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ABUNDANCE OF SOURCES – THE TRUE MEANING OF THE TERMS COPY AND ORIGINAL; SEMANTIC CHANGES IN ART AND COPYRIGHT TERMINOLOGY IN DIGITAL ENVIRONMENT AND CHANGE OF THE ROLE OF LAW IN DIGITAL SOCIETIES

"Life, liberty, and property do not exist because men have made laws. On the contrary, it was the fact that life, liberty, and property existed beforehand that caused men to make laws in the first place."

(Fréderick Bastiat, The Law)[1]

In modern societies the role of law is changing upon accelerated modifications of quantum, knowledge structure and information processing possibilities. The functions of copyright law and industrial property law are also experiencing historical changes, especially due to digitalization and global networking. The objective of this work is to delineate the constants and discontinuities in the legal protection of creativity through semiotic analysis of language, principally the one used throughout the past to designate different types of copies and originals and comparison between art history and legal language. Analysis of historical aspects leads also to conclusions on possible trends in copyright law and its role in digitalized societies. In short, these conclusions suggest

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[1] Fréderick Bastiat, The Law, (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, (1850), 1950) pp.5-6.

an uninterrupted but shifted position of the role of copyright law and, at the same time, the appearance of a variety of parallel and simultaneous forms of copyright protection and increased role of automatized technology based protection of usage monitoring and royalties collection.

Key words:
copyright, law, creativity, intellectual property, language, digitalization, Internet, copy, original, DRM, technical means of protection

Introductory Notes

The consequences of technological advancements to which we participate have no precedent in human history. We cannot expect that they leave no trace in the organization of social realities, considering that much less extensive technological changes have in our history led to important business and legislative modifications[2].

Researches conducted by various authors suggest that the amount of information processed by modern societies has a completely different order of magnitude than earlier in the past. They support the assertion that mankind has never before now been faced with such amount of information by a simple calculation based on the sum of bits available to the individual during different historical stages. They are convinced that similar exponential growth of available information cannot leave any consequence on social relations.[3] We believe that there is no need to question such findings. It is perfectly evident to any observer that such increase of the quantity of available information and theoretic possibilities of their processing is unprecedented. We can presume that the necessity of social changes is inevitable with the further growth of data volume and processing speed. It appears that this development leads directly to several strong, tectonic shifts in the manner societies use law to achieve the necessary balance between interests and relations. The legal concepts of sovereignty and territorial jurisdiction appear, among others, particularly susceptible to changes in that sense. Although we will have no opportunity to elaborate here this matter in detail, we need to put these assertions, at least superficially, into context. Without embarking upon a debate on these broader and deeper changes, we will only delineate here the observations lying beneath these assertions.

[2] Vukmir, Mladen, "Influence of Technological Development on Copyright and Legal Nature of the Subject of Intellectual Property Protection", Zbornik Hrvatskog društva za autorsko pravo, Vol. 2, Zagreb, 2001, pp. 9-40.

[3] Robertson, S. Douglas, The New Renaissance: Computers and the Next Level of Civilization, Oxford University Press, USA; first edition, 1998. See also Lawrence Lessig et al., Code: Version 2.0 (2006), ISBN 978-0-465-03914-2 - available as a free Creative Commons Attribution-Share Alike (by-sa) licensed download. Particularly relevant here is Part IV, «Competing Sovereigns», pp. 284-313.

As to sovereignty, we may plausibly claim that aspirations towards regional cohesion, primarily the European Union, and secondarily Mercosur[4], Andean Community[5] and NAFTA[6] lead to layering of sovereignty. Modern redistribution of sovereignty is vertically partly ascending to supranational level, and partly descending to regional level. This process is undoubtedly intensified by modern communication and telecommunication technologies, and above all by the power of Internet, which moves part of information management and distribution power, representing earlier the basis and reflection of sovereign power, to an even lower level; a level at which it has never before been distributed – the level of the individual. Although in the history sovereignty was often impersonated by the individual, it has typically never been distributed among several individuals on the same territorial level.

At the same time, the notion of territorial affiliation is also affected by the same changes. Hence, if we accept that sovereignty is being redistributed, it is implied *per se* that its redistribution is also territorial. In fact, accelerated social relations brought by digital networking via the Internet put into question the sense and advantages of territorial borders. Considering that our notion of space is susceptible to our vision of sovereignty, changing the first we change also the second. Thus, it is comprehensible *per se* that upon accelerated transactions and the new state of mental supraterritoriality[7] brought by the Internet, the functionality of territorial power of sovereign legal systems is becoming questionable. These modifications include, as changing concepts, the principle of territoriality, for instance, as one of the characteristic features of intellectual property law. In that connection, the questions of adequate solution in determining territorial jurisdiction in the application of intellectual property law, court jurisdiction, both related to decision-making and decision implementation, are raised and existing solutions to these questions fit less and less adequately

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[4] Wikipedia The Free Encyclopedia, article Mercosur, http://en.wikipedia.org/wiki/Mercosur, 2011-01-09. Although arguably even in its layout Mercosur treaty carefully avoids impinging on the sovereignty of the signatories, and its practical implementation lacks even further behind, it is our opinion that such trade agreements actually reflect the trend set by the EU integration efforts and will ultimately lead to the shrinking of sovereign power of the countries. Power of the markets themselves are crushing many of the elements of the sovereign right to fully control the monetary policies and many other economic aspects that theoretically lay witching the power of sovereign.

[5] Wikipedia The Free Encyclopedia, article Andean community of Nations, http://en.wikipedia.org/wiki/Andean_Community_of_Nations, 2011-01-09.

[6] Wikipedia The Free Encyclopedia, article North American Free Trade Agreement, http://en.wikipedia.org/wiki/Nafta, 2011-01-09. Needless to say, the US Congress would never have ratified the Treaty should it ever have deemed that by doing it might in any way limit the sovereignty of the US. However, the very fact that the implementation of the Treaty encountered various obstacles, such as transport workers resistance which was only recently partially overcome, and the political resistance it encountered throughout its life, shows that the effects of the integrative efforts are perceived to lead to the erosion of sovereignty.

[7] Anderson, Benedict Richard O'Gorman, Imagined communities: reflections on the origin and spread of nationalism, Verso, 2006, pp. 7, where Anderson sets his main thesis that nations are imagined as inherently limited, sovereign and as communities, and interpretation of his theses by Reicher, Stephen, Hopkins, Nick, Self and nation: categorization, contestation and mobilization, Sage Publications, 2001, pp. 16-17, and Jackson, John H., Sovereignty, the WTO and Changing Fundamentals of International Law, Volume 18 of Hersch Lauterpacht Memorial Lectures, Cambridge University Press, 2009, pp. 13-14, 214.

as legacy social relations advance under the strain of digitalization and networking. A discussion on these two questions would clearly require much more space than the one provided herein, thus, embarking upon a deeper analysis of the foregoing would be aimless. Let us focus on the topic of this article.

We will elaborate the implications material reality digitalization and computer networking processes represent in the context of intellectual property law, especially with regard to copyright law. In that respect, the principle of territoriality is evidently one of the foremost candidates for radical changes in the world where the notion of territory and sovereign power over such territory is being modified. The consequences of present territorial jurisdiction systems represent one of the principal reasons why users of the legal system are avoiding its adoption in the first place. The issue of change of the role of law in societies that base their vertical decision-making on the legal procedure is certainly a difficult question, which also goes beyond the framework of this article. Therefore, whilst the consequences of the conclusions drawn in the field of intellectual property law are assuredly pertinent to the entire legal system, we shall leave the elaboration of full implications of such issues to another work. We shall restrict to analyzing the symptoms of the evolutionary sidetrack on which the legal system has found itself in a modern social environment. If we recur to elements of Bastiat's postulate quoted as the motto of this article, *life, liberty and property*, and if we recur to the analogy with evolution processes in the biological sense, as a paragon of the events leading to the marginalization of legal system in modern economies, we will come to certain conclusions.

We refer to new revelations on social reality that paradoxically emerge from unusual scientific fields. Namely, natural scientists have come to certain revelations leading them to the conclusion that using specific universal cognitions on the nature of things is worthy and necessary to re-examine and yield new conclusions and understanding of social processes.[8] We refer principally to Stephen Wolfram's assertions that an elementary set of simple rules can create various types of complex contents.[9] Wolfram, thus, explores different relation points between the information theory and the efforts to define the concept of complexity in social contexts as well.[10] Apparently, although it was not a leading or fashionable model in the philosophy of science, especially in light of the Popperian analysis, the idea that analogy between social observation and scientific observation is ripe again for the analogies between the two.

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[8] Vedral, Vlatko, Decoding Reality: The Universe as Quantum Information, Oxford University Press, Part 3, Wolfram, Stephen, A new kind of science, General science, Wolfram Media, pp. 8-11. See also Lessig, Lawrence, Code and other laws of cyberspace, Part 11, Basic Books, 1999, pp. 216 where he talks about physical revelations from W. Heisenberg's quantum mechanics in the context of analogy with constitutional law. As we have obtained the Amazon Kindle edition of the Vedral work we shall quote its electronic reference number instead of its page numbers and will refer to those as location, no. AK (for Amazon Kindle).

