CHAPTER II

THE OBJECT OF COPYRIGHT

A consideration of the influence of technological progress on copyright should begin with a definition of the objective limits of such law. Thus, despite views once expressed that the whole of man's intellectual creativity could be included within the framework of a single law, both State legislators and the authors of international conventions decided to promulgate separate laws concerning copyright, patents, trademarks, etc.[6] This decision must be regarded as the right one, as legal relations arising from such distinct results of intellectual activity as creative works, inventions, industrial designs and models are most fundamentally different from one another. Their only common feature is that they are the result of intellectual activity and that from a legal point of view they are non-material goods, often having their manifestation in a physical object (e.g., a painting, a manuscript, a printed edition) which is, however, the object of entirely different laws, in particular the law of property. However, the laws vary in their character, in the way they came into being, the type of protection they offer, their duration, and often in the principles of their legal action. The necessity of taking such far-reaching differences into consideration argues for the promulgation of separate laws, the more so because it would be difficult to create common regulations general for all laws on non-material goods excluding those which in any case fall outside the norms of civil law.

Without entering further into this legal problem, I shall confine myself to stressing one distinction permitting a division of non-material goods into two categories. To this end, I have recourse to Troller's viewpoint[7]. Troller, in my opinion rightly, has divided non-material goods into aesthetic works[8] and technical works. The distinguishing feature of the first is that they are "in themselves" an autonomous object of cognition. In other words, their contents reach the receiver as an autonomous whole at the moment he is confronted with the work. Technical works, on the other hand, are instructions directed at the human intellect, defining the rules of advisable procedure to achieve a desired effect. They are not

"in themselves" an autonomous object of cognition, but only a medium defining the procedure necessary to master and exploit the forces of nature[9]. This distinction finds its expression in the material of the legal system. Thus, the object of copyright is "aesthetic" works, those belonging to literature, music and painting, independently of what information they may contain, whereas technical works are the subject of separate laws, above all patent law[10]. The aforementioned products of intellectual activity differ significantly in terms of structure, particularly in the question of form, which plays a fundamental role in the case of aesthetic works but which is insignificant (or even absent) in technical works.

Such a view, however, traditional in a certain sense, occasionally raises doubts. These are voiced by, amongst others, Dietz, who writes that copyright is at present at a crossroads, not only with regard to the protection of computer programmes, which have highlighted particularly clearly the problem of the understanding of a work and the limits of copyright[11] and with regard to which I am raising the question of the understanding of the object of such law. The problem may be reduced, in Dietz's opinion, to an answer to the question as to whether copyright should protect only works of literature and art, or also all other creative achievements, regardless of which field of human activity they belong to. If the second viewpoint is supported, Dietz, accepting Troller's view[12], believes that there exists a serious danger of effacing the clear-cut limits of copyright. For it may arise that in protecting computer programmes by copyright, we should be obliged to extend such protection to all instructions giving rules of procedure and directed at another person's intellect. In Troller's and Dietz's view, this would lead away from the concept of an autonomous work "in itself" which constitutes the precise criterion marking the limits of copyright.

Naturally I appreciate the weight of the arguments put forward by Troller and shared by Dietz, but I do not believe that it is impossible to counteract the danger they perceive. However, it is necessary to consider further criteria defining the concept of an "aesthetic work". I shall attempt to do so by discussing the protection of computer programmes. For the moment I shall close by affirming that in connection with technological progress, which we have to thank for new and previously unknown achievements in man's creative activity, it is necessary to evaluate the objective limits of copyright somewhat differently. To this end the concept of the

work as the object of copyright must be subjected to a fundamental analysis, though this does not mean that the concept presented by Troller should be abandoned. And one more essential observation: it is common knowledge that copyright is distinct from the system of protection by patent. Attention has been paid to this distinction in legal literature. It was emphasized by Schramm in his formulation of a law effective with regard to any third person, including the independently operating author of a creative production that already exists *(Sperrwirkung)*[13]; and by Kopff in his presentation of the concept of universal legal protection particular to the copyright system and of the particular legal protection on which the system of protection by patent is based[14]. I stress this distinction because in dealing with new creative accomplishments which are the result of technological progress, it is always necessary to consider which system of protection should be adopted, along with all its consequences. The matter is thus reduced to an answer to the question as to whether we want to protect each subjectively new solution (achievement), regardless of its objective novelty, or whether on the contrary we shall offer protection only to those achievements that are objectively new[15]. And I am led to the conclusion that this pragmatic issue must also be kept in mind in considering the objective limits of copyright. For the purposes of further argument let us assume that the object of copyright is a work, and let us consider what we shall understand by that. Only then let us decide whether and on what conditions computer programmes may be considered to be works.

