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Abstract of the doctoral dissertation

“Copyright status of visual and two-dimensional outputs of Artificial Intelligence”

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This dissertation is devoted to determining the copyright status of visual and two-dimensional Artificial Intelligence (AI) outputs, that is, the copyright status of AI digital images. Polish copyright law provides for uniform requirements for copyright protection, regardless of which category of artistic creation the subject matter belongs to. Nevertheless, the specifics of the given field of creative activity must be taken into account when assessment of whether the object falling within said field meets those requirements is made. Creativity and individual character may manifest themselves in myriad of ways, distinct for each of the branches of creative activity. The research field of the dissertation was therefore limited to a selected field of such creative activity. The decision to limit the research to visual and two-dimensional AI outputs was motivated by the scope of author's competencies as well as the fact that AI's achievements in this field of creative activity are the most impressive and have been extensively described in the literature. Therefore, all statements and propositions made in the dissertation do not apply to the entire - large and intrinsically diverse - category of objects created using AI. They do not refer, at least not explicitly, to AI outputs other than digital images.

There were two research objectives of this dissertation. The primary objective was to determine whether, in the light of current case law, representative views of legal academics and commentators as well as and axiological fundamentals of the current copyright regime, AI outputs that are visual and two-dimensional works of computer art, can be recognised as a subject matter of copyright under Polish law, or whether the function of AI in the creative process excludes human creative contribution. The secondary objective of the dissertation was to determine – in the event that it is established that AI creations that are visual and two-dimensional works of computer art are not *de lege lata* subject to copyright protection, ergo AI images that are not works of art are also not subject to such protection – whether the latter

should be protected by some form of exclusive rights, particularly intellectual property rights, and to formulate *de lege ferenda* postulates in this regard.

The dissertation consists of an introduction, seven chapters and a conclusion.

The introduction presents research objectives, justifies the choice of topic, and describes the research methodology.

The first chapter discusses the phenomenon of AI amid the technical and philosophical issues thereof and reflects on the history of "intelligent" machines. This chapter defines the concept of artificial intelligence and presents current state of AI, in particular its achievements in the field of visual creation.

The second and the third chapter of the dissertation are theoretical in nature. The second chapter focuses on philosophical justifications for copyright law. The considerations therein contained are based on an underlying premise that the principles stemming from copyright justifications should be taken into account in the process of *de lege lata* interpretation of the copyright law - as arguments for or against the protection of a given object - and must be considered when formulating *de lege ferenda* conclusions.

The third chapter presents, to the extent necessary with regard to the subject of the dissertation, concepts and constructs of civil law theory.

The considerations of the fourth and the fifth chapter of the dissertation are primarily of a dogmatic nature. The fourth chapter focuses on a dogmatic analysis of the premises for copyright protection, insofar as it is necessary for determining what characteristics - according to the general definition of a work reconstructed under provisions of the Polish Copyright Law, in the light of representative case law and views of scholars on the interpretation of the statutory criteria for protection - should an object have in order to be considered a subject of copyright under Polish law.

The fifth chapter examines the premises for acquiring status of a creator or co-creator of a work. The primary aim of this part of the dissertation was to discuss the concept of creative contribution and to consider, in the light of views presented by scholars and under existing case law, what types of human activity, which, although might be necessary for the creation of a work, do not entitle one to the status of the work's (co-)creator. The fifth chapter of the dissertation is also devoted to the analysis of the human-authorship principle and to the issue of copyright protection for the results of animal activity and natural forces.

The broadest chapter of the dissertation - the sixth chapter - is devoted to the problem of the copyright status of visual and two-dimensional works of computer art, including any such works that are AI outputs. It determines framework of the analysed phenomenon, that is,

establishes the scope to which the name *computer art* is used. It attempts to systematize the terminology employed in the research on the issue of the copyright status of works created with the use of computer technology, by reviewing both Polish and English literature. It presents a classification of computer art based on the criterion of the copyright status of its referents, dividing them dichotomously into those that can and those that cannot be considered the subject of copyright under Polish law. Such works of computer art, which *de lege lata* can be considered a manifestation of creative activity of an individual character, are referred to as *computer-assisted works of art (computer-assisted art)*. Those which cannot meet the prerequisites of copyright protection are called *computer-generated works of art (computer-generated art)*. The adopted criterium for division is not whether creativity and individual character are manifested in a given object *in concreto*, but whether manner in which given computer program operates (that is, the program's function in the creative process) excludes creative human contribution or not. For, according to the adopted premise, program's manner of operation implies whether such human contribution, that would allow a given result to be attributed to his/hers creative activity, may be distinguished in the process of creation of the result. Thus, the issue at hand is the potential possibility of meeting the prerequisites for copyright protection, not whether the evaluated artwork actually meets the criteria for protection. The remainder of Chapter Six is organized in consistency with this dichotomous division. The discussion of the issue of computer-assisted art begins by determining which of persons involved in the process concluding with the emergence of a work of computer art, could potentially be considered creators of that work. Two hypotheses were formulated in this regard. According to the first hypothesis, computer-assisted art includes such computer-assisted works of art in which creative contribution of the user of the program may be distinguished. According to the second hypothesis, computer-assisted art includes such computer-assisted works of art in which creative contribution of the creator of the program is recognizable. Both hypotheses presented were subjected to verification. The final part of Chapter Six was devoted to the issue of computer-generated art. Building on the former findings, it determines which AI programs exhibit the ability to generate results in which, given the role that these programs perform in the creative process, human creative contribution cannot be observed.

The purpose of the seventh chapter of the dissertation was to determine whether visual and two-dimensional computer-generated works *de lege lata* may be subject to protection under the provisions of Polish private law in a manner that would give reasons to recognizing them as intangible goods, as well as to formulate *de lege ferenda* conclusions.

The dissertation closes with a conclusion, which provides a summary and presents final conclusions.

Although in the global debate on legal issues related to the use of AI, the question of copyright status of AI outputs is being increasingly addressed, so far few publications on this topic have appeared in Polish legal literature, and the available literature addresses the issue in a relatively fragmentary manner. The dissertation attempts to fill the gap existing in the literature.

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