[9] Wolfram, S, *ibid.*, pp. 11: « But now, with the discovery that simple programs can capture the essential mechanisms for all sorts of complex behaviour in nature (…).» Wolfram shows that programs called "cellular automata" can create patterns of infinite complexity from elements comprising just two or three simple rules, pp. 53-70, 867-868, 883-887.

[10] Wolfram, S., *ibid.*, pp. 1067-1069, 1135-1136,

While we venture into scientific analogies, we will keep in mind Vedral's *caveat*: "As a colleague of mine often said - sometimes working with a little physics can be more dangerous than working with none at all."[11] He also notes that: "To a scientist, any knowledge always refers to the knowledge of the future. Hence historians are not scientists - historians make predictions about the past - but science is all about predictions concerning the future." If we substitute lawyers for historians, we remain too close for comfort under this statement.[12] At the same time he set his task as: "More complex social structures, such as the distribution of cities, the wealth of citizens, and the social order are also seen through the eyes of an information theorist." He is continuing to conclude that: "In this way, the laws themselves (in physics, biology, economics, sociology) could all be seen as short programs describing the makeup of reality."[13]

For some twenty years this author was inescapably driven to the conclusions that such analogies are not only useful, but that they are sensible and might partially be scientifically defensible. What we wish to say with this analogy is that Bastiat's set of values (*life, liberty and property*) which started regulating and providing protection with rules in an early phase of human civilization, from few initial rules, following the principles of *cellular automata*, evolved into a very complex system, today known as the legal system; including national and international legal systems.

However, as in the evolution theory for many organisms complexity has not always been a comparative advantage in the fight for survival, analogously, in the context of accelerated, networked and digitalized social transactions the legal system can hardly survive in its complexity deriving from thousands of years of development and growth. The fact that today we see these complexities as fundamental elements of the legal system does not change the fact that law is just an attempt to regulate ethicality in the context of social relations. In order to serve this purpose successfully, legal systems need to keep direct proportion to their basic function unobstructed. Hence, we can expect, on the basis of similar rules of evolution, that the legal system as a life's functionality will be adjusted to the new environment. The topic of this article is the result of efforts made to make a contribution towards such transformation in the field of copyright law and industrial property law.

In this article we will mostly pursue the analysis of the essential terms used by creators, intellectual property rights holders and users of the legal intellectual property rights protection system to name objects and means of protection. We will try to draw conclusions from legal language analysis on the dynamics of copyright traditions, state of copyright and possible changes caused by new social needs.

In other words, we claim that the cumulative consequences of accelerated social interactions rate, increased transactions and relations frequency and volume is at present time weakening role of traditional legal instruments, particularly in the

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[11] Vedral, V., *id.*, location 1284 AK.

[12] Vedral, V. *ibid.*, location 212 AK.

[13] Vedral, v., *ibid.*, locations 176 and AK. He is also stating that: "The first substantial clue that information may play some role in sociology came in 1971 from the American economist and Nobel Laureate, Thomas Schelling. Up until his time sociology was a highly qualitative subject (and still predominantly is); however he showed how certain social paradigms could be approached in the same rigorous quantitative manner as other processes where exchange of information is the key driver." Location 1022 AK.

field of dispute resolution. We could argue that an increasing number of sophisticated legal system users consider litigation and arbitration in the resolution of disputes counterproductive to their interests. In fact, right holders are more and more often of the opinion that by initiating litigation or other adjudication proceeding they actually just add to the existing disputes and business problems a new layer of problems without solving the core one.

On the basis of many confirmed experiences, legal system users have developed high levels of distrust in the legal system. The level of distrust is such that often initiating of litigation is not seen as a practical resolution of the problem due to length, costs and uncertain outcome. How have we come to this point and what can we do faced with this situation? In order to explain the level of changes we deem inevitable, we will recur to an example from Prof. Richard Susskind's work, who in his innovative book *The end of lawyers* predicts a business where, due to their complexity, and ultimately insolvability and irrelevance, resolution of legal questions and uncertainties will not be attempted at all, but only estimated for the purposes of management practicalities. Thus, legal risk shall not be resolved in consultation with attorneys, but as part of risk management performed by adequately trained risk managers. The cost of risk of possible legal error, according to Susskind's predictions, will simply be included in the price of the transaction to overcome inherent length and uncertainty of the legal proceeding. Use of legal proceeding is, thus, gradually becoming perceived as detrimental to mutual competitive positions and market competition**.** Subsequently, legal departments of large corporations will become just another outsourced backoffice function, which, instead of a senior counselor, will be led by computers and risk manager. Many other authors today address the inadequacy of the legal system leading to gradual diminution of the purpose of recurring to law in modern societies as a means of resolving social tensions.[14] The web site of the Common Good movement defines what they see as the problem with modern legal system in the US through the following statements:

> Law is supposed to be a framework for human judgment in a free society. *Instead law has replaced freedom*. Rules are so detailed that people can't act sensibly. Letting people sue for the moon does not support freedom, but infects daily dealings with legal fear. The land of the free has become a legal minefield. Instead of striving towards our goals, Americans tiptoe through the day looking over their shoulders.

[14] See: Philip K. Howard, Life Without Lawyers: Restoring Responsibility in America, W. W. Norton & Company, 2010, Philip K. Howard, The Death of Common Sense: How Law is Suffocating America, Grand Central Publishing, 1996, Philip K. Howard, The Collapse of the Common Good: How America's Lawsuit Culture Undermines Our Freedom. Philip K. Howard is a respected practitioner and civic leader, partner in the Covington & Burling firm. Similar views are expressed also by Michael Ore (American Lawyer) in his review of the book Kronman, Anthony, The Lost Lawyer: Failing Ideals of the Legal Profession, Belknap Press of Harvard University Press, 1995, accentuates: «(...) An eloquent and provocative book. When you listen to...(Kronman's) diagnoses of just what has gone wrong with the job of lawyering today, you begin to see that the spreading disaffection of lawyers for their work should not be underestimated.» Web site www.amazon.com, 2011-01-06, http://www.amazon.com/Lost-Lawyer-Failing-Ideals-Profession/dp/0674539273/ref=pd_sim_b_7

> Modern law is based on the false premise that law is self-executing. *So regulators organized society like an assembly line—trying to avoid human error by millions of words of regulation that eliminate human judgment*. We don't trust judges either—so we allow lawsuits over almost anything. But determining what's right or fair always requires a value judgment. *To take responsibility, people must be free to make responsible choices*. Society can't work unless everyone, at every level of responsibility, has freedom to use their common sense.
>
> Look around. Governors can't balance budgets when programs are cast in legal concrete. Teachers can't maintain order when compelled to "prove" what happened in a legal hearing. Doctors can't be candid when terrified of lawsuits.
>
> America is paralyzed by decades of accumulated law and lawsuits. That's why we need to start over.[15]

It could be concluded based on simple informed observation that the majority of cases circulating through legal systems are the result and the product of the working of the legal system itself. The legal services industry apparently nowadays serves in large part to maintain the system itself and create economic benefits for the participants of that system, rather than serving society as a whole in the resolution of disputes. In other words, today many experts notice that legal system participants are misusing the system for various reasons, either to gain a tactical advantage over the competitor or the opponent due to system's length, complexity, inconsistency, unpredictability, contradiction and high cost, or to gain profit as system participants from their knowledge of said characteristics.[16]

These characteristics of the legal systems are seriously and rapidly undoing any remains of the trust the societies used to place into the system. While modern societies are conditioned to think that the rule by law is the only possible way of running a decent society, it appears that more and more members of the societies are skeptical towards such postulates. And indeed, we might ask our selves, what kind of a society is the one that needs to be ruled by law? At one point in time the feudal lords have also thought that democracies will for sure be ungovernable, chaotic places. For sure, they rightly saw a vast improvement in feudal organization over the earlier forms of social structure.

When the democracies started replacing the older models of social organization and the feudal power was sidelined the law took its place and brought societies unprecedented benefits. However, due to its increasing complexity and increasing internal inconsistencies legal systems might be today hindering some aspects of

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[15] Common Good movement, on its website www.commongood.org at its page The Problem, Drowning in Law http://www.commongood.org/pages/the-problem. See also the link to Start Over movement action web page at: http://www.commongood.org/page/s/joinus, 11-07-31. The movement is founded by Philip K. Howard. Emphasis added.

