "Pengo" materialised in the logic board under consideration in this litigation constitutes an original work in the sense of the statute. To do this, analysis of the different elements making up this electronic game requires recognition of the technical element made concrete by a micro processor ... and the graphic element made up by different images ... and the audio element ..."

Beyond the functional technical and non-aesthetic character of software, in essence, in the sense of the Statute of 11 March 1957, it is now necessary to examine the domain of industrial property for it would be easy to fail to recognize the conditions imposed by positive law on the co-existence of industrial and artistic properties.

B) On the correct usage on the law of Industrial Property

In his article "Software and copyright - The Dream of Icarus?", R. Dusausoy recalls the proceedings of the Criminal Court of Paris whose presumption about the nature of the work appeared right at the beginning of the phrase (which he omits): "it is incontestably a question of a work manifesting itself in a visual way ... that has a relationship to cinematic works or those produced by a process analogous to cinematography, and belonging to the sphere of art. 3 of the Statute of 11 March 1957".[53] It is precisely this "relationship" which constitutes the heart of the problem.

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[52] In his previously cited article – see note 11 – P.M. Dusausoy criticizes the decision of 4/6/84 saying that it shook "the fragile edifice of case-law and uncertain theory". The theoretical studies done over the past 3 years by Profs Le Tourneau and Plaisant (articles cited) and A. Lucas "Computer Programs and Intellectual Rights", JCP 1982,1,3081, and X. Desjeux "Software: case-law takes a step forward", leave no room for doubt about the fact that software falls outside the province of copyright. It would seem that the Le Stanc studies stand alone in perpetuating the uncertainty expressed by his predecessors between 1972 and 1975.

[53] Atari v. Valadon et al, High Court of Paris (10th Ch. Pres. Hanoteau) 8/12/82, *Expertises* 1983 No. 48, p.31 – overruled by the Paris Criminal Court (13th Ch.) 4/6/84, cited above.

The court on Nanterre, going back to the source of the matter, examines the intellectual effort of the informatician, and from this analysis springs the judicial definition of software at least insofar as it bears on excluding software from the copyright sphere. For its part, the Paris Court in its judgment of 4 June 1984 departs from a similar perception, though one rather less polished in its formulation, but resites the problem in its proper field, being that of the problem of patentability and of the conclusions that positive law draws in the general theory of industrial property. We shall examine successively the nature of the intellectual effort in the creation of software (1) in order to deduce the judicial definition such as it is set out in the law on patents (2).

1) The Nature of the Intellectual Effort of the Informatician with respect to copyright

The Court of Nanterre (and the judgment of 4 June 1984) by describing the technical nature of software and not its technical "purpose", leaves little room for doubt as to the application of copyright to this area:

> "The technical element (is) made concrete in the form of a micro processor which has in its memory multiple instructions related to the movements given to the images on the screen and to the sounds which accompany these movements ... in considering the technical and electronic element of a game as described above, the court believes that it could not be qualified as 'a work of the intellect' in the sense of the Statute of 1957 since the intellectual effort of the technician who created it does not appear to be of the same nature as the creative effort protected by that statute, but is dependent on the judicial regime of 'know how'".

For its part the Court of Paris declared

> "after all, whatever may be the technical complexity especially in the eyes of the layman, of software or the programming of a computer, it is a question, in the end, of a technological creation which is begging for electronic clothes ... the elements of an electronic game, as with the computer, in fact draw attention to the structure of a simple industrial object. The inventor, whose intellectual activity can certainly be of a very high level, only finds himself protected against an attack on the property of his patent by a civil action".

From the foregoing, it is apparent that it is insufficient to prove "the individualised or personalised effort" for an intellectual work in the terms of the statute of 1957 to exist. The notion of an "intellectual work" evokes all intellectual activity; thus an invention is not a creation and the statute of 1978 on patents is not the Statute of 1957 on copyright.

These pieces of legislation differ profoundly, are not based on the same philosophy, and consider different "intellectual efforts" in their nature and function.

Without attempting to give an account of everything that distinguishes creation from invention, I will simply indicate that creation in the copyright sense springs fundamentally from aesthetics, a notion which it is unnecessary to associate with the idea of beauty or non-utility that would evoke the "intuitive knowledge that produces images or expressions" and more general reflections upon art.[53] The invention, and the law of industrial property generally,

[53] See particularly Philippot, The World as Involuntary Representation, revue Esthetique1964, p.270ff, and especially B. Croce, Aesthetics as the Science of Expression and general linguistics, Paris 1904. These observations are offered more to stimulate thought than to govern definitively the aim of intellectual creation.

evoke a succession of natural actions to produce a technical result aimed at the satisfaction of a social need. The invention must produce an industrial result[54]. The law of copyright is interested in the static work while invention is essentially dynamic, and aims to employ the forces of nature. In this it is distinct from systems and methods directed at imagination. It is only in the context of industrial property law that the question of protection of computer programs is raised unhesitatingly, because of the development of the Statute of 2 January 1968: is the invention of software "susceptible of an industrial application" in the sense of the statute, or does it have an abstract character? And must it include non-patentable inventions such as "plans, principles and methods in the exercise of intellectual activities, in the area of games or in the domain of economic activities"?[55] After discussion and hesitation, "computer programs" was added to the list of exclusions.[56] It is not impossible that our society is in the course of undergoing a radical upheaval and that all traditional concepts may take no account of cultural transformations. Will it be necessary to maintain the distinctions between art and industry, creation and invention; will this scheme of the society of the industrial bourgeoisie, based upon technical progress, make any sense in the future? Will not "art" become "the art of life"? Hasn't the sense of eternity already become the sense of the ephemeral etc? The preceding analyses are limited to reporting the state of the law in the present cultural context. In fact, if envisaged social changes were to modify the actual cultural context, it would be necessary to re-think the entire field including literary, artistic and industrial property. For the moment the two recent decisions which refuse to protect software by the Copyright Statute limit the application of the rules of industrial property to facts which appear in this domain. This is a case of judicial classification.

2) The Judicial qualification of software that can be deduced from the rules of industrial property

The Nanterre Court decided that software calls attention to the judicial regime of "know-how" and reminds us that a game is not in itself an intellectual work but should be analysed as a system of abstract characters. The Paris Court echoed this,

> "We cannot liken the creation of software to an intellectual work, though it deals with questions of concept and analysis, even when the latter have for their object the development of a game. One cannot extend penal protection to methods in the area of games nor to computers programs. At most the inventor could seek to be able to be protected by the law of industrial property, but the legislature in this domain has, in the Statute of 13 July 1958 decriminalized the action of counterfeiting in such a way that the only possible action is in unfair competition ...".