The first statement, that works are non-material goods, will raise no-one's doubts or reservations[16]. I believe it is also safe to agree that works are pure intentional objects, which "have the source of their existence in individual acts of consciousness"[17]. Initially these are acts of consciousness by the author. After the work has been made available to an audience, the objects of these acts increase, producing in turn further unlimited perceptual possibilities. Of course, as long as the work exists only in the author's acts of consciousness, the existing state of affairs is from a legal point of view irrelevant. It is only the manifestation of the work and of subject coming into contact with the work that creates social and legal relationships[18], quite independently of the manner in which the work was manifested (distributed).

However, not every intentional manifested object constituting

"in itself" an autonomous object of perception is a work as far as copyright is concerned. An essential qualifying condition is the factor of creativity, which can be identified with the quality not of subjective but of objective novelty. The feature of subjective novelty, though essential for a product of activity to be recognized as a work, is not in itself sufficient. For, as determined by Article 1 of the Polish Copyright Act of 1926, this product must carry the personal stamp of the author. Ulmer talks of the individuality of a work, which allows it to be distinguished from "ordinary" expressions or products of human activity[19], while Troller seems to link the condition of the individuality of a work (originality) with the condition of statistical uniqueness, regarding these two terms as synonymous[20]. A closer analysis of the views cited, fundamentally quite similar despite differences in terminology, is not essential for the continuation of my observations. Thus I may end with the statement, which may be reconciled with the view of the authors mentioned, that a work is a subjectively new result of human activity, distinguished by the feature of originality and directly constituting an object of cognition and experience.

Nevertheless, the question arises as to whether all the structural elements of a work must always fulfil the conditions mentioned above. The answer to this question is of particularly great significance with regard to, amongst other things, the protection of computer programmes by copyright. In my opinion this is by no means a new problem. For the question of these computer programmes is essentially the same as that of all scientific works and their relationship to artistic ones[21]. In connection with this, I should like to point out that for many years I have been of the opinion that when considering the limits of copyright, one should divide works into two categories, artistic works and scientific works[22]. I work from the assumption that the structure of these works is different, in particular with regard to the matter of content, and I subscribe to the view that copyright protects only those elements of the work which are distinguished by their originality. In my views on this subject, I concur with Kohler's well-known theory concerning the stratified composition of works[23]. Kohler, of course, distinguished, apart from the contents of a work, its internal and external form. In reference to these constituents of a work, I have understood content to be "that which is presented or expressed", and form as "the agent presenting or expressing something"[24]. Thus, according

to Kohler's theory, I have understood the contents of a work of art to be the so-called individualized image constituting the creative conception individualizing events of a general nature and including everything that comprises the factual, psychological and ideological contents of a work of art, arranged individually, in other words in accordance with the creative convictions and predispositions of the author. In connection with this I have assumed, and this view will surely raise no doubts, that the contents of works of art, individually given form, enjoy full protection by copyright. The theme of the work, on the other hand, does not; for the theme is a transcendental phenomenon in relation to the work, a certain type of general occurrence awaiting an individual formulation. Thus anyone may create on the same theme, for example paint a portrait of the same person or the same landscape, or base a drama on the fate of Joan of Arc. The law does not recognize a monopoly of themes either in artistic or in scientific creativity.

As far as scientific works are concerned, their contents, comprising the result or outcome of a scientist's research, are not created by them but only discovered; for the scientist does not create scientific truths; they exist objectively, and so the scientist merely discovers them, describes them, explains the relation between the phenomena investigated and so on. For this reason, without considering other arguments of a pragmatic nature[25], copyright does not protect the contents of scientific works. In the case of such works, protection is restricted exclusively to elements of individually created form. These comprise, *inter alia,* the sequence of reasoning, the choice and gradation of arguments, the style of expression and so on. Thus it must be said that the protection of scientific works is not so far-reaching as that of artistic works.