[16] Many legal analysts and popularizes accentuate the imperfections of the legal system, sometimes even caricaturing the situation: Catherine Crier, The Case Against Lawyers: How the Lawyers, Politicians, and Bureaucrats Have Turned the Law into an Instrument of Tyranny--and What We as Citizens Have to Do About It, Broadway, 2003, and Walter K. Olson, The Rule of Lawyers: How the New Litigation Elite Threatens America's Rule of Law, St. Martin's Griffin, 2004.

social processes. It is rapidly dawning that our societies will need to react quickly in finding the proper forms of social organization to serve the new circumstances in which the humanity finds itself. Searching for the underlying causes for the loss of efficiency characterizing the modern legal systems we might look for the explanation in the physical world, as suggested earlier. If we try to make an analogy with the physical observations we could certainly use to the following view:

> (…) This was also realized by Leibniz who stated: `But when a rule is extremely complex, that which conforms to it passes as random'. This perfectly encapsulates the Kolmogorov view of randomness: when the rule is as complicated as the outcome it needs to produce, then the outcome must be seen as complex or, in other words, random.[17]

Given that this article addresses the great changes early twenty-first century social reality is going through, it may be of use even for a broader outlook to commence with the analysis of elements that have more or less constantly marked human creativity, and distinguish them from those denoting moments of change. In that light, we may easily notice that the majority of authors dealing with issues of copying point out that human tendency to unauthorized copying is one of the constants of social development. Whilst we could likewise claim that other types of illegal behavior have also shown similar recurrence, we believe that copy-making can be distinguished for its role in the development of life, education and creation, as we will explain below. Many, thus, state that from antiquity to modern times works of art of all types and techniques, especially those that at a given moment brought most profit, have been counterfeited. In addition to works of art, we should stress that throughout history other objects of everyday use have also been subject to counterfeiting, particularly those with recognized market value. Therefore, this article traces the phenomenon of unauthorized copying both in copyright law and trademark and design rights infringement. By scrutinizing the historical context we will try to delineate the constants and prepare the platform from which we intend to make out possible changes in the role and meaning of "unauthorized" copying.

In doing so, we must bear in mind that copyright law has historically protected mainly commercial, rather than artistic aspects of creativity. In fact, from the beginning of modern copyright, not only have the laws been set in a way that did not value the results of human creativity as a prerequisite for protection, but insight into the court practice of all countries reveal that disputes have more often been initiated in cases of prospective monetary value, rather than in cases of works of extraordinary artistic value. Finally, it is evident that neither modern copyright laws distinguish between the different levels of artistic contribution of particular work or art; therefore, all protectable works have the same protection level.

From our point of view taken in exploring copying issues, and also those copying that individuals and societies considered unauthorized, evidently appears that

[17] Vedral, V. *id*. location 1867 AK. While due to the space constraints we cannot provide here for the full explanations for the physical concepts of randomness and the related rules of the Second Law of Thermodynamics, Prof. Vedral's work is actually accessible to any interested reader.

copying is a constant commercial activity. We could even claim that copying is actually the warp and woof of life. With the multiplication of cells, and copying of DNA sequences, life is reproduced in all its forms, making reproduction, i.e., copying, the fundamental biological fact. Likewise, many components of persons' behavior are also acquired during education through imitation, i.e., by copying the elder.[18] Many authors stress that the basis of all human creativity is actually in the internalization of existing solutions, which, along with the extraordinary human ability to add with their personality a new view to an existing issue, yield the result of creativity.

We think that too often we look away from this simple fact of life. The real truth is that life is based on copying in the same way people copy knowledge in order to create. Hence, if to absolutely evident facts on copying as the basis of life we add also the fact that human creativity is based on similar principles, we come to the conclusion that it could be suitable to compare the legal system, as a reflection of the aspiration of human beings and societies to bring their regulations in line with natural principles, to principles that appear dominant in nature. This approach might be of use when looking for a response to the questions on the need for changes in social and legal relations brought by the above-mentioned rapid social progress, which we will analyze further hereinbelow.[19]

Hence, we are of the view that it will be useful to examine semiotic[20] and semantic characteristics and properties of the terms used in social communication, and thereafter systematize the phenomena and concepts named, i.e., designated by those terms, which describe copying activities and objects derived from such activi-

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[18] *E.g.*, see the discussion on copying-fidelity in Richard Dawkins, The selfish gene, Oxford University Press, 2006, pp. 17-18. The author takes the fact of multiplication for granted, and elaborates the reasons of copying errors constantly appearing in the multiplication, explaining them as required for the evolution process. The discussion continues on pp. 28-29. On pp. 23 expressly states: «DNA molecules do two important things. Firstly they replicate, that is to say they make copies of themselves. This has gone on nonstop ever since the beginning of life, and the DNA molecules are now very good at it indeed.»

[19] For an early sketch of the theory by which human creative ability has a constitutive effect related to creation of reality, based on Shannon-Weaver model of mathematical theory of information and digital anaogies, see Vukmir, Mladen, Integral protection of Intellectual Property, unfinished work published on Amazon Digital Text Platform, 2010, original text from 1990, (Kindle Edition - May 3, 2010), http://www.amazon.com/Integral-Protection-Intellectual-Property-ebook/dp/B003KN3I94/ref=sr_1_2?ie=UTF8&m=ABZSE0W26BU7U&s=digital-text&qid=1281787230&sr=8-2, 10-08-14, Chapter 3. ASIN: B003KN3I94. The original text is published in Shannon, Claude E. and Weaver, Warren, The Mathematical Theory of Information, University of Illinois Press, Illini Books edition, 1963, especially in Weaver's introduction pp. 3-28, in particular pp. 8-9. The basic thesis of outlined theory is that the fact of the freedom of choice, clearly evident in the mathematical model or in the digital analogy with the option of choice between 0/1, is the cornerstone of human creation having as consequence the creation of reality. Prof. Vedral's often quoted work raises the Shannon theory of information to another plane by developing fully its potential within the field of quantum physics. Quantum theory of information is in our view even stronger as a basis for quantifying the information of creativity.

[20] Wikipedia, The Free Encyclopedia, article Semiotics, http://en.wikipedia.org/wiki/Semiotics, 2010-08-08 "Semiotics is frequently seen as having important anthropological dimensions; for example, Umberto Eco proposes that every cultural phenomenon can be studied as communication." For a wider context see Umberto Eco, Kultura, Informacija, komunikacija, Nolit, 1973, e.g. pp. 413 and 417 etc. (La Struttura assente: la ricerca semiotica e il metodo strutturale, Volume 39, Saggi tascabili, RCS Libri, 2004).

ties. The necessity of finding the basis of diversities and terminological inadequacies ensuing from the comparison of art, legal and colloquial language is a special challenge and the next step to take. In this way we intend to come to understand the constants of copying activities and see how these constants can lead us to solutions necessary to manage properly social copying activities at the time of great social changes brought by digitalization and networking.[21]

HISTORY OF COPYING WITH AND WITHOUT AUTHORIZATION

As many authors claim, copying of objects with the intention of hiding that it is done without authorization is a characteristic already present in the earliest more complex societies.[22] Thus, evidences of false indications of origin were found in antiquity placed on utilitarian objects. The Roman Empire saw the falsification of Corinthian bronzes from earlier antique periods, than jewelry, Greek stone sculptures with their fraudulent signing.[23] Furthermore, famous Martial's laments teach us that poems (poetry) have been regularly plagiarized.[24] In addition to art and artisan objects, money was also subject of falsification.

A similar situation characterized other periods as well, as described in detail in contemporary records. If we were to apply modern criteria to past social relations, we could say that during Humanism and Renaissance many private collections were true forgeries storehouses as a result of increased social need for holding works of art. In Renaissance era forgeries content was also associated with antiquity, considering the high value attributed to that age, especially forgeries of monuments and portrait busts. Copies or replicas were often produced on order for collectors who wished to add to their collection the representation of a particular piece.

18th and 19th century Classicism represents another historical age, which saw many forgeries, especially those of antique gems.[25] In 19th century, which was also

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[21] Vukmir, M., Influence of Technological Development on Copyright and Legal Nature of the Subject of Intellectual Property Protection, Zbornik Hrvatskog društva za autorsko pravo, Vol. 2, Zagreb, 2001.

[22] A rich source of information on the history of forgery can be found on Wikipedia, The Free Encyclopedia, article Art Forgery, http://en.wikipedia.org/wiki/Art_forgery, 10-08-18: «Art forgery dates back more than two-thousand years." Links lead to many other sources.

[23] See also web site Heilbrunn Timeline of Art History Metropolitan Museum of Art, http://www.metmuseum.org/toah/hd/rogr/hd_rogr.htm, 10-08-14, where it is stated «Soon, educated and wealthy Romans desired works of art that evoked Greek culture. To meet this demand, Greek and Roman artists created marble and bronze copies of the famous Greek statues. Molds taken from the original sculptures were used to make plaster casts that could be shipped to workshops anywhere in the Roman Empire, where they were then replicated in marble or bronze. Artists used hollow plaster casts to produce bronze replicas. Solid plaster casts with numerous points of measurement were used for marble copies.»

[24] Vukmir, Mladen, 'The Roots of Anglo-American Intellectual Property Law in Roman Law' (1991) 32 IDEA. See also note 130 below.

[25] See also Heilbrunn Timeline of Art History Metropolitan Museum of Art web site, http://www.metmuseum.org/toah/hd/carp/hd_carp.htm, 10-08-14, stating: "There Carpeaux was trained both by the controversial modèle estampe method of copying prints after master drawings and by copying eighteenth-century sculpture."

the period of great discoveries in Egypt, replicas of Egyptian monuments became the major target of forgery.

The thematic field of forgery has been expanding ever since, and Italy has, at its time, become the leading country in forgery production. In line with the strong Italian tradition of regional specializations, specific regions specialized in the forgery of specific groups of art objects.