In other words, one can only be struck by the similarity of approach of the two criminal courts dealing with essentially identical problems, despite certain differences in formulation. In both cases, the work under examination was that of a "technician" or "the technological construction of an able electronics engineer". Technical ability is not patentable, neither does it arise in what are essentially artistic creations. The personal choice put into the work arises from

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[54] Roubier, The Law of Industrial Property, Vol.II, p.86ff.
[55] Art.6, para.2 in the text of 13 July 1978 - on the interpretation of Art.6, see Lucas, "Programs as objects...", JCP 1982, 3081, no.6.
[56] On this question, J. Schmidt, Inventions protected by the Statute of 2 January 1968, p.53ff.

"know-how". A personal method or system is excluded from patentability, cannot be protected by the Copyright Statute and, if there is a form, it is essentially "functional". The informatician

> "undoubtedly has a certain freedom to arrange his methods. One readily notes here patents terminology, although these terms are no longer found in French legislation (Statute of 2 January 1968 amended by the Statute of 13 July 1978 article 6). Personal expression, as indicated above, is limited to variants in the logic or writing of the program, always subordinated to a precise technique and end".[57]

Considering that the copying of a patented invention is not subject to criminal sanction even if the intellectual activity is of a very high order, (and even if the economic investment is important) the Court of Paris, in its judgment of 4 June, draws certain conclusions from this which are translated into the effect of the judgment. There is a scale of sanctions against copying: at the bottom the "reprinting" of a gramophone record through application of article 1382 of the Civil Code; moving up, there is the performer who enjoys a right of personality; at the top is the inventor who has the benefit of a right of industrial property. As a result the electronic engineer who wishes to enjoy a protection superior to that of an inventor, i.e. to set the criminal law in operation, must demonstrate that, far from having proved a simple technical ability, he has created a "form" in the sense of the Copyright Statute and that form manifests his "personality" in the statutory sense. It is not just any intellectual effort that is protected by the law on artistic and literary property, but only the original creation, the most "sacred of all properties". Le Chapellier and Lakanal are long dead, but the times have not changedthis point of view. It is hardly probable that a legal scheme tending to decriminalize artistic counterfeiting would be accepted with serenity today without immediately generating some lively reaction. To "merit protection" and to be elevated to the rank of protected "intellectual works" at the top of the ladder of sanctions, i.e. protected by criminal law, the "technical construction" of the "electronic engineer" must not be solely technological, but must also demonstrate a minimum of "originality". This originality is not the "personality" of the inventor; the word "aesthetic" characterises it best. It is not the aesthetic "value" that the judges weighed, but the "aesthetic character" of software i.e. its originality in the copyright sense. By including software in the categories of industrial property - an move approved by all specialists without exception - the court has given the facts their true classification: the nature of the invention, patentable or not, arises exclusively from the use of technology. Legislation on copyright does not include it, and does not protect purely technical realisations. Theory and case-law regularly restate this.[58]

The Supreme Court is extremely concerned with harmonizing legislation on patents and that on copyright. A computer program was the object of a patent application that was subsequently declared void. The applicant in the appeal then specifically invoked the Statute of 11 March 1957 on the ground that his program was "original".

The Cour de Cassation rejected this method in the following terms:
"It flows from the reasons for judgment aimed at by the measure that the

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[57] R. Plaisant, op.cit.

[58] See below - more generally on the juristic regime of know-how, J.-M. Mousseron Enc. Dall. commercial; R. Fabre "Know-how", Litec Paris 1976, F. Magnin, Know-How and Industrial Property - on compilation "not rising to the level of intellectual creation", Cass. crim. 2 June 1982,ref below n.93.

> intellectual work claimed by K. was nothing more than the procedure of programming as the object of patent... The court of appeal which determined the absence of private rights in this regard, could not, without putting in check the provisions of the Statute of 5 July 1884 on patents, recognize the depositor of the patent on the basis on the Statute of 11 March 1957 on private rights opposed to those of third parties, considering the intellectual content of the declared patent to be valueless".[59]

Copying of a technical realization evokes initially the law of industrial property and the regime of patentable or non-patentable inventions. In the same way, any consideration of technical skill changes direction and moves towards copyright from the moment the creation is materialised in graphic form.

The Nanterre Court in the judgment just analysed cited an indubitable theoretical and judicial principle expressly mentioned in article 6 of the Statute on patents in the list of exclusions from protection: "It is a matter of principle that a game is not in itself an intellectual work" protected by this statute (on copyright). The court explained this step: "insofar as concerns the audio and graphic elements of the game Pengo, conceived round the theme of an iceberg, it is useful to consider if each of the different components taken singly, then together, has the character of originality required to benefit from the Statute of 11 March 1957 as set out above". The Court of Paris in its judgment of 4 June 1984 is more synthetic, but it also classified the graphics of application software in a video game as forms and movement. In fact it is in its audio-visual display that the game developed by informatic techniques would be susceptible of protection. If the non-original character of sound does not pose particular problems in one or other of the two types analysed, falling back on "graphics" causes the entire problem of judicial concepts and their correct usage in the area of copyright to resurface.

II) Conditions for Protection of Graphics by the Statute on Copyright

A game as such is not protected except in its concrete form. The Nanterre Court resists a common reflex to assimilate the usual support of an artistic work to the work itself, without establishing the distinction between support and work: "the audio-visual support for a game, even if assimilable to a procedure analogous to cinematography, does not by this sole fact constitute an 'intellectual work' protected by this statute". It is not sufficient that the game is translated into graphics to make it a protected work. The Court of Paris also resisted this reflex of automatically assimilating graphics to the protected work: "It would no longer be possible, on the plan of French law, to assimilate an electronic game to an audio-visual work on the pretext that the specific elements of the game move about on the screen with a succession of images and noises capable of attracting the attention of the player". Since graphics, as in the two analysed cases, are the expression of a technological activity leading to the development of a "system of an abstract character", i.e. the electronic game, it is necessary to look at it very much more closely; on the one hand to examine the requirement for originality of graphics in the copyright area (A) and on the other, to bring a critical appreciation to bear on the intellectual approach, the motivation and usage of concepts in the first decisions (Babolat and Apple Computer) that have tried to justify the entry of software into the copyright sphere (B).

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[59] Cass. com. 24 January 1972 Bull. Cass IV, no.27.

A) The requirement for originality of graphics in the area of copyright

The Statute on Copyright only protects an intellectual work if it is original; this is the fundamental condition for the protection of the work.[60]

1) Declaration of originality

Judges are bound to decide the originality of an intellectual work. Legislators who have not defined "intellectual work" have also not defined "originality".