It is significant that, despite the various approaches to the concept of the statified composition of a work[26], naturally demanding certain modifications in the case of music and abstract art, in science the division is accepted between scientific works and "others", as are the reasons for the exclusion of scientific discoveries from copyright. Ulmer, amongst others, writes on this theme, expressing the view that in particular in scientific works the realm of public property includes not only facts and phenomena belonging to the physical world and to history, but also research concepts and methods[27]. In this way, protection by copyright is reduced in this case to the way these facts, phenomena and concepts are presented[28],

in other words to those elements of the work which I have called internal and external form. Troller, in turn, expresses the view that scientific works enjoy copyright protection as statistically unique linguistic works, and so from the point of view of the manner of presentation of the contents[29]. This view could lead to the conclusion that Troller tends to regard the object of protection solely at the level of external form; but that would be a slightly erroneous conclusion, as Troller does not exclude an extension of protection to the internal form of scientific works. He writes that the distribution of contents (i.e., the layout), the choice made, and doubtless the line of argument taken, may also be afforded protection if they bear the stamp of originality. This is certainly the case where there is a legitimate supposition that no-one else "formulated" the same content in the same way. Thus, I believe that Troller's viewpoint is essentially similar to Ulmer's, despite the differences in each author's point of departure, and partly their terminology and conceptual apparatus. There are also differences, as we shall see, in their views on the protection by copyright of computer programmes. I should like to add, too, that many authors, for example Hubmann[30], subscribe to the concept of the stratified composition of works, and distinguish in that composition both elements of content and internal and external form. Thus, this is a view which is very similar to my own, though by no means identical. The difference is that Hubmann, for instance, believes that all levels of a work contain both elements enjoying protection by copyright, and elements excluded from this protection and thus constituting an object of "public property"[31]. I, on the other hand, believe that this viewpoint clouds the picture somewhat, and that the tripartite structure of the composition of the work becomes less useful; for it does not provide an answer to the problem as to which levels are protected by copyright and which are not. When using this model, then, it would be necessary in each case to state which elements of each level enjoy copyright protection and which constitute objects of "public property". The model I propose to use, on the other hand, clearly opposes scientific works and aesthetic ones and allows one to state that in works of art all levels are protected (the contents, it means individualized image, the internal form and the external form), whereas in scientific works, only the levels of internal and external form[32]. That which does not enjoy legal protection (e.g., the theme of the work, creative and research methods, artistic trends

and so on) does not essentially belong to the work, for it is transcendental in relation to that work and for that reason remains in the sphere of "public property".

In consequence of these considerations, I am led to the conclusion that, to use Troller's terminology, aesthetic works, that is, those which constitute "in themselves" an autonomous object of cognition, may become the objects of copyright, only however in so far as they bear, as a whole or at individual levels, the mark of originality. The second condition in particular constitutes a criterion to determine the limits of protection and is the basis of the division into aesthetic works and scientific ones. If then it is the case that computer programmes may be included among scientific works (and possibly occasionally to artistic works)[33], then it will be possible to recognize them as an object of copyright without broadening the objective limits of such law to include a new category of works that are neither scientific nor aesthetic (artistic)[34].

Much attention has been paid to the protection of computer programmes, both in legal literature[35] and in jurisdiction. Amongst other things, the protection of computer programmes by patent has been considered. Tendencies of this sort belong to the past, not only in the study of law; for many legislators, including the Polish legislator, have expressly ruled out such protection. This view must be seen as justifiable for at least two reasons.

Firstly, the programmes under discussion are undoubtedly different from technical treatments, and yet display features of scientific works. To justify this thesis it is sufficient to point out that computer programmes always possess an individual form, unlike, for example, inventions, or industrial designs and models. For they are composed exclusively of logically ordered concepts and principles intended for another person's intellect, constructed "transparently" in the form of a pattern, or to put it another way, a lens portraying reality, which only appears thanks to the application of an invention[36]. The concept of the novelty and originality of technical solutions thus concerns the element of content. This constitutes an additional argument in favour of their being distinguished from scientific works. It is worth recalling Ingarden's view[37], according to which deliberate creative acts are divided into those which, apart from the intention to create intentional objects, tend to make them permanent and confer upon them inter-subjective objectivity (Troller's aesthetic works) and those which treat the intentional

object they create themselves as a pattern according to which something else is to be created (Troller's technical works).