The above listing is made completely randomly. An actual elaboration on the history of forgery would go far beyond the framework of this work. We can conclude that in this activity forgery has always been successful if forgers successfully adopted high skills of the original author and complex knowledge about materials, techniques and historical context of the pieces they imitated, i.e., attempted to replicate. Hence, we could say that creativity in the field of forgery has similar proportions to the genuine creative work. Besides standard forgery methods, modern technological possibilities pose new questions.

For instance, let us mention in this context modern copying techniques that are based on digital techniques. Namely, if we accept that the future of material reality is also interpretable as digital, derived from its quantum mechanical properties, we would easily come to the conclusion, considering currently available techniques and their development in the near future, that many, and consequently even all the aspects of our material reality will be expressed digitally. Today we are already able to print various mechanically functional assemblies, perfumes, and architectural models. Many people take it with disbelief that muscle tissue can be printed and copied to demand.[26] Might that in the future be applied also to entire buildings, footwear, clothing or wine?[27] We could almost claim that the question of reality

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[26] The Economist, February 18, 2010, Making a Bit of Me: "The advantage of using a bioprinter is that it eliminates the need for a scaffold, so Dr Atala, too, is experimenting with inkjet technology. The Organovo machine uses stem cells extracted from adult bone marrow and fat as the precursors. These cells can be coaxed into differentiating into many other types of cells by the application of appropriate growth factors. The cells are formed into droplets 100-500 microns in diameter and containing 10,000-30,000 cells each. The droplets retain their shape well and pass easily through the inkjet printing process." http://www.economist.com/node/15543683?story_id=E1_TVVQPGRP. Similar at the BBC: http://www.bbc.co.uk/news/science-environment-12507034. See also BBC programs at: http://www.bbc.co.uk/programmes/p00j74m5, http://www.bbc.co.uk/news/business-14282091, http://www.bbc.co.uk/news/technology-14030720, all links 11-08-05.

In respect of buildings see: http://inhabitat.com/3-d-printer-creates-entire-buildings-from-solid-rock/, http://www.blueprintmagazine.co.uk/index.php/architecture/the-worlds-first-printed-building/, http://mashable.com/2010/04/21/d-shape-sand-printer/, all links 11-08-05.

Although it is difficult to imagine digitally expressing wine, the perfumes have their digital expressions. See e.g. Perfume spraying printer, United States Patent 5975675, http://www.google.com/patents?id=eJkXAAAAEBAJ&printsec=abstract&source=gbs_overview_r&cad=0#v=onepage&q&f=false, 11-08-05.

[27] Wikipedia, The Free Encyclopedia, article 3D printing, http://en.wikipedia.org/wiki/3d_printing, 2010-08-05, «3D printers offer product developers the ability to print parts and assemblies made of several materials with different mechanical and physical properties in a single build process. Advanced 3D printing technologies yield models that closely emulate the look, feel and functionality of product prototypes.

In recent years 3D printers have become financially accessible to small- and medium-sized business, thereby taking prototyping out of the heavy industry and into the office environment. It is now also possible to simultaneously deposit different types of materials.» See also, The Economist, A Factory on

digitalization is crucially defined only by processing and computer power available to our civilization. It is even more relevant to take into analysis the development of a subtype of 3D printing able to produce biologically functional organs. That combined digital-organic materialization demonstrates, to an even larger extent, the great advancement achieved by digitalization of our material reality.[28] Significant progress was made in the research of direct brain-computer interface, so we can expect completely new challenges when idea-sharing will be enabled via computer networking.[29] What we wish to point out is that it is difficult to see the present copyright system remaining intact if the sharing of ideas becomes a reality as it seems it will become. We will address this question in a future articles that will follow this work. Let us now concentrate on copying technologies.

MODERN TECHNIQUES OF SPATIALLY FORMED OBJECTS DIGITALIZATION

Technology is, in our opinion, the generator of changes and realignment in society that will, in turn, impose changes within the legal system. During the history technologies have already proven their ability to play a crucial role in changing the legal intellectual property rights protection system. Let us have a glimpse at the technologies that today serve the purpose of spatial formation, a role played in the past by sculpture and architecture. In doing so, it could be inciting to consider the reflections characterizing the period of high-analogue culture flourishing. Late 19th and early 20th century sowed the invention of many analogue reproduction techniques, such as film projector, diorama, piano roll, and different types of gramophones.[30]

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your Desk; Manufacturing: Producing solid objects, even quite complex ones, with 3-D printers is gradually becoming easier and cheaper. Might such devices some day become as widespread as document printers?, 09-09-03, http://www.economist.com/node/14299512, 10-08-15

[28] Wikipedia, The Free Encyclopedia, article 3D organ printing http://en.wikipedia.org/wiki/Organ_printing CAD/CAM Technologies, 2010-08-05,: "Because most of the above techniques are limited when it comes to the control of porosity and pore size, computer assisted design and manufacturing techniques have been introduced to tissue engineering. First, a three-dimensional structure is designed using CAD software, then the scaffold is realized by using ink-jet printing of polymer powders or through Fused Deposition Modeling of a polymer melt.[12]."

[29] As per the technologies enabling a direct link between computer and persons see Wikipedia, The Free Encyclopedia, article Brain-Computer Interface, http://en.wikipedia.org/wiki/Brain-computer_interface, 10-08-18, and also the article Brain Implant, http://en.wikipedia.org/wiki/Brain_implant#Brain_implants_in_fiction_and_philosophy, 10-08-18, especially sections Ethical Considerations and Brain Implants in fiction and philosophy. For a more complete information on advanced state of brain-machine interface technique development see the chapters of: Brockman, John, Editor, This Will Change Everything: Ideas That Will Shape the Future, HarperCollins, 2010, pp. 104-157, including esseys by Gary Marcus, Jamshed Bharucha, Leo M. Chalupa, Susan Blackmore, Kenneth W. Ford, Freeman Dyson, Peter Schwarz, et al.

[30] Vukmir, Mladen, Influence of Technological Development on Copyright and Legal Nature of the Subject of Intellectual Property Protection (in Croatian), Zbornik Hrvatskog društva za autorsko pravo, Vol. 2, Zagreb, 2001. *Diorama*, 1823 as a type of picture-viewing device, from Fr. *diorama* (1822), from Gk. di- "through" (see dia-) + orama "that which is seen, a sight" (see panorama). Meaning "small-scale replica of a scene, etc." is from 1902.

As a consequence of those changes, our civilization lived then in the grip of new possibilities, which since the appearance of Gutenberg's printing technique were unprecedented as to implied cultural influence. We could say that strong worries, sometimes even fears, philosophers felt at that time at the prospect of innovations, today constitute a good model for reflecting on modern times. In mid-20th century the standpoints confirming the existence of a consensus over the fact that technology would actually lead to great changes in the civilization became clear. Paul Valéry at the time stated:

> Our fine arts were developed, their types and uses were established, in times very different from the present, by men whose power of action upon things was insignificant in comparison with ours. But the amazing growth of our techniques, the adaptability and precision they have attained, the ideas and habits they are creating, make it a certainty that profound changes are impending in the ancient craft of the Beautiful. In all the arts there is a physical component that can no longer be considered or treated as it used to be, which cannot remain unaffected by our modern knowledge and power. For the last twenty years neither matter nor space nor time has been what it was from time immemorial. We must expect great innovations to transform the entire technique of the arts, thereby affecting artistic invention itself and perhaps even bringing about an amazing change in our very notion of art.[31]

We could almost envy our predecessors for this moderate anticipation of changes which, less than three generations ago, they deemed so fatal, given that the changes we are facing are immeasurably deeper and stronger than those they came across upon the introduction of analogue technologies. Therefore, if we accept that the potential for generating changes was significant in the era of high analogue development, we believe that we will have no particular problem in accepting the fact that the beginning of full digitalization of society cannot even be compared in terms of magnitude to the changes taking place in the 20th century. Let us have a brief look, without further discussion, at examples of the technologies that today are already completely adopted. We have selected only two techniques applied for digital copying of 3D objects, ignoring thereat the promises of technologies that are currently being explored and yet to be introduced.[32] Continuous alternation of technological

[31] Paul Valéry, Pièces sur L'Art, 1931, Le Conquete de l'ubiquite "" Quoted according to Walter Benjamin, The Work of Art in the Age of Mechanical Reproduction, http://www.marxists.org/reference/subject/philosophy/works/ge/benjamin.htm. Steve Jobs paraphrased this Valery's paragraph which Benjamin prominently emphasized in his essay by replacing the term art with the term property: «We must expect great innovations to transform the entire technique of the arts, thereby affecting artistic invention itself and perhaps even bringing about an amazing change in our very notion of property." (Steve Jobs, Keynote, MacWorld San Francisco 2004), according to Wizzards of OS web site http://www.wizards-of-os.org/index.php?id=711&L=3, 10-08-11.