> "Having taken account of the specific genesis of the three orders of creative work, originality, the only valuable criterion for determining if a work will or will not be protected, appears to be a rather fuzzy notion that the courts have to assess in each case; from whence the uncertainty of examples ... and imprecision are sometimes worth more than their opposites".[61]

Theory and case-law readily agree that a work is original when it bears the stamp of its author's personality. Professor Plaisant declares that "the question of whether a work is original arises in relatively numerous borderline cases, principally concerning works of applied art".[62] From the foregoing one can already deduce that examination of the existence of originality in the technological area, and beyond in the area of art applied to industry, is problematical: as much as investigating the individualised intellectual effort applied to a method, system or, more generally, to know-how. If software is lacking the "form" of art, it is necessary to classify the nature of the inventive effort in software, a non-patentable process. It is this type of fundamental confusion in the choice and usage of concepts which is analysed in the first part.[63]

However, the Cour de Cassation basically demands from judges a declaration of originality. Professor Francon notes that "if the judge must abstain from taking part in the issue of the value of a work, he can only thereafter endow it with the monopoly when he has verified it is an original, i.e. that it bears the stamp of its author's personality. The rule is clear and classical".[64]

In the case the subject of this commentary, an appellate court, requested to penalise the copying of an architect's plans whose originality was contested, felt it had the power to decide that it "was not to pass a value-judgment on the artistic, original or harmonious character of the plans in the litigation". This judgment was overruled by the Supreme Court on 6 March 1979, who recite that originality is a condition for the protection of original works. The eminent commentator notes "it was at least clumsy of the lower court judges to have said in effect that they must not pass a value-judgment on the original character of the plans but on their artistic or harmonious characters. In fact apart from this appearing to confuse merit and originality, the formula was ambiguous".[65] This is a typical and hardly isolated example of the ambiguity of language which reveals more and more tellingly the emotional use of language and the difficulties of formulating a clear idea when technology is introduced into the universe of creative works.

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[60] H. Desbois, op.cit., no.3 et seq; Colombet, op. cit., no.29; A. Francon, Literary and Artistic property; R. Plaisant, jcl civ. ann. fasc. 302, no.12 to 22.

[61] Colombet, op.cit., no.32.

[62] R. Plaisant, jcl. civ. ann. fasc. 302, no.15 - and see below comments on the system of fine arts and the presumption of originality.

[63] Examination of this question on the occasion of the "round table" of February 1984 (op.,cit p.2ff) displays the confusion of the participants, and see the major reservations of Prof. Francon.

[64] See Francon RTD comm. 1979 p.463 with reference to cass. civ. I, 6 March 1979, JCP T.J. p.169.

[65] Op.cit. p.464 and see agreeing C. Colombet. op.cit., no 32.

The Tribunal of Nanterre and the Court of Paris - in the decisions cited above from June 1984 - have pronounced on this condition of originality. In the text of its decision, the Tribunal directed itself to describe, far more minutely than was asked of it by the defendants, the graphical elements that appeared on the screen by referring first to the idea of the iceberg, made material in a rather nondescript way; they then considered the "coloured forms" that moved on the screen; it analyses them in detail:

> "what the civil parties called 'penguins' or 'hostile creatures' or perhaps 'monsters' are geometric lines that outline silhouettes, schemas one might describe as animals, but which have no particularly original character especially if compared with well settled types such as those of Donald, Daisy, Minnie, Pluto and Mickey of the fairy-tale world of Walt Disney, which have also entered the electronic games market; what are called 'iceblocks' by the applicants are formed by squares with rounded corners or by abstract blocks shaped like diamonds which have, even less than the 'penguin' or the 'monster', any original aspect. Considering again the 'movements' which are imposed on the various shapes, we conclude that they are not really distinguishable from the series of movements that exist in any other electronic games of the same type ... without following any particularly imaginative itinerary, but resulting from diverse combinations that are given to them by the technology of the microprocessor and which depend on the player's dexterity and the speed of his reflexes. As for the movements given to the head and feet of the penguin and the hostile creatures, they could easily have been imagined by any technician in the field however unfamiliar with this type of game."

The Tribunal concluded that there was no sufficient original character in the different components of the "Pengo" electronic video game. It declared that the designs, the movements that are given to them by microprocessor technology, and the sounds accompanying these movements, were "trivial, indeed, rudimentary" and that consequently there was no question of an "intellectual work" in the sense of the Statute of 11 March 1957.

However, apart from the Statute of 11 March 1957, the parties invoked the Statute of 14 July 1909 on designs and models in such a way that the tribunal had to decide on the concept of "novelty". The solution it reached was absolutely classical:

> "If in principle the notion of 'novelty' is not to be confused with that of originality, it is nevertheless necessary that the proffered object reflects an effort and personal contribution of taste or imagination which gives its realization a new aspect in the sense of the Statute of 1909."[66]
>
> The law does not protect a model that is novel but trivial.

The Court of Paris, in its judgment of 4 June 1984, approaches the problem by starting from the law of industrial property:

> "We would be able to assimilate the creation of software to an intellectual work only if there is a question of concept or analyses, even when these latter have as their aim the development of a game. One cannot extend penal protection to methods in the field of games, nor to

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[66] See "The Protection of designs and models, and 'Novelty'", P. Greffe, Melanges Bastian, 2 Droit de la propriete ndustrielle, and the cases cited.

> computer programs. At the very most the inventor might be able to have an industrial property right attributed to him. ... In the final analysis we are dealing with a technological construction which sometimes requires skilful electronics technicians, but there is no occasion to regard it as 'sacred' to the extent of hauling it up to the rank of the intellectual works protected by the Statute of 1957. The elements of an electronic game, like those of a computer, in fact form part of the structure of a purely industrial object."

Noting the preceding analysis and the purely industrial character of the application software of a video game, the judges were unable, on the scale of protection and penal sanctions, to "raise" it above the legal protection recognized for an inventor. They explained, "The inventor, whose intellectual activity can certainly be of a very high order, is only thereby protected against attack on the property of his patent by a civil action."

The court next proceeds to examine "graphics". Just as the Nanterre Court would do a few days later, the Paris Court refused protection to an audio-visual support alone; over and above the technical character of the game, it sought to establish originality in the copyright sense: "In conclusion, it is not possible in this case to discern any originality of expression which would give the game an aesthetic character worthy of the attentions of the legislator." The court very properly attaches importance not to aesthetic merit, but to the aesthetic character of the originality. On this point, Professor Plaisant writes of informatics:

> "The concept of originality is itself unclear. It arises to some degree with brand names, in the case of new or imaginative trade marks. A particular kind of originality can appear in the technical field: from two available solutions, the engineer will choose the one which, in addition to its material advantages, best fits his training and experience. With regard to copyright, it is considered that originality must have an aesthetic character, although to Statute of 11th March 1957, article 2, protects all types of work and all forms of expression regardless of merit or purpose. *The judge thus avoids any evaluation of originality or aesthetic character, yet these must be evident.*"[67]

In this case the Paris court sums up its analysis of the elements appearing on the screen; the drawings designated "coloured forms" by the Nanterre Court here become "luminous modules"; regarding movements, it considers that "those displacements are brought about by nothing more than a simple technical device of electronic contacts ..."