Secondly, and this is a pragmatic condition which a lawyer should always bear in mind, a patent system with an extended objective exclusivity and a subjective efficacity *(Sperrwirkung)*[38] is not necessarily called for in the case of the protection of computer programmes. Such a system would impede the development of this area of creative activity, as has already been mentioned. If on the other hand this system is rejected, it is necessary to declare support for the system of protection by copyright, unless one completely abandons protection based on the structure of subject rights. Thus, a project for a model law by the WIPO[39] is based on the copyright system. Studies by the WIPO on international agreements on the matter of the protection of computer programmes[40] are aimed in the same direction. This view cannot be changed by the opinion, expressed from time to time, that the programmes in question should be protected by a separate law[41], for in essence the problem is not within which legal act the relevant regulations are to be found, but according to which system computer programmes are to be protected. In that case, we may choose either the patent system or the copyright system. More detailed problems, however, such as the shorter duration of legal protection[42], the limits of public use, the rights of the producer and so on may be regulated in a law on copyright. It is merely a question of including it in relevant provisions, varying in relation to the type of work.

Let us then consider the protection by copyright of computer programmes. Advocates of such protection include Ulmer and Kolle[43], who are of the opinion that computer programmes should be counted as written works *(Sprachwerke)* which in copyright laws are usually classified as literary works[44] although this classification to be sure is not too precise, as it does not define a separate category of works, but only their assignation[45]. They express the view that such a classification does not depend on which computer language the programme is in, nor on the fact that the understanding of a programme depends on the "reader" possessing the relevant qualifications. The essence of the matter is that the programme is the result of creative intellectual activity. This feature of creativity concerns, or at least may concern, all the stages of the programme's production. This is supported by the opinion of legislators who, on the basis of rich experience, testify that the same problem presented

to a number of different programmers actually yields several different solutions[46]. For each stage in the development of a computer programme there appears a considerable margin of creative freedom. This is also true as far as the contents of the programme are concerned, by which Kolle and Ulmer understand the choice, ordering and division of the material, in other words those elements which I include as part of the level of internal form. Of course in the opinion of these two authors, the programmers have an even greater margin of creative freedom as concerns the element of form, by which they understand the form of the work falling directly under the reason of the receiver (for example the linguistic level)[47]. These authors also discuss the protection of algorithms and assert that, in an actual programme, they are "sunk" into the programme in an individual way, and so form part of something that is protected by copyright[48]. Thus they believe that although each programmer may use the same algorithm, not only simple copying but also any adaptation or re-working of another programme based on the same algorithm constitutes, thanks to the individual creativity of the author, an infringement of his rights[49].

Kohler[50] also holds the view that computer programmes are scientific works and that as such should be subject to protection by copyright as far as those elements bearing the mark of individual creativity are concerned. The author questions the principle of distinguishing form and content, supporting the argumentation presented by Ulmer and Kolle. Hubmann[51], however, does distinguish both the contents of a work and its internal and external form, but still holds that all these structural elements of the work may include parts that are legally protected and others that belong to the realm of public property. The condition for copyright protection is in his opinion the requirement of "individuality", which cannot be identified with subjective novelty; for, he writes, certain new developments are not marked with the stamp of individuality *(individueller Geist)*[52]. I cannot, however, concur with Hubmann's view; firstly, despite his proper reference to the concept of the three levels of a work, his view that all levels may contain elements that enjoy legal protection and others that do not, impairs, as I have said, the sense of his use of the aforementioned concept; and secondly, I do not believe that the condition of the distinction between the evidence of performers in the form of artistic performances and performed works should be sought in the opposition of

the stamp of personal creativity and the personal activity of the performer. In my opinion this relationship is explained much more clearly by the concept of so-called undefined points, which occur in every work that is essentially a schematic creation including an infinite number of such points, even when superficially it is unambiguously "marked" in its material form[53]. It is precisely thanks to this that each work can be differently interpreted (performed). For the execution to warrant legal protection, it must not only be subjectively new, but also must carry the stamp of personal (individual) creativity[54]. Without further analysing the concept of the scientific work, Hubner[55], like Ulmer for example, declares himself in favour of copyright protection for computer programmes, which he seems to include in the category of scientific works[56].