[32] See Wikipedia, The Free Encyclopedia, article Simple microchip implant techniques: http://en.wikipedia.org/wiki/Microchip_implant_%28human%29, and the page showing the actual achievements of said technology: http://en.wikipedia.org/wiki/VeriChip, 10-08-16, and speculations on possible achievements of said and similar technologies: http://en.wikipedia.org/wiki/Cyborg, and http://en.wikipedia.org/wiki/Ambient_intelligence, 10-08-16.

and social scenery is characteristic to the introduction of any new technology, including these digital reproduction techniques and associated business models.

Three-dimensional Scanners

We wish to present very common technologies, frequently applied today that many of us still see as science fiction.[33] Digital scanners[34] are devices for the perception and digitalization of three-dimensional shapes, which generally use laser technology to perceive and store digital models of real-world objects. These devices analyze objects from the environment and collect data, including color, which can then be used to construct 3D models. The purpose of 3D scanners is to reconstruct objects from the analogue domain using digitally collected data.[35]

Generally, we know of two types of 3D scanners, namely, contact scanner, which requires physical contact with the object being scanned, and non-contact scanner, which uses light reflections, ultrasound or x-ray to scan the object.

Areas of their application include, for instance, industrial design where they accelerate the conversion of models into prototypes and vice versa, documentation of cultural artifacts where they have a similar role, and the entertainment industry where they make production of films, computer games, etc., faster through rapid introduction of models of real-world objects into digitalized 3D images.[36] An early example of statue scanning dates back to 1999 when Marc Levoy from Stanford University and H. Rushmeier and F. Bernardini from IBM scanned Michelangelo's statues in Florence.[37]

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[33] Although I have personally never seen any particular satisfaction in science fiction, we can not deny that many predictions of leading science fiction authors were very constructive and, above all, exact prevision of technological advancements. Arthur C. Clarke, thus, claimed: «Any sufficiently advanced technology is indistinguishable from magic." See web site Wikipedia, The Free Encyclopedia, Clarke's three laws: http://en.wikipedia.org/wiki/Clarke%E2%80%99s_three_laws

[34] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *scan* (v.), late 14c., "mark off verse in metric feet," from L.L. *scandere* "to scan verse," originally, in classical L., "to climb" (the connecting notion is of the rising and falling rhythm of poetry), from PIE **skand-* "to spring, leap" (cf. Skt. skandati "hastens, leaps, jumps;" Gk. *skandalon* "stumbling block;" M.Ir. *sescaind* "he sprang, jumped," *sceinm* "a bound, jump"). Missing -d in English is probably from confusion with suffix -ed (see lawn (1)). Sense of "look at closely, examine" first recorded 1540s. The (opposite) sense of "look over quickly, skim" is first attested 1926. The noun is recorded from 1706.

According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; scanner, 1927 as a type of mechanical device, agent noun from scan.

[35] Article 3D scanner, Wikipedia, English web site, 2010-08-05, http://en.wikipedia.org/wiki/3D_scanner «A 3D scanner is a device that analyzes a real-world object or environment to collect data on its shape and possibly its appearance (i.e. color). The collected data can then be used to construct digital, three-dimensional models useful for a wide variety of applications. These devices are used extensively by the entertainment industry in the production of movies and video games. Other common applications of this technology include industrial design, orthotics and prosthetics, reverse engineering and prototyping, quality control/inspection and documentation of cultural artifacts.»

[36] Z Corporation scanner technology is highly developed, as the printer technology, so ZScanner 700 was a successful portable laser scanner model. See Z Corporation web site: http://www.zcorp.com/en/home.aspx, 10-08-17.

[37] See web site The digital Michelangelo project: 3D scanning of large statues, http://portal.acm.org/citation.cfm?id=344849, 10-08-18

More recent examples date to the last decade, e.g., 2002 when David Luebke scanned Thomas Jefferson's house. The scanner data were combined with color data from digital photograph to create the virtual model of his home, exhibited in the New Orleans Museum of Art in 2003.[38]

Three-dimensional Printing or Stereolitography[39]

Digitalization of the real-world requires also reproduction technology of 3D object created or stored in a digital environment in order to transfer digital matter from the cyberspace domain back to analogue, virtual space domain. Among the technologies in use today are DLP (*Digital Light Projection*), FDM (*Fused deposition modeling*), SLS (*Selective laser sintering*) and DMLS (*Direct Metal Laser Sintering*), stereolitography and the most popular technologies where 3D object is created by laying down successive layers (inkjet).

One of the technologies used for 3D printing (*Photopolymer Phase Machines*) consists of combined use of ultraviolet light or laser to cure the thickness of each layer as it is deposited. Thanks to the use of powder, polymer, wax or metal this technology enables printing of nearly any imaginable shape. Development of high-volume metal prints is also in progress. All the technologies are able to produce mechanically functional prints corresponding to the recreation of the model of a tangible shape.

Even though their works shall be mentioned below, when analyzing sculpture terminology, we must mention that artists have started using advanced technologies quite early, as they have done in the past. Hence, 3D printing technology attracted artistic work over a decade ago. An example of such early artistic activity is represented by the work of Bathsheba Grossman, a Californian artist combining computer design and 3D modeling, with metal objects printing technology.[40]

It needs to be pointed out that 3D printing in all of its additive manufacturing facets is progressing in strides as we prepare this article. Recently a first airplane en-

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[38] See David Luebke web site, with many 3D reproduction-related projects, http://luebke.us/, 10-08-17.

[39] Wikipedia, The Free Encyclopedia, article 3D printing, http://en.wikipedia.org/wiki/3d_printing, 10-08-17, «The democratization of 3D printing is evolving in two streams, firstly with DIY 3D Printers such as MakerBot and RepRap for home 'desktop manufacturing'. The second stream is through online services such as Shapeways that allow users to upload their designs to have them 3D printed in a wide range of materials (currently 20 material options) and shipped worldwide. The creation of tools that enable 3D printing without the direct use of CAD are also currently being implemented." Likewise, article Stereolitography, http://en.wikipedia.org/wiki/Stereolithography, 2010-08-05, see also Solid Concepts web site, a company for Rapid-Prototyping, i.e., production of 3D prototypes https://www.solidconcepts.com/, 10-08-17. Z Corporation printers, such as ZPrinter 450 or 650 enable 3D color printing. ZPrinter 310 Plus enables high-speed printing. See Z Corporation web site: http://www.zcorp.com/en/home.aspx, 10-08-17

[40] Bathsheba Grossman, web site http://www.bathsheba.com/, 10-08-17.

tirely manufactured by a printer has flown.[41] As stated elsewhere in this article also the first building has been printed.[42]

SCULPTURE – SPATIALLY-FORMED WORK OF ART

We have chosen sculpture as the subject of analysis of the specific language related to the designation of original and copy, as it is one of the earliest expressive and artistic human activities, and thus enables insight into the constant of copying development during various historical periods. Hence, we will start our analysis by probing the pertinent language and phenomenology of one of earliest named copyrightable works.[43] We will pay attention that, in the case of works of sculpture, there is a clear correspondence between the copyright terms and their equivalents in the artistic field. In doing so, we have chosen an artistic form, which not only is among the most ancient manners of human artistic expression, but since the beginning has been subject to copyright protection.[44] Expression with spatial forms is certainly one of the longest human artistic expression practices and may thus enable optimum insight into the constants of creation and copying in different historical phases. Using this approach we will be able to define the methodology of research to be used

[41] "Engineers at the University of Southampton have designed and flown the world's first 'printed' aircraft, which could revolutionize the economics of aircraft design. The SULSA (Southampton University Laser Sintered Aircraft) plane is an unmanned air vehicle (UAV) whose entire structure has been printed, including wings, integral control surfaces and access hatches. It was printed on an EOS EOSINT P730 nylon laser-sintering machine, which fabricates plastic or metal objects, building up the item layer by layer. No fasteners were used and all equipment was attached using 'snap fit' techniques so that the entire aircraft can be put together without tools in minutes." http://www.soton.ac.uk/mediacentre/news/2011/jul/11_75.shtml, 11-07-25

[42] "In a small shed on an industrial park near Pisa is a machine that can print buildings. The machine itself looks like a prototype for the automotive industry. Four columns independently support a frame with a single armature on it. Driven by CAD software installed on a dust-covered computer terminal, the armature moves just millimeters above a pile of sand, expressing a magnesium-based solution from hundreds of nozzles on its lower side. It makes four passes. The layer dries and Enrico Dini recalibrates the armature frame. The system deposits the sand and then inorganic binding ink. The exercise is repeated. The millennia-long process of laying down sedimentary rock is accelerated into a day. A building emerges. This machine could be used to construct anything. Dini wants to build a cathedral with it. Or houses on the moon." http://www.blueprintmagazine.co.uk/index.php/architecture/the-worlds-first-printed-building/, 11-08-05.

[43] CRRA, II COPYRIGHT, Chapter 1 SUBJECT MATTERS, COPYRIGHT WORK, Article 5

1) A copyright work shall be an original intellectual creation in the literary, scientific and artistic domain, having an individual character, irrespective of the manner and form of its expression, its type, value or purpose, unless otherwise provided for in this Law.

(2) The Copyright works shall be in particular:

(...) – works of visual art (in the field of painting, sculpture, and graphics), irrespective of the material they are made of, and other works of visual arts,

– works of architecture,

– works of applied art and industrial design, (...)