By doing this, the court does not depart from the traditional principle which states that graphics or purely technical drawings do not merit protection by copyright because no "originality" exists in the sense of the law.[68] In the case in point the civil parties did not demonstrate that the electronics technician, whose program was of purely technical nature, and of purely indoctrinal purpose (i.e. the operation of a game), had displayed originality in the copy right sense, but simply technical skill or know-how. *This analysis corresponds with off-repeated case-law analysis on the subject of art applied to industry*: even when it conveys a particular impression at the aesthetic level, the functional form is difficult to protect, and is *never* protected if it has no aesthetic or ornamental effect.

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[67] See R. Plaisant op.cit and the body of case law quoted, Gaz. Pal. 25/9/83, theory on p.2.

[68] See below developments on technical character as a limiting factor in the Assessment of originality.

Traditionally, in the area of technical creations, the requirement for originality is even greater. It is no surprise that in the list of legal categories "software" is placed next to that of "design", with the difference that the model of "applied art" is listed in the Statute of 1957 by virtue of its aesthetic or ornamental character, while software is not listed because it fails to be of the same nature as the intellectual creations relevant to copyright.

Case-law consistently reiterates that originality is considered of sovereign importance to the lower court judges[69]; a technical creation displaying little or no originality does not merit protection under the Statute of 11 March 1959 on literary and artistic property.

Such a proposition can no doubt be surprising to those who do not usually think about the right of intellectual (artistic and industrial) property but who nevertheless have ventured half-way into the domain of copyright. They will notice that article 3 of the Statute of 11 March 1957 lists as intellectual works some creations whose artistic character and originality would appear at first glance to be very slight, such as "brochures, illustrations, geographical maps, plans, sketches and three-dimensional models relating to geography, topography, architecture and science."

The arguments most frequently used to justify copyright protection for software are inspired by the existence of a case-law which widely extends the application of "originality" to what is often called the "small change" of copyright at international congresses on the subject of literary and artistic property. Professor Desbois seems to deplore this extension of protection when he writes: "The Statute of 11 March 1957 repeated earlier bad habits; utilitarian purpose does not jeopardise the application of copyright. Courts have gradually taken under their aegis such things as guidebooks, catalogues and synoptic tables, regardless of their scientific commercial or financial aims. Yearly address directories have given rise to decisions made in the same spirit".[70] This extensive case-law invites several observations. Firstly it is plausibly explained by the fact that, in one way or another, the protected work is related to the system of the fine arts and in general to the intellectual creation covered in the organization of the law of copyright. All the cases previously analysed were dealing with a concrete form, either literary or artistic, in which the author has been able to express himself through his style, through graphic expression, through his choice and arrangement of colours, and in general through the presentation of a work which is perceptible by the senses. In brief, each time judges have to deal with a work which is to some degree on the fringes of the fine arts system, they tend to be satisfied by a minimum of originality and personal expression in the more or less artistic form required to assure the protection of a piece of property which involves economic interests and whose copying is more or less morally reprehensible. Sometimes inclusion in the system of "arts and letters" springs solely from the fact that the work seeking protection is in the form of a book - a "cultural" product by its very nature,[71] or

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[69] For example Ct.Crim.Appeal 9/10/74 D 1974 I.R., p.228; partial citation 2/6/82 J.C.P. 1982, I.V., p.285.

[70] Desbois, op.cit., No. 37

[71] As an example see the expose of the reasoning, and more generally see debates on the Statute of 10/8/81 about the price of the book; also X. Desjeux's report by way of a syntheses, presented 16/12/81 at the French Association for the Study of Competitive Practices (see work of A.F.E.C.) on the determining influence of the "cultural" aspect of the book on the drafting of this legislation.

more often a "text" published by an editor, a partner who enjoys the same privileges as authors in the drafting and implementation of the copyright legislation.[72] Thus the editor, considerably more than the informatician or the electronics engineer, is linked in people's minds with the author, not simply because he is often the assignee of rights at the legal level, but especially because in his profession he undertakes to encourage literature, and his work is quite easily accepted as cultural, even when the "text" seeking protection is a simple prospectus or map of a town. The informatician does not enjoy the same tolerance; his activities do not appear, or hardly appear, to be related to the development of "arts and letters", and the protection of his economic investment is not to enjoy the same tolerance either. This is evident both in the decision of the Paris court of 4 June 1984 and in that of the Nanterre court of 29 June 1984.

On this subject, we must go back to the pertinent and very proper point made at the end of the previously analysed judgment: though audio-visual support in itself is not protected, the fact is that the video process can be considered "analogous to film-making". Now cinema is the seventh art, and the system of fine arts lays great emphasis on the presumption of factual originality. Though the judges rarely make this analysis, it is a fact that in court practice (as in theory) this "presumption" is made instinctively, and while it is often unstated, is one of those pre-suppositions which can determine the outcome of an action .[73]

In the case of the video game "Pengo", the judges took care to make their decision very lucid: the informatician who conceived the video game set out merely "to create a simple play activity which requires no more than attention and reflex actions ... This game can therefore in no way be classed as an 'audio-visual work' in the meaning of the statute on literary and artistic property."

In short, the judges intend to keep the analysis of the facts where it belongs; a simple video game is not per se a protected work. Their solution conforms closely to the entire structure of the general theory of intellectual (industrial and artistic) property. To be granted status equal to that of the seventh art, the video creation must display, in addition to its technical aspect and its "play" aspect - which is an essential part of software applied in this area - an element of performance, or entertainment. This may be apparent in the expression of its graphic drawings or in its static or moving decor, but the judges pointed to the banality of the coloured shapes and other elements. In this respect the text of the judgment shows perfect legal rectitude in these indissolubly related terms: "It has not been demonstrated that they have sought to present any 'performance' beyond the creation of the game".

The judges' attitude in refusing video games legal protection under the Statute of 11 March 1957 seems to be based on two considerations: first, they believed they were dealing with a technical creation in the meaning of the law of

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[72] To illustrate this point, see for example the role of editors and the fact that they are treated exactly the same as authors in the sense of the law of 11 March 1957 which wages war on unauthorised photocopying; on this point X Desjeux, "Reprographics and scientific editing; the creation of form or the commerce of ideas - a contribution towards the study of the relationship of copyright and culture", "Copyright Magazine, O.M.P. 1, Geneva, September 1977, p.242; more generally X. Desjeux". Photocopying and Copyright "An international Report presented at International Literary and Artistic Association (A.L.A.I.), "Copyright" mag. O.M.P.I.. Geneva 1973, P.51 et. seq.