Troller, on the other hand, takes a diametrically opposite viewpoint. He believes that the protection of computer programmes by copyright would lead to a significant broadening in the concept of the work, as such programmes are not "in themselves" autonomous objects of cognition, but define rules of procedure aimed at the accomplishment of a desired result[57]. Of course, the legislator may act at his own discretion; but he ought to be aware that in this way he will depart from the traditional realm of copyright. At the base of Troller's view therefore there lies the criterion of intention, which in my opinion ought not to be understood too restrictively. For as Munro has rightly observed[58], the opposition of aesthetic functions and practical tasks a work may fulfil is rather dangerous; there is no doubt that those intentional objects which are lasting subjects granted an inter-subjective objectivity (what Troller understands as aesthetic works) may serve practical ends. Such a function is fulfilled not only by all scientific works, but also by works of art (artistic works in the nomenclature I have chosen). They may become the direct basis of practical use or raw material for subsequent studies, either artistic ones or technical ones. Therefore, I see no reason why computer programmes, just because they serve a practical function or may serve in the creation of new works, should be excluded from the category of works protected by copyright. Is a programme for computer music not an artistic work, at the same level as a sketch for a painting or an architectural design? So, questioning the objections raised by Troller, I am convinced that computer programmes are scientific works on the basis of copyright thus far established. What is more, I do not believe that

there is a need to reconsider and redefine the concept of the work[59]. I am, on the other hand, of the opinion that they confirm the appositeness of the distinction, with regard to structure, between artistic and scientific works, including the distinction, *inter alia*, of the elements of content and form. Furthermore, I believe that Kohler's concept of the tripartite composition of the work is still exceptionally useful, for it serves best the separation of those elements which enjoy copyright protection from those which do not on account of their objectivity, devoid of the stamp of personal creativity, in other words of the quality of individuality. From the incorporation of computer programmes into the category of scientific works there arises one practical observation: in the case of such programmes it is necessary, in considering their protection by copyright, to include elements of an individual nature into the field of internal and external form, while elements devoid of such character should be included in the realm of contents (e.g., algorithms, general principles of procedure, methods, etc.)[60].

I believe, and I am by no means alone in this view, that the protection of computer programmes by copyright is also supported by the nature of this protection, differing fundamentally from patent protection; for it is not a protection with an objectively broadened efficacity and a subjectively broadened exclusivity *(Sperrwirkung)*. This system, then, does not exclude the possibility of assuming the copyright protection of identical or, depending on the terminology one wishes to use, superficially similar works[61] (including computer programmes) produced independently, that is, separately from those produced by other programmers. Kolle calls attention to this[62]; indeed, he believes that there is little "danger" of two identical computer programmes being produced, although he does not exclude the possibility. Nor, essentially, does he exclude this possibility in relation to other types of work, for example designs, artistic craftsmanship or decorative patterns. In considering this possibility, Kolle declares himself, in spite of everything, to be in favour of the copyright protection of computer programmes. As far as patent protection is concerned, on the other hand, he sees its role as being exclusively in relation to technical treatments such as the structure of semi-conductors or the construction of self-contained elements[63]. This view should without doubt be accepted. Likewise one should agree with Kolle's viewpoint that the regulations of laws aimed at combating unfair com-

petition and contractual decisions may fulfil a complementary role, affording protection to those elements of computer programmes which are not covered by copyright, for example the algorithms lying at their base, methods of operation, principles of procedure and so on[64].

Thus, it should be stated that the whole of the legal problem concerned with computers and computer programmes should be regulated by the elements of many different laws, in particular copyright law, patent law, the law of unfair competition and the law of obligations. In this way, the production of a single legal system for all the aforementioned phenomena and needs[65] seems neither desirable nor attainable. Such efforts would seem all the more unnecessary as it is relatively easy to distinguish the fields of phenomena and economic and legal interests enjoying the protection of particular legal regulations. Foremost among them, copyright law may, without needing to be fundamentally changed, become the instrument of protection of computer programmes, included in the category of scientific works. In particular it may serve to protect the programme, its description, including design and control documentation, and supplementary material such as operating instructions. Of course, let us remember again that a necessary condition for enjoying protection by copyright is that the object of protection should be a work in the understanding of the law, in other words that it should bear the stamp of personal creativity. In accordance with this condition, either a whole programme or part of one may enjoy protection.