[44] See Vukmir, Mladen, Influence of Technological Development on Copyright and Legal Nature of the Subject of Intellectual Property Protection (in Croatian), Zbornik Hrvatskog društva za autorsko pravo, Vol. 2, Zagreb, 2001, pp. 9-40.

in a subsequent terms analysis, constituting one of the purposes hereof. In short, the analysis will include examination of the frequency of terms usage in the artistic practice, etymological structure of the terms, their semiotic aspects and frequency or absence of such terms in legal science and, finally, drawing conclusions on the meaning of the examined term in the context of both legal and artistic disciplines. In conclusion, we will try to outline the future development anticipated by the complex of relations regarding the concept echo of the chosen terms refers to.

As an introduction to the analysis of nature of copying, we will take the example of sculpture, a branch of art characterized by the highest degree of definition through spatial presence. In this context, we will use the term statue (Lat. *statua*, from *statuere*, to set up, also *status*, social position)[45] as a synonym of sculpture, considering that Latin terminology has, in our opinion, stronger universal value, more adequate for modern needs than national terminology.

Interestingly, and not by coincidence, legal terminology uses the term *statute*, which is derived from the essentially same PIE root in order to denote a notion of a regulation intended to define a long-term shapes for social relations.[46] In that connection we were always wandering why the lawyers do not take the same amount of responsibility which urban planners and architects are prepared to undertake when they plan spatial organization that will be shaping social relations of the communities where such structures are to be erected for many years after the point of their creation. In that respect it is important to note that architecture is close to sculpture

[45] According to Online Etymology Dictionary, http://www.etymonline.com, 2010-08-04, *statue*, c.1300, from O.Fr. *statue* (12c.), from L. *statua* "image, statue," prop. "that which is set up," back-formation from statuere "to cause to stand, set up," from *status* "a standing, position," from *stare* "to stand" (see stet). Statuary is from 1563. Statuesque is from early 1820s, patterned on picturesque. Dim. statuette, with Fr. ending, is first recorded 1843. The children's game of statues is attested from 1906. Related to constitute, mid-15c., verb use of adjective constitute, "made up, formed" (late 14c.), from L. *constitutus* "arranged, settled," pp. adj. from *constituere* "to cause to stand, set up, fix, place, establish, set in order; form something new; resolve," of persons, "to appoint to an office," from com-, intensive prefix (see com-), + *statuere* "to set" (see *statue*). Related: Constituted; constituting.

According to Online Etymology Dictionary, http://www.etymonline.com, 2010-08-04, *sculpture*, late 14c., from L. *sculptura* "sculpture," from pp. stem of *sculpere* "to carve, engrave," back-formation from compounds such as *exculpere*, from *scalpere* "to carve, cut," from PIE base *(s)kel- "to cut, cleave." *Sculptor*, 1630s, from L. *sculptor*, agent noun from *sculpere* (see sculpture). *Sculpt*, 1864, from Fr. *sculpter*, from L. *sculpt-*, pp. stem of *sculpere* "to carve." The older verb form was *sculpture* (1645).

During recent art history the term *sculpture* has experienced certain repositioning. Hence, during the middle of last century the term *mobile*, indicating sculptures having a different degree of solidity in space, appears. Generally mobiles are objects with moving parts, later evolving to ensemble of moving three- dimensional parts and other elements, for instance light. M*obile* (adj.), late 15c., from M.Fr. *mobile*, from L. *mobilis* "movable," from *movere* "to move" (see move). The noun is early 15c. in astronomy; the artistic sense is first recorded 1949 as a shortening of *mobile sculpture* (1936). (...)

[46] It is interesting to note the closeness to the legal term *statute*, late 13c., from O.Fr. statut, from L.L. statutum "a law, decree," noun use of neuter pp. of L. statuere "enact, establish," from status "condition, position," from stare "to stand" from PIE base *sta- "to stand" (see stet). Statutory first attested 1717; statutory rape, in U.S., "sexual intercourse with a female below the legal age of consent, whether forced or not," is recorded from 1898. Online Etymology Dictionary, http://www.etymonline.com, 2011-06-28. We cannot but to remark that apparently, carnal motives seem to drive legal terminology just as they drive introduction of new technologies.

insofar that it involves shaping spatial forms, therefore also pertinent to our observations here. Architecture's characteristic of being able to shape long-term human relations has been long noted.[47] If the urban planners make meaningful projections ten or twenty years ahead, and such planning effects social relations in a community, why wouldn't the lawyers attempt to do the same? Once lawyers accept responsibility for their format of shaping social relations, their contribution to building relations on which our societies rests should be recognized, and their role in their societies enhanced in stature. However, we should devote space to the research of this issue in another article, and shall revert to our study of sculptural issues in the field of copyright here.

Traditionally, sculpture, as definition of three-dimensional volume in space, is the epitome of materiality. Apart from the spatial characteristics, primarily the material of which it is made has always distinguished it. Traditionally, sculpture is a three-dimensional work of plastic arts created by carving, modeling, fabricating or casting.[48] Sculpture forms are created using two basic methods, called plastic arts techniques: modeling[49] and carving[50].

In spite of their exceptional "materiality", in the sense of their three- dimensional presence in space, sculptures are particularly interesting for their property of high reproducibility. In fact, long ago it was noticed that copying was more inherent

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[47] Winston Churchill famously remarked that "We shape our buildings, and afterwards our buildings shape us.", *House of Commons (meeting in the House of Lords), 28 October 1943*. http://www.winstonchurchill.org/learn/speeches/quotations, 2011-06-28.

[48] Dimitrijević, Braco, Accidental Sculpture, http://bracodimitrijevic.com/index.php?album=early_works&image=early_works_008.jpg, 10-08-08. Braco Dimitrijević did some interesting re-examinations of sculpture three-dimensionality and materiality in the 60s. Dimitrijević disperses a pile of gypsum powder on the street. Accidental passing-by of a car makes its driver the author of three- dimensional cloud of dust, perceived like sculpture by observing the space it fills. Furthermore, in conceptual art tradition this shape is fixed in a photograph as a document of three-dimensional shape in space. The original shape, due to the principle of the second law of thermodynamics, is unrepeatable, but the photo can be copied. It is interesting Dimitrijević's comment on the authorial aspect of the work revealing that not only the aspect of sculpture but also the aspect of authorship is subject to re-examination: «In my work we have, in a way, this transfer of authorship to somebody who is unknown, somebody who created a visual change by accident. But then, this person had the opportunity to recognize that this was something of visual importance, and thus, signed and confirmed the existence of this artwork." The author comments his work also on ArtFacts.net web site, http://www.artfacts.net/index.php/pageType/newsInfo/newsID/4217/lang/1, 10-08-08.

[49] Croatian Wikipedia, The Free Encyclopedia, article Sculptural techniques, http://hr.wikipedia.org/wiki/Kiparske_tehnike, 10-08-10, "Modeling is, for instance, when a sculptor models (shapes) formless mass of clay by hand, pressing or stretching, adding or taking away. When the clay is dried or fired, the sculpture is hardened and gets the final form which may be reproduced (e.g. in bronze) by molding. Modeling can be performed also in other materials: paper, cardboard, sheet metal, synthetic materials, glass (by casting), steel, etc.»

[50] Croatian Wikipedia, article Sculptural techniques, http://hr.wikipedia.org/wiki/Kiparske_tehnike, 10-08-10, «Carving means creating a smaller desired shape from larger piece of material – wood, stone, marble, plaster - by splitting, cutting or shaping.» Please note the relation to the "additive" and "subtractive" forms of 3D manufacturing discussed in relation to the 3D printing technologies, Wikipedia, The Free Encyclopedia, article Additive Manufacturing: http://en.wikipedia.org/wiki/Additive_manufacturing, 11-08-01.

to sculpture than it was to painting. While copying of painting works was considered possible only with high-level skills, sculpture has always been easier to copy, whether by making a duplicate in clay, stone or, especially, casting into metal or alloy mold.[51]

Copyright law protects works of visual art (painting, sculpture and graphic art), whatever may be the material of which they are made, as well as other works of fine art, works of architecture, works of applied art in some copyright systems, etc. According to copyright laws of many countries various forms of completeness of sculpture will enjoy protection. Complete copyright work, incomplete work, parts of work meeting originality and individuality criteria and alterations if they constitute original intellectual creations and have individual character (e.g., adaptations, arrangements, etc.) shall enjoy protection as sculptural artwork. As in the case of all works of art, ideas for sculpture creation, processes and working methods are neither in sculpture subject to protection.[52]

In this article we shall occasionally revert to the particular legal provisions. Our method is not comparative and we shall not venture in comparing various particular provisions from copyright systems of various countries. Rather, in order to be able to demonstrate the characteristics of legal approach to legislating creativity we shall use the Croatian copyright law. This is a modern Continental European copyright legislation based on the German doctrine and incorporating all of the *acquis communautaire*, due to the impending Croatian EU integration. Simplified, it is as good as any copyright law for the purpose of this analysis.