[73] On the virtual inevitability of subjective assumptions, see quote Mikel Dufrenne re. note 24.

industrial property, and secondly they decided, in accordance with the most classical principles, that graphics of a purely technical nature, which in addition showed no original conception or presentation, cannot be classed either as belonging to the five arts system - as the civil parties had attempted to claim - or, in a more general sense, as an intellectual creation in the meaning of the copyright statute.

Today there is an ever-growing tendency for case-law to limit copyright protection which has been so indiscriminately extended, to any economic investment which results from any intellectual activity whatsoever. The case-law cited above on the protection of catalogues and other directories is over fifty years old. Judges are becoming more and more exacting about assessing the originality of works with a utilitarian, industrial, technological or scientific purpose. Even though there are still some poorly-reasoned judgments which grant protection to works quite unconnected with pure art, on the other hand decisions more and more frequently refuse this same protection. It seems to be not so much the degree of originality as the predominance of the aesthetic or even of the technical character of a work which will be the determining factor. Nevertheless, great uncertainty prevails, and the determining factors in fact seem to be: the artistic, intellectual or economic value of the creation as it is materialised by a fine arts form - i.e. drawing or written material; the degree of "slavishness" of the copying; any more or less immoral or prejudicial circumstances in the case; the degree of usefulness of the work; the type of litigants (artists, shopkeepers, businessmen or technicians).

Whatever the case it cannot be claimed today that case-law grants protection as widely as in the past to "minor" productions (i.e. which show scant originality) of acts and letters, as in the case of directories and prospectuses.[74]

2. The denial of protection to graphics

One principle which seems fully established is that graphics of a purely technical kind, not only in terms of purpose but also in their nature, have no claim to copyright. Thus a technical plan cannot be original. This derives in the first place from the general philosophy of the law on copyright (a) and next the principle is illustrated by a study of the fate of an architectural plan (b).

(a) The general philosophy of the law is at once clear from the very title "Law on literary and artistic property". Keeping the subject of this report in mind, it is worth looking again at the theory of artistic unity in order to grasp the basis of the law. This theory was born out of the great debate about the relationship between the artistic and the technical spheres - a theory after all open to argument, and unknown in other civilised countries - and is known as the theory of artistic unity. In 1957 it found expression in the adoption of article

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[74] By way of example, the Court of Appeal grants protection to a "schedule of charges for civil engineers" (Civil Court 1, 21/5/75, Report 1 No. 171) but refuses it to a catalogue (Civil Court 1, 25/1/76, DS 1976, p. 267). Note that in both cases the court took refuge behind the sovereign importance of the assessment of originality made by the lower court judges. Like Procruste's bed, the question of the assessment of originality can be wide (like art in its widest meaning) or restrictive (outside the domain of art); by way of example, Professor Francon states "Even though the condition of originality may be less strict than the requirement of novelty demanded in the area of industrial property, the fact is that the courts are fairly hard to satisfy on the matter of originality when they are examining advertising creations" - from "The protection of advertising creations by copyright", R.I.D.A. Jan. 1980, p.11.

2, which restates the Statute of 1962, and also in an insertion in Article 3, which enumerates protected works. The item inserted was "applied art", i.e. art as applied to industry. Whether art be pure or applied, the law protects only works of art, the intellectual creation as opposed to the invention (patentable or not) of an industrial nature.

This legal approach is evident throughout the treatise of Professor Desbois, on which Professor Colombet provides the most accurate and succinct summary: "The three areas of intellectual creation can be taken to mean that the protected work must belong to one or other of three genres: music, literature or the plastic arts. Thus protection is afforded to what is expressed in article 7 of the Statute of 1973 as 'any production of the mind or genius which belongs to the Fine Arts'".[75]

There is not doubt that French case-law, reinforced by theory, has in the past granted a wide ranging protection - quite independently of a work's "artistic merit" - to all tangible forms represented by a written text or by drawing. The reality is that this sort of protection has had its day; we have reached the point beyond which there lies a real danger of protecting any and every kind of intellectual activity.[76]

The international expert and eminent copyright specialist given the task, by the European Communities Commission, of examining the present copyright situation in Europe, has this to say: "When determining the aim of copyright as it constitutes part of a global system of law, it is important to specify the different phenomena of human activity which are liable to be considered for protection. This implies a need to formulate a concept which is precise enough to cover the works protected ... It would be preferable for this concept to include at least two of the elements originally laid down by the Berne Convention of 9 September 1886 for the protection of literary and artistic works. This defines the area of copyright classification with regard to inventions and scientific discoveries more sharply than the concept of 'intellectual works' does".[77] On the subject of "intellectual works" he adds: "As for the literary and musical 'small fry' a special kind of protection could be envisaged which operated for a more limited period".[78]

We will not here enter into the rights or wrongs of this kind of proposition, but it is interesting to note the orientation of this international report, which tends to disapprove of the indiscriminate and artificial extension of the domain of copyright.

When dealing with graphics "of technical character", independently of its technical purpose, the problem becomes much simpler. The judge who established its purely technical character (apart from its possible banality, which is

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[75] C. Colombet, op.cit., No. 25: a similar impression is gained from the work of Professor Francon "What do I know?" More particularly, "Copyright concerns artistic works just as much as it concerns literary or musical works"; there is no reason for thinking that a "non-artistic" work could benefit from protection (with the exception of title pages or documentary photographs).

[76] On this point, see the whole of 1st section.

[77] Dietz, "Studies on copyright within the European Community", report to the C.E.E., No. 66; see also Civil Jurists' Yearbook, Literary and Artistic Property, parts 302-202.

[78] Dietz op.cit., No.73.

yet another problem) either expressly or implicitly, but inevitably, infers from this fact a lack of originality, he confirms that he is not in the presence of an intellectual work in the copyright sense. A technical creation as such is not original; it can be novel, or indeed personal, as can any show of dexterity by an artisan or good technician. Present-day positive law has never considered that a technical creation, irrespective of the inventive effort entailed, was an "intellectual work" within the meaning of the Statute of 1957. A study of case-law yields no example of "exclusively technical plans" being granted protection; theorists are unanimous in considering this exclusion from protection to be automatic. It must be admitted that this solution will remain inconsistent as long as the distinction survives between creation and invention, and between the rights of literary and artistic property and the rights of industrial property. At this stage software is still blanketed with the technical plan. The problem of the protection of architectural illustrates this split much more clearly.

(b) An examination of architectural plans in positive law: a useful distinction.