Concluding this consideration of the copyright protection of computer programmes, I should like to add that many lawyers and interested industrial circles are in favour of such a solution. This is confirmed by the reports of the national groups of the AIPPI, published in the AIPPI's April/IV journal. In this we learn that the following groups have declared themselves to be in favour of protection by copyright: the Federal Republic of Germany[66], Argentina[67], Austria[68], Belgium[69], Canada[70], Denmark[71], Spain[72], the United States[73], Finland[74], France[75], Great Britain[76], Hungary[77], Ireland[78], Italy[79], Norway[80], the Netherlands[81], Poland[82] and Czechoslovakia[83]. Only a few national groups expressed opposition to the concept of the copyright protection of computer programmes, or had no opinion on the matter. Opposition to copyright protection was expressed by Japan[84], Portugal[85] and the German

Democratic Republic[86], while the Chinese group[87] expressed no preference. This group explained that patent law had not long been in operation in their country, while a law on copyright had not yet been passed.

Of course the viewpoint taken by the national groups of the AIPPI expresses above all the opinions and views of industrial circles with an active interest in the protection of computer programmes; yet reports produced under the auspices of Question 57, called "the protection of computer programmes"[88], indicate a fairly universally anticipated legal regulation, both on a national and an international scale. They also justify a number of general observations. Firstly, agreement is expressed that computer programmes should be protected with exclusive laws, for contract and transgressional protection is insufficient. It is recognized that these may fulfil a role only of reinforcement, particularly in relation to those elements of the programme which do not enjoy copyright protection, for example algorithms. Secondly, almost universal expression is given to the conviction that copyright (universal) protection and not patent (particular) protection is more appropriate, and it is stressed that legal practice is moving in this direction. This view[89] found expression, *inter alia*, in the approbation of resolutions for the project for a model law by the WIPO, which as I have already pointed out, has been based on the copyright system[90]. Thirdly, the conviction is expressed that computer programmes may, on the basis of the majority of copyright laws, be included in the category of scientific works. It is recognized as advisable, however, that computer programmes be mentioned in amended laws and that additional regulations be included to ensure among other things a shorter period of legal protection than is the case for other categories of works.

Concerning the regulation of the issue on an international scale, the conviction was generally voiced that the Berne Convention on the Protection of Works of Literature and Art, and the Universal Copyright Convention, afford sufficient protection to computer programmes in international relations. In particular it was stressed that in the understanding of these conventions computer programmes are considered to be works. To be sure, they are not mentioned here, but it should be remembered that the conventions included only a sample listing, not an exhaustive one, of the various categories of work. In accordance, then, with Articles 3 and 5 of the

Berne Convention and Article II of the Universal Convention, the signatory States are obliged to extend protection to foreign authors of programmes who are citizens of another signatory State, on the principle of assimilation, in other words of their being treated equally with citizens of their country. Independently of this, citizens of these countries should enjoy the so-called minimum rights defined by the regulations of the convention, to which regulations the legislators of particular countries should adapt internal law[91]. It is also stressed that the right of distribution (publication) reserved for the benefit of the subject of the copyright[92] in Article 3 of the Berne Convention and Article IV*a* of the Universal Convention embraces, practically speaking, all the most important ways of making use of computer programmes, for example, transferring a programme from one form of storage to another, placing a programme in the computer's memory and so on. Thus, no urgency is seen to produce a separate international agreement on the protection of computer programmes[93].

A similar view is also expressed in the literature of copyright. I recall the views of Ulmer, Kolle, Kohler, Gotz and Kummer, all of whom are of the opinion that computer programmes fulfil the conditions of a work, specifically a scientific work, and that for this reason they should enjoy protection by copyright, on the basis both of national laws and of international conventions.

I shall now pass on to the problem of works of computer art. Much attention has been paid to this problem by Kummer[94], who started from criticism of the viewpoint that for copyright it is essential to divide the actions leading to the appearance of a work into human actions and machine actions. He justified his view by pointing out that firstly, we very often encounter creative processes, and results of creativity arising from them, in which the activity of a man and a machine are inextricably mixed. In this case, Kummer writes, no-one doubts that the resulting work enjoys copyright. Why then should we deny such protection to the result of labour when the "contribution" of the machine (the computer) is relatively greater than for example in the case of the mechanical preparation of the original? Secondly, he emphasizes that a person always decides whether he will recognize the product of the machine he has programmed as his own work or not, and thus whether he will present it to its audience under his own name[95]. Thirdly, he points out that the machine "creates" only such a product as