We should now start the task we have undertaken. We will choose particular terms considered indicative and analyze them according to the above-described methodology, with no intention of conducting an exhaustive or conclusive research. The terms are roughly arranged according to the level of their closeness to the original, i.e. those that require less steps of reproduction are closer following the analysis the term original. Let us start from the beginning and see what results we will obtain.

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[51] The materials used in sculpture include clay, modeling clay, wax, plaster, bronze, wood, stone, wire, glass, ivory, sheet metal, aluminum and copper foil, paper-plastic, papier mâché, plastic, bitumen and other materials, combined technique (various materials), incrustation, assemblage.

[52] Pursuant to the Copyrights and Related Rights Law ("Official Gazette" No. 167/03 and 79/07, hereinafter: CRRA) a copyright work shall be an original intellectual creation in the artistic domain, irrespective of the manner and form of its expression, its type, value or purpose. Art. 5 CRRA

Unique (Lat. *unicus*; the only, the single one of its kind, original)[53]

A single copy of the original work of visual arts,[54] in this case sculpture,[55] without ever being copied upon author's consent, represents a unique artwork. The unique work shall remain such regardless of unauthorized copying, since its status is based on the fact that the author has never copied or authorized the copying of the original. This shall apply both related to the absolute original work and relative original, i.e., derived work. In the context of sculpture the fact that it needs to be specifically pointed out that there is only one copy of artwork becomes evident, as if it was implied that there could be more than one copy, as if copying was almost a natural property of the work of art. We should remember that in traditional sculpture making methods often the author first sketches a two-dimensional model of the future piece, than he creates a three-dimensional model on a smaller scale, often in clay, and than he proceeds with the creation of the final real-size model, often in plaster and only thereafter with the creation of metal or alloy mold where the piece shall be cast, or carved into stone. Elaborate techniques that include various devices using metal pins, sprues or other tools are deployed to transfer the sculptures from the mold into the final material and to help maintain proportions in the case various sizes are being sculpted. Hence, even in the case of unique work, the preceding forms are strictly related to the final work and it is actually possible that each of these stages represents protected work of art, each one possibly a unique original, all depending on the expressed will of an author.[56]

In the case of digital works, files containing earlier versions of the work are created, whereupon we can expect that many such earlier versions shall simply be replaced by later versions of the same work in the same file. This neatly demonstrates the disposability of digital copies, from the "mere transitional copies" stored into computer memories for purely technical reasons during the regular usage and automatically discarded in the process, to the numerous versions of a work stored during the process of creating by the author and by the computers in the process of backing-up.

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[53] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *unique*, c.1600, "single, solitary," from Fr. *unique*, from L. *unicus* "single, sole," from unus "one" (see one). Meaning "forming the only one of its kind" is attested from 1610s; erroneous sense of "remarkable, uncommon" is attested from mid-19c.

[54] Art.35 CRRA

[55] Wikipedia, the Free Encyclopedia, article Sculpture, http://en.wikipedia.org/wiki/Sculpture, 10-08-05. See also articles Bronze Sculpture, http://en.wikipedia.org/wiki/Bronze_sculpture, Stone Carving, http://en.wikipedia.org/wiki/Stone_carving, Wood Carving etc. Many of those articles describe numerous specific techniques for reproducing copies. It is easy to remain impressed by the level of knowledge and intricacy of the techniques humanity developed in order to be able to reproduce copies.

[56] For a concise overview of the types of authors relation to their works see: Gradation of Originality in Sculpture; Valuation of Sculptures in Procedures of Casting and Safeguarding of Gypsum Casts, ANALI year XXVIII-XXIX (2008 2009), No. 28-29, 421-460, pp. 209-217.

Replica (Lat. *replicare*, to repeat, reply)[57]

In visual arts replica is principally a work of art resulting from a reproduction process whereby the author makes a copy of the original.[58] In addition to this meaning, the term replica is used also to indicate works of art created with a new application of the same artwork motif, i.e., a work of art created as a reflection of an earlier artwork of the same author, the new piece being created by other masters.[59] Replica is often created if the unique work of art was lost or destroyed, but is known to the person recreating it who has a legitimate artistic or historical motive, order or other context making the creation of such replica highly legitimate, as is the case for the facsimiles that are actually a subset of replicas (as discussed bellow).

In addition to the above-described meaning, the term replica is also used to indicate works of art legally reproduced for commercial reasons, for sale to customers who agree to have in their possession a work of art created by anonymous higher or lower quality masters for different reasons. Nowadays, there is a very developed business activity and web-based trade of such replicas of works for which copyrights have expired. *Museum Replicas* is an interesting example of company specialized in recreating world famous masterpieces using, allegedly, the same techniques once employed by the original artists.[60] Replicas of bronze, marble and wood sculptures and other types of works of art are created on order. There are many web-based business projects dealing with the creation of famous artworks replicas.[61]

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[57] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *replica*, 1824, from It. *replica* "copy, repetition, reply," from L. *replicare* "to repeat" (see reply). Properly, a copy of a work of art made by the original artist.

[58] See Fondation Beyeler web site, http://www.beyeler.com/fondation/e/html_15information/info-04pres/pres_05son/17modrian_malewitsch/02_modrian_long.htm, 10-08-10, "The exhibition includes a replica made by the artist in 1923 of his triptych of 1915, from the Russian Museum in St. Petersburg." and Books and Writers, http://www.kirjasto.sci.fi/malevich.htm, 10-08-10, "In Russia Malevich produced replicas of many of the paintings he had left in Germany. "

[59] See web site World Architecture News.com, http://www.worldarchitecturenews.com/index.php?fuseaction=wanappln.projectview&upload_id=1912, 10-08-10, "One room is dedicated to Russian artist and architect Vladimir Tatlin and is dominated by replica huge model of his original designed to celebrate post-Czarist Russia." Tate Papers web site, https://www.tate.org.uk/research/tateresearch/tatepapers/07autumn/leleu.htm, 10-08-10, "This lost work has been reconstructed several times and each artifact synthesizes and formalizes a different state of knowledge in a given form and time. Pontus Hultén has been a major protagonist in at least two of these reconstructions. Various exhibitions justified their production, a recurrent circumstance in the history of replicas and reconstitutions of twentieth-century works of art." Also Metropolitan Museum of Art, http://www.metmuseum.org/toah/hd/duch/hd_duch.htm, 10-08-14, with photograph of Duchamp's Bottle rack replica.

[60] Web site of company Museum Replicas: http://www.museum-replicas.com, 10-08-08, outlines that in the production of replicas original techniques are used. Reproductions repertoire is not related only to sculpture, but also to works of architecture, painting and applied art. For instance, related to sculpture, replica of A. Rodin's *The Kiss* is available in sizes from 60 to 180 cm at a price from USD 4,650.00 to 18,345.00.

[61] See e.g. Fabulous Masterpieces web sites, http://www.fabulousmasterpieces.co.uk/page13.htm, 10-08-10, Classic Repro: http://www.classicartrepro.com/, 10-08-14, WahooArt, http://en.wahooart.com/, 10-08-14, or the web site of Steven Haigh, fine art painter promoting his copyist activities, in addition to his secondary portrait-painting activity: http://www.fineartcopies.com/, 10-08-14

The skills and virtue of fine reproduction in many Asian countries constitute values, which have a position comparable to the artistic contribution. With the growth of Chinese economy, this quality has also gained its position in export business. Thus, in addition to counterfeits production, nowadays China is producing large amounts of replicas, principally of classic works of art whereon copyrights have expired. Nevertheless, given that such copies are handmade and have not necessarily the same details as the original, many Chinese exporters point out that such works must also be treated as derived works, i.e., alterations and permit them to be placed on the market.[62]

Obviously, the term replica indicates to the long established and extensive craft of producing legitimate or justified copies in the analogue world, based on the set of skills that the original artist might use or approve of. However, it is important to bear in mind that the term replica has recently become popular among forgers of products protected by industrial property rights, especially fake watches. It seems that use of art terms implies the attempt to give to fake products market dignity they would not otherwise have.

Multiple (Lat. *multiplus*; manifold, multi-type, multiplex)[63]

Multiple is a work of visual art made in a technique allowing copying under specific technical, sales and other conditions. In the context of sculpture the term is related to cast sculptures. Clearly, this meaning implies multiplicability as an inherent property of cast sculpture, as outlined above. In the legal sense multiple would represent the name of the copy produced by authorized multiplication of the original work of art, which will thereupon cease to be unique. Furthermore, it ensues that replica could also be realized as multiple, revealing that language finesses are not subject to strict categorization and that many language qualifications actually depend on the context of each artistic project.

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[62] See New York Times article dated 05-07-15, «Own Original Chinese Copies of Real Western Art!», 10-08-14, Times, stating: "Exporters of Chinese paintings say that even though the paintings often imitate well-known works of art, the copies are inherently different because they are handmade, and so do not violate copyrights. Robert Panzer, the executive director of the Visual Artists and Galleries Association, a trade group based in New York, disagreed. He said that the vast majority of paintings produced before the 20th century were in the public domain and could be freely copied and sold. But it is not legal to sell a painting that appears to a reasonable person like a copy of a more recent, copyrighted work, he said."