Article 3 of the Statute of 11 March 1957 lists, in its enumeration of protected works, plans, sketches and three-dimensional models relating to architecture. A superficial interpretation would suggest that it is enough for the author of the plan to show that it "relates to architecture", and that it has been copied in order to invoke a penalty for what he sees as forgery. When challenged on the grounds that his plan is "technical", he will reply that purpose is not a consideration. This is a simplistic view expressed from time to time by those who support copyright protection for software. When a plan is referred to as being of technical character, is it not in fact merit and purpose which are being referred to? The reality is much simpler, and Professor Francon recalls the principle: "The matter of protecting plans raises some difficulties. To be sure, if the plan itself shows some originality, it is covered by copyright. But if it displays a purely technical character, it cannot be protected by literary property."[79] Professor Colombet is equally clear: "We must be clear about the five distinctions: architecture is both art and technics; while the architect is protected as an artist who creates forms, he is not protected as an engineer who uses purely technical procedures. For example, a court of law (Tribunal at Nimes 25/1/71 G.P. 8-11/5/71) points out that on one hand estimates, studies and calculations of resistance of metal and concrete, which are purely the application of the rules and laws of physics, are not in principle protected, and that on the other hand, this lack of protection also applies to certain plans which are simply a graphic representation of the engineer's purely theoretical calculations".[80]

The classical solution to this question applies directly to software: "Copyright ... was conceived for the artist, and not for the engineer; technical procedures do not fall within its range - that is the domain of invention patents".[81] On reflection, it is hard to see how a technical procedure, a technical graphic or a procedure description could constitute the "living" form protected by copyright.

The foregoing approach, which looks at the architectural plan from the angle that it is a "technical graphic" - a definition which was accepted in the

[79] Francon, op.cit., p.21.
[80] Colombet op.cit. No. 82 - See also for refusal of protection to a topographical plan drawn by an architect - Crime App. 18/6/68, Gaz. Pal. 1969, 2, summary 5, also case-law quoted by R. Plaisant, Civil Jurists Yearbook, part 302, No. 16.
[81] Work by Pres. H. Boursigot on RIOM 26/5/66, J.C.P. 1967, 2, 15182.

two recent decisions about software in video games - which in effect rules out the definition of software as a "scientific work", comes to us from Germany, and some would like to apply it via a roundabout process of reasoning. A technical plan is not a "scientific work" any more than a functional industrial model is, or in particular, a technical procedure is. A decision of the Paris court on 22 January 1982 reveals the disquiet which judges encounter when called upon to sanction (under the copyright law) the copying of a "scientific text" as stated in article 3 of the Statute of 11 March 1957.[82]

Generally when the point at issue is the copying of a book, cultural product par excellence, the author, or more often the editor, has relatively little difficulty in putting the penal mechanism into action. Most likely the number of pages, the presentation and the turn of phrase will also show evidence of a "personal touch", or even a "style", which is applicable to the book, the "literary" form. A liberal interpretation of the law coincides with economic morality. So it is easy to understand Professor Francon's reservations when commenting on this decision: "While recognizing that a scientific work by its nature does not have a wide claim to copyright protection, one is nevertheless inclined to question whether, in this context, the prospects are quite as the Paris Court paints them". However, a little further on he points out,

> "It is certainly quite true that literary property is not concerned with ideas, only with the way in which they are expressed. But neither can it be derived that, because of this fact, copyright rarely applies to scientific works because, in this area, the ideas themselves are usually of greater importance than their manner of expression".[83]

The Paris court's attitude is typical of the instinctive reservations usually met with when the production seeking copyright protection is of a scientific or a technical nature. In this case it denies that the work exhibits "originality of expression", largely on the grounds that "remedies, methods, investigative procedures, even their exposition in anecdotal form, typically come under the general heading of science." We do not know all of the circumstances, or the exact content of the petitioners' motives. Did they believe, as is often the case, that a book is by its nature an "intellectual work" which enjoys a tacit "presumption of originality", and did they confine themselves to seeking a penalty for copying? How did they justify their claim that their work was original? In the absence of more detailed information, let us simply keep in mind that the relationship between technology and copyright is fraught with dangers and uncertainties.

The situation of software is much clearer in this respect: know-how, non-patentable inventions or technical procedures in written form cannot be so easily transferred from the area of industrial property to that of artistic property. In principle software has not even the most tenuous link with the world of arts and letters.

The Nanterre court of 29 June 1984 very brilliantly distinguishes between the nature of the intellectual effort of the technician and that of the creative effort which is protected by copyright. Furthermore, the creator of a software production does not aspire to write a book, but to conceive, as inventively as he can, a new technical know-how or a technical procedure.

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[82] R.I.D.A. July 1982, Belaiche and Bourret, French Society of Physiotherapy and Aromatherapy, and others; R.T.D. comm. 1982, p.431, Comment by Andre Francou.

[83] Francon op.cit., p.432

The highly questionable qualitative leap from the notion of know-how to the notion of a protected scientific work seems to derive from Germany, in the writings of Professor Ulmer between 1966 and 1967. At this time Professor Desbois was to declare: "I have no more sympathy with the workings of copyright than with patents ... it is just that programs constitute scientific works in the widest sense of the term, and stress subject matter more than form".[84]

In 1976, when the International Association of Literature and Art met in Athens, the question of copyright protection for computer programs appeared on the agenda for the first time. Professor Desbois sums up the debates in this way: "The President believes that he accurately interprets the opinion which emerged from our discussion when he says that neither copyright nor patent fully cover the characteristics peculiar to computer programs, and that it would be better to create a special category as soon as possible".[85]

Soon afterwards, in the latest edition of his work in 1978, Professor Desbois introduced some developments in the matter which should be read in the light of this comment which was clearly opposed to the protection of software by copyright: the Master seems to modestly bow to the "experience" of his German colleague, who was better informed that he in the area of informatics, and who had impressed him considerably.

It is fairly certain that the views expressed by Professor Desbois owed more to the Ulmer studies, which he quotes widely, than to any personal approach to informaticss, which was quite outside his orbit. In a general way, both French and foreign copyright specialists, even the most eminent, are almost all quite uncerned about the question of copyright protection for computer programs. The prevailing climate of opinion constrains them to follow from afar in the international context in general, and in the essential orientation of American legislation in particular, when copyright application is in question.

Of all the concepts already studied, software seems to us much closer to purely technical plans or even to functional applied art than to protected scientific works: whether in the matter of the "form of "expression", of "composition", or of "structure", one must always add "form" of an "intellectual work". A structure is not protected by copyright unless it is "the structure of a protected intellectual work". But the "written text" of software is much like the "written text" of an invention. If we are willing to admit that the text of the patent is a "scientific work", it must certainly be admitted that the important thing is the invention itself, and that analysing the "original form" of the text of a patent is problematical, restrictive, and, in most cases, useless.[86]

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[84] Point made by H. Desbois at Strasbourg symposium on "Protection of the results of research in the face of two evolution of science and technology", C.E.I.P. Collection, libr. Techn. 1969, p.176. Note that on the same occasion he states with his well known simplicity that he had been "greatly impressed" by Professor Ulmer's articles on this subject, and by his emphasis on the importance of form. See also the important quotation from Professor Ulmer's theories by X Desjeux in "Reserving rights on Know-How by Copyright", 1975, op.cit.