the man intends, for the machine itself has no ability for independent creation, nor of expression of feelings or convictions. This is illustrated, in Kummer's view, by Steinbuch's witty remark[96] that it is possible to build a machine that wags its tail, but not one that enjoys doing so. In the case of computer creativity, then, the programmer (author) decides everything, both when he creates the programme and when he takes the final decision whether or not to recognize the "project" as a work. On the other hand, no importance in terms of legal appraisal is attached to the amount of time and labour demanded by the creation of a work with the aid of a computer, for such circumstances are, as far as copyright protection is concerned, entirely irrelevant. Only the result matters. Thus, the fact that the author may have saved some time is of no consequence[97].

Despite the fact that Kummer's views include many accurate observations, some of these raise doubts and even objections. I have in mind in particular the excessive emphasis placed on the author's decision whether to call the product a work[98]. For it is undeniable that the will alone of the interested party and his declaration, even made publicly, do not constitute a guarantee of the existence of the work, despite the fact that it usually constitutes an essential condition for use of the work[99] and for the practice of copyright. By no means, however, could this lead to qualities of the work being ignored, in particular the stamp of personal creativity (individuality). It is, however, possible to assume the view that these qualities may be manifested in the manner of appearance (presentation) of the work, chosen by the author from many possibilities. This is by no means a new problem, though it is particularly acute at present with regard to computer art. Let us recall that, for example, so-called "dead-wood" art involving the ability to present a root or a piece of rotten wood, often found by chance but always deliberately chosen, is fairly universally recognized as an art form, as is the "able" presentation of objects of everyday use. Many authors, however, educated in traditional art, express doubts as to whether in such cases we are in fact dealing with creativity and art[100]; they stress, and this is undeniable, that works in the understanding of copyright are objects created by their authors. Let us, however, add the word "also", so as not to omit the fact that the element of creativity may lie equally in the conscious choice of objects and in the manner of their presentation. For if we took the opposite view-

point, then despite the needs of modern art, we should have to protect creativity in the matter of choice, organization and presentation with a separate law, regardless of the similarity of these phenomena to "classical" authorial creativity, or leave it completely beyond the realm of legal protection. Such a solution, however, would be neither advisable nor in accordance with feelings of fairness and the needs and development of art.

A diametrically opposed view has been expressed by, among others, Schmieder[101]. He took the position that the concept of a work in copyright demands modifications in respect to new phenomena, creative methods, types of work (including computer art) and so on. Schmieder believes that apart from the condition of objective novelty[102], the work must be socially useful[103], result from human activity, though not in the sense that it owes its entire being to conscious psychological acts on the part of the author, and that the author must recognize the "product" as his work. Thus, in conclusion he writes that creativity may also be a matter of making a conscious choice of an object deliberately chosen or even accidentally found, and subsequently of its individual presentation[104].

Concluding my consideration of this subject, I should like to stress that those who express reservations with regard to recognizing selection and presentation as a sufficient condition for including the results of such actions in the category of works protected by copyright, have considerably modified their viewpoint. This is shown by Ulmer's statement, in regard to the phenomenon of avant-garde art (including computer art), that the lawyer's task is not to pass judgment on artistic movements, but to consider views prevalent in circles of artists, art connoisseurs and the viewing public, and accordingly to draw his own conclusions for the purpose of the law[105].

As may be seen, then, there is increasingly universal support for the view that computer programmes are the object of copyright, be it in the category of scientific works or that of artistic works, if they result in the appearance of computer art[106]. It also appears that it is not necessary to produce a new concept of a work. It is necessary merely to share the view that creativity may also consist of the individual (creative) selection of the object and its presentation, and to incline to the concept of the triple levels of the composition of a work. For this serves to distinguish scientific works

from artistic ones and creative (individual) elements from objective elements which remain outside of copyright protection[107]. What is more, it appears that it is not necessary to change either copyright laws or international conventions in order that *de lege lata* computer programmes should be afforded copyright protection. An appropriate interpretation of existing laws is sufficient. Of course, there is nothing to prevent such works being mentioned in the texts of laws and even defining them rather more exactly, as legislation in the United States has done, or a shorter period of protection being catered for, for example 20 years from the moment of production. It is also possible to define the rights of the employer with regard to computer programmes produced by employed authors, which will be discussed in the following lecture, devoted to the subject of copyright.