[85] A.L.A.I. Report 1976, p.109; also Desjeux's comment p.107.

[86] But note an exceptional case where a patents text was considered an intellectual work (and without verification of its originality) - ref. note 41.

The penal decisions given quite recently in the Paris court on 4 June and the Nanterre court on 29 June 1984 are in line with all the developments we have been considering. By emphasising the concept of purely technical character and not the technical "purpose" of the "intellectual work" which they are to consider, the judges could exclude software applied to video games from application of the law on copyright. By declaring that the graphic or visual aspect was commonplace, or was simply the vehicle of a technical procedure, they could infer the absence of originality in the copyright sense. The law of literary and artistic property does not recognize "technical originality", because the exclusively technical "form" cannot be the "living" form or the intellectual creation which it legally clothes.

Artistic property is not concerned with the "personal touch" in a technical procedure or know-how, because the latter both belong to another sphere, of intellectual property. To bring all intellectual effort, including the personal variety, into the domain of copyright is senseless, inconsistent in terms of the general theory of intellectual property, and probably inappropriate and irrelevant in the eyes of those - who seem to be unaware of the host of problems which they raise (such as the rights of salaried authors, proportional remuneration, the limiting concept of the collective work, and so on). Copyright is deceptively attractive to the enterprise with economic investment at stake; we must constantly keep in mind that the judges tend more and more to rule on concrete examples, and are obliged to answer only the arguments and questions which are put to them. Especially in the case of intellectual property, a lawsuit between non-specialists can often have a totally different flavour to one between specialists on the subject. In the same way, for a specialist in intellectual property, the atmosphere of a hearing can sometimes vary according to whether he is stating his case before a special court or before a commercial court in the provinces. Without going further into these considerations, which are nevertheless so important in practice, let us just conclude by noting that one cannot judge the consequences of a single decision in the abstract, or independently of the context in which it has been given.

B. A critical look at the intellectual approach used in the Babolat and Apple Computer cases.

The decisions handed down by the civil courts in the Babolat and Apple Computer cases [87] both endeavoured to demonstrate why software was an intellectual work in the copyright sense. Thus we would do well to examine first the concepts which were mentioned in debate, and the way in which they were used (1), and then draw some lessons from the most recent decisions of the Supreme Court which applied to the subject of creations with a useful purpose.

1. The criticism which can be made of the Babolat and Apple Computer decisions is based on two ideas.

(a) Questionable Analogies

First it can be claimed that the texts of the two decisions, insofar as copyright developments are concerned, are directly inspired by the thesis of Professor Debois as expressed in the latest edition of his treatise[88]. This is most obvious in the Babolat decision:

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[87] See note 4 and the guarded, indeed frankly critical reaction of theorists - ref. note 4.

[88] See the developments on this point above.

> "The development of a computer program is an intellectual work which is original in its composition and expression, because it goes beyond the constraints of purely automatic logic, and is not a matter of a necessary intellectual mechanism, since in effect the analytical programmers have to choose, as a literary translator does, between different types of presentation and expression, and because their ultimate choice also carries the mark of their personality".

This can be seen from now on in the Apple judgment of 21 Sept 1983: "The personal input of the creator of computer programs is as crucial to the result obtained as it is in the case of a musical composer".

In the Babolat case, most commentators have made the point that it was essentially a dispute between an employee and his former employer, and that this situation had in fact coloured the whole case. In the second case (Apple), on the other hand, the central issue was the problem of software protection.

In both of these cases there does not seem to have been any discussion about the purely technical or utilitarian aspect of the program in terms of both its nature and its purpose. "Form" was not discussed in the sense of comparing it to "idea", nor was the unprotected form contrasted to the protected "living" form (this point is developed in the earlier section). Neither was there any discussion of whether software is a technical procedure or a patentable invention, and so on.

Furthermore, there was no discussion about the comparison between the original and the personal attributes of a production. By way of example we can recall that the performing artist gives a performance which is personal but not "original", and that technological know-how in particular often displays a "personal touch" which nevertheless does not make it "original".

Neither was there any question about the degree to which the text of a patent may be considered a "scientific work", and of how this sort of approach can have a significant effect on the illegal copying of the patented procedure itself.

We must then start from the assumption, or as the philosophers would have it, from the "affective a priori", that from the outset the informatics engineer was likened in one case to a "translator" and in the other to a "musician". This is surely a breakdown in the intellectual process, a qualitative leap from the functional and utilitarian product to the intellectual creation in the copyright meaning: only translations of "works" are protected. The translation of technical instructions which as such display no originality would not be protected by copyright. The civil judges have taken for granted what needed to be shown at the outset - the nature of the form seeking protection. It is true that this does not seem to have been asked of them. Nevertheless, a musical score is the score of a musical "work", and when Professor Ulmer compares a set of software instructions to a "scenario", he too is harking back to the fine arts, or to art in general. A scenario is a film scenario, and expresses the "structure" of a work, while in the case of software, the work is the structure, a situation which makes no sense in copyright terms (see the first section on developments of form).

Here the point at issue is not the purpose of software, whether it be useful or recreational, but the very nature of the intellectual process of informatics, as well as the legal definition of the technical procedure, while at the same time never forgetting the question of industrial property.

Some copyright experts go to enormous lengths to ensure protection for the aesthetic quality of industrial "design", whose concern for the artistic or the ornamental is rarely questioned, even in the case of "utilitarian" forms. It is astonishing that these same analysts can so readily include software among artistic creations by failing to distinguish between the purpose and the actual nature of the work seeking copyright protection.

(b) How pertinent is the discussion of whether or not software is perceptible by the senses?

In the Apple Computer case, the judges were presented with an argument of American origin on the question of whether software was "perceptible by the senses".

The analysis has been drawn up with undeniable subtlety, and is worth preserving as a "collectors' piece":

> "Even though computer programs are not immediately perceptible by the senses of every individual in the same way as are literary or plastic works, they are nevertheless accessible and intelligible when transcribed on a variety of material supports, such as listings, screens or tapes. Granted that they obviously cannot be read and understood by everyone, and require a certain degree of technical knowledge, this fact alone is not such as to exclude them from the category of intellectual works. Why should this be so when, for example, musical compositions, which are also expressed in coded language, cannot be immediately understood without special training? Computer programs, moreover, become intelligible through the medium of an instrument, the computer, which reveals its possibilities to the uninitiated, just as the voice or any mechanical musical instrument reveals the contents of a musical score".

This sort of passage delights the mind.

But it does not convince. Firstly, the most frequently encountered problem among copyright people is not whether software is perceptible to the senses, but whether a production destined not for the use of man but of a machine, can be qualified as an intellectual creation in the copyright sense. That is the point at issue, and court says little to enlighten us on it. But in reality the essential criticism to be made is the childish analogy drawn between software and music; comparisons are odious. Musical scores and software share the common characteristic of being unintelligible to the layman, but the fact remains that the score is developed around a musical work, and that software is a technological procedure. It is not the software's purpose which is in question, but its nature. When discussing inventions, it is really pertinent to ponder over whether or not the text of the patent is accessible to the layman before the patented procedure can be granted protection. This takes us back to our study of the "industrial" or purely technical nature of software.

2. *Some lessons to be drawn from the recent Supreme Court Decisions*

Comparison of the three recent decisions permits us to more effectively apply the provisions of Art. 2 of the Statute of 11 March 1957.

In one very unusual case, the civil court overruled a decision which refused to qualify as intellectual works drawings and audio-visual montages produced for a car manufacturer from factory plans. This refusal was based on the views that the work was not in any way based on aesthetic or artistic considerations, but purely and solely on technical factors. But the law protects any work which

proceeds from an original intellectual creation, independently of any aesthetic or artistic consideration.[89]

This decision can be compared to a previous instance which also concerned technical plans of motor cars, which had been copied by a third party. The penal division of the Paris court, in upholding the judgment, had decided that the photocopies under dispute did in fact constitute the reproduction and publication, and, consequently the illegal copying, of designs drafted by the Citroen company and protected by copyright legislation. This decision was overruled by the criminal court on 31 October 1962, observing that "the plans of the automobile worker in question were identical in nature to the object which they represented, and whose construction they made possible", and that "each line had its own technical function".[90]

The commentary of Professor Colombet on the decision of 15 April 1952 is not as clear cut as it appears to be. He admits in his book on the subject of protection of architects that the latter is not protected "as an engineer, using purely technical procedures".[91] The High Court could have restricted itself to determining, as the Court of Appeal had done, the "purely technical" character of the plans, and could have treated the problem of aesthetics as superfluous. But in the event, the graphic was produced by a designer, and was not a "factory blueprint" but on the contrary a "vivid representation" of the technical elements, showing volume and perspective enhanced by colour. The drawing was a "living" form, albeit in a very small way.

A central fact in the case is that in its earlier written statements the defendant company had declared its readiness to add the words "original designs by C....". Later on the debate shifted to the consideration of the designs as a "collective work". Whatever the situation, their claim to being an "original work" could hardly be challenged; under these conditions the text of the Court of Appeal's decision was somewhat ambiguous and left some room for thinking that the lower court judges had considered the technical "purpose" of the designs rather than their nature, and their "aesthetic merit" rather than the "aesthetic character" of their originality.

The severity of such a decision with regard to the lower court judges can only be attributed to the factual circumstances. The main point is the emphasis placed by the civil division on the "original intellectual creation" which they verified this work as being. Not all individual intellectual effort is protected, and it cannot be inferred from this decision that technical know-how and the non-patentable invention have entered the the domain of copyright. Over and above their appraisal of its originality, the court restored to the designs their nature as distinct from their purpose, and by implication at least, rectified the text of the contested decision, which seemed to them to have in effect "distorted" the matter at issue which had been formally acknowledged by the defending company.

The commercial court, in its decision of 3 December 1979, gives the traditional solution: "In order to benefit from protection under the Statutes of 14 July 1909 and of 11 March 1957, the model of the pullover must be of an original

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[89] Civ. Appeal 1st div. 15/4/82, DS 1983, ir p.93, Comment Colombet
[90] Yearbook 1965, p.51, and note by R. Blaustein p.66
[91] Colombet op. cit., p.68.

character and display some aesthetic elements, giving an overall impression which differentiates it from previous comparable models".[92] The word "aesthetic" is not synonymous with "beautiful"; it defines the nature of originality. Certainly the notion of aesthetics is a fragile one, but it is no stranger to the law of arts and letters, it simply needs to be applied correctly.

Finally, on 2 June, 1982 the criminal division followed an intellectual approach which has something in common with that later taken by the Paris Court of Appeal on 4 June 1984 when examining a football supporters' handbook, to which it refused protection: "No originality can be discerned in these various elements, which when combined do not constitute an intellectual work "meriting protection" but rather a compilation which 'does not attain to the status of an intellectual creation' either in the choice or the arrangement of the subject matter".[93]

Thus, by associating the word "merit" with the assessment of originality, the Supreme Court reveals at the same time the objectivity of its analysis and the precision of its language.

The inevitable subjectivity appears in its proper place, that of determining the existence of originality within the meaning of the law. The real intellectual difficulty lies in attempting to dissociate the concept of originality from the purely technical nature of a work, but this would be to fall into the erring ways that this study has attempted to bring to light. In all probability a work whose character (and not its purpose) is purely technical can never be original in the copyright sense; the personal touch displayed in the know-how (or procedure) which is purely utilitarian does not bring it into the copyright sphere. Furthermore, to accept the opposite thesis because it is "appropriate" or "realistic" in the case of software would stir up a great deal more disillusionment than satisfaction among the "beneficiaries" of any such judicial policy so much at odds with all the fundamental principles of the law.[94]

At the conclusion of this study, we would do well to recall that the company whose software is copied can relatively easily activate art. 1382 of the Civil Code (in preference to the shadowy notion of unlawful enrichment).[95] Certainly protection is incomplete, but in any case it is more sure and easier to make use of than copyright from the point of view of the firm which is not in ordinary circumstances entitled to copyright protection on its own or its employees' programs, and which is not protected against private copying (also see note 14).

In view of the problems raised by the special nature of software, and the economic stakes involved, a project of similar kind to the one developed by OMPI is already under way. INPI also is not in a position to draw up some concrete proposals in support of a well-argued study. This initiative reflects the thinking of the majority who would like to see a particular and unique protection for software. The developments of these projects are sure to be followed with interest.

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[92] Comm. Appeal 3/12/79, Report IV, No. 319.

[93] Crim. Appeal 2/6/83, Ann. Pr. Jud. 1982, p.203.

[94] The movement in some foreign countries towards copyright protection must be regarded with the greatest circumspection; it is still progressing, and is causing controversy and uncertainties in the countries involved.

[95] On the full extent of art. 1382 of the Civil Code see X. Desjeux, "What legal protection for the functional model..." ref. note 2, and studies by Le Tourneau, Plaisant and Bertrand, ref. note 4.