[63] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *multiple*, 1640s, from Fr. *multiple*, from L.L. *multiplus* "manifold," from L. multi- "many, much" + -plus "fold," from base of plicare "to fold, twist;" see ply (v.)). Multiple exposure first recorded 1923.

Series (Lat. *seris*; row, kind, corrtege, *serere*; to join)[64]

A series is a group of works linked by a common feature, where copies are not presumed to be identical, but to a certain extent variations of the genuine work. Also, in the copyright sense we start from the definition of the original work of visual art.

Although we find no practical significance in the following solution, on a speculative level we could state that the author of the series, provided that during the exposition the series remains and is sold integral, acquires at the same time copyrights in the collection, obtaining, thus, two legal grounds for protection. Namely, even though it appears that the list of works that can constitute a collection of independent copyright works described in various copyright laws as protectable works of art[65] has not been made taking into account this possibility, in case the author selected the works that will constitute a collection, we believe that the conditions for such dual protection could be acquired. This is so because the laws often provide that if collections constitute personal intellectual creations of their authors *by reason of the selection or arrangement* of their constituent elements which themselves represent independent works of art, they are protected as independent works of art.[66]

Version (Lat. *versio, vertere*; to turn, revolve)[67]

The term version indicates generally one of several different works with the same content, or variety, variant, different representation of the same author's thought. Bearing in mind that even the final published variety of author's work is often not quite definitive, in the sense that often the author continues to develop the idea of work fixed in the "final" published version, we deem necessary to point towards the natural course and constant development of the idea dominated by variability as essential constituent. Even though this article will not examine one of the essential premises of creativity, which in copyright law is the relation between idea and work

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[64] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *series*, 1610s, "a number or set of things of one kind arranged in a line," from L. *series* "row, chain, series," from *serere* "to join, link, bind together, put," from PIE base **ser-* "to line up, join" (cf. Skt. *sarat-* "thread," Gk. eirein "to fasten together in rows," Goth. *sarwa* (pl.) "armor, arms," O.N. *sörve* "necklace of stringed pearls," O.Ir. *sernaid* "he joins together," Welsh *ystret* "row"). Meaning "set of printed works published consecutively" is from 1711. Meaning "set of radio or television programs with the same characters and themes" is attested from 1949.

[65] CRRA, Chapter 1. SUBJECT MATTERS, Collections and Databases, Article 7: (1) Collections of independent works, data or other materials, such as encyclopedias, collections of documents, anthologies, databases, and the like, which by reason of the selection or arrangement of their constituent elements constitute personal intellectual creations of their authors shall be protected as such.

(2) The protection enjoyed by the collection referred to in paragraph (1) of this Article, shall not extend to its contents and shall in no way prejudice the rights subsisting in the works and subject matters of related rights included in the collection. (...)

[66] In other words, the wording of Art. 7 CRRA could also cover series.

[67] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *version*, 1582, "a translation," from M.Fr. version, from M.L. *versionem* (nom. *versio*) "a turning," from pp. stem of L. *vertere* "to turn" (see *versus*). Also with a M.E. sense of "destruction;" the meaning "particular form of a description" is first attested 1788.

of art, referring to versions, we must say that the requirement of fixation, i.e., expression, as a precondition for work of art protection, actually conceals and obscures the nature of idea development. In that sense the phenomenon of version of work of art is an emancipation of creativity from strict requirements of copyright. By this we mean that it is actually the series of versions that is the natural state of interaction between author and his idea. The idea thus manifestly, through a series of versions, results in the unity of its evolution with many possible versions of a work of art emerging on the path of expression.

In the creation of digital works this is even more visible, whereby files storing earlier versions of the work appear, one upon the other in the sequence of creation. It can be expected that many earlier versions will simply be replaced in the same file by later versions of the same work. This process can continue even after the publication and making available of a work of art if the author continues to work on the work.

Variant (Lat. *varians*; variable)[68]

The term variant indicates generally one of the forms in which the same essential content appears. It is a different representation of an author's idea. A search of New York Metropolitan Museum of Art web sites revealed that in English art language the term *variant* appears in general less frequently that the term *version*. It appears that more often the term variant denotes the relation of the work towards the general, as towards particular styles or other general features, rather than other particular works of the same or different authors.[69]

As with the term version, in the copyright sense we principally rely on the concept of original of a work of visual art and its relation with the concept of alteration.[70] Here the term shall also indicate principally derived copyright work based on the original representing a genuine work of art, where the derivative work is the result of artistic contribution of the same author as well as of the original work. In certain cases the object resulting from artistic contribution may actually be incorporated into copyright protection of the principal work due to minimal contribution achieved by such variant.

Even if we accept the foregoing without reconsideration, our task is to answer the following question: what happens with the original when both the original and its copies are digital? We should bear in mind that nowadays with the use of tech-

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[68] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; variant (adj.), late 14c., from O.Fr. *variant*, from L. *variantem* (nom. *varians*), prp. of *variare* "to change" (see vary). The noun is first attested 1848. Also, *vary*, mid-14c. (trans.), late 14c. (Intrans.), from O.Fr. *varier*, from L. *variare* "change, alter, make different," from *varius* "varied, different, spotted;" perhaps related to *varus* "bent, crooked, knock-kneed," and *varix* "varicose vein," from a PIE base **wer-* "high raised spot or other bodily infirmity" (cf. O.E. *wearte* "wart," Swed. *varbulde* "pus swelling," L. *verruca* "wart").

[69] Web site http://www.metmuseum.org/toah/search/ represents a very rich source for studying art and art history language, considering its representative scope and number of works, and highly specialized and skilled authors whose works are uploaded increase further the relevance of search results.

[70] Art.35 and Art. 36 CRRA, respectively

nology we can compose music and paint, but sculptors are also commencing to use completely digital technology. Let us first see the situation described in a recent interview with the painter David Hockney, where the reporter described how she was receiving electronic paintings made by the artist:

> At the Biennale, sitting outside in the Giardini, checking my iPhone for emails. I'm delighted to discover 24 new messages, all from "DH", all with attachments. He has been sending iPhone drawings to friends over the last few months while he explores the technology. They are mostly still-lifes, with some sunrises. There is something incredibly free and joyful about these little pictures, and, regardless of the technology and their diminutive scale, they are instantly recognisable as Hockneys. I later discover he does them first thing in the morning while he is still in bed. He has a tiny wooden easel on his bedside table where his iPhone rests at night.[71]

Let us ask ourselves which of the copies the author sent simultaneously to a number of his friends is different from the original. The mathematical physicist, Roger Penrose, discusses very deeply about the identity of digital records comparing them with quantum mechanics, however, we shall limit to the prosaic level of culture observation.[72] In that sense, we can conclude that there is no difference between received drawings and the original, initially created by the artist in digital form, as there will be no difference between the original and hundreds and thousands further copies the author's work could undergo, should the recipients of the first twenty-four e-mails decide to share received computer file with other recipients. The only difference would appear when and if one of the recipients was to intervene into such file by giving his author's contribution, or otherwise intervene into the work/file. The nature of digital work creation clearly shows a change in the traditional relation between original and copy and announces implications characteristic of its inherent property, multiplicability. Moreover, this multiplicability is effortless and costless.

These implications clearly indicate that the work is inherently subject to copying, sharing and easy further modification. If we apply to these implications present copyright system rules they will evidently result incompatible with the new properties underlying the nature of digitalization. Copyright law aspiring at controlling copying as a form of control of work of art exploitation will be in collision with the fundamental feature of digitalized work which is inherently multipliable.[73] Copy-

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[71] Intelligent Life magazine, Vol. 3 No. 4, Summer 2010, article Brushes with Hockney, pp. 80-89, http://moreintelligentlife.com/content/arts/karen-wright/brushes-with-hockney, 10-08-17. Italian press reports on Hockney's fashion detail, namely his custom made coat with a big pocket once containing a block of drawing paper was now used by the artist to carry the iPad, whereby he crated a fashion trend trying to resolve the problem of carrying relatively unwieldy iPad.

[72] Penrose, Roger, The emperor's new mind: concerning computers, minds, and the laws of physics, Penguin Books, 1991, pp. 24-25, about philosophical mathematical discourse on quantum mechanical particles identity.

[73] Tobin, Jonathan, Licensing as a Means of Providing Affordability and Accessibility In Digital Markets: Alternatives to a Digital First Sale Doctrine (July 31, 2011). 93 J. Pat. & Trademark Off. Soc'y 167 (2011), pp. 17-21 and the works referened in the pertaining footnotes.

right law striving at preventing alterations made to the work of art without the author's consent will be in conflict with the alterations and contexts such work will go through during its digital life, i.e., digital eternity, considering its permanent presence in cyberspace.

Finally, given that due to objective reasons we will try to restrict our reflections to only one context of creativity, we have examined the foregoing terminology about sculpture as one of traditional creative methods. We have also already mentioned how this traditional activity is changing under the influence of digitalization and networking and using a random selection of the activity and work of California artist Bathsheba Grossman as an example of the current artistic activities. She is one of the authors who combine computer design and 3D modeling and the technology of metal objects printing. By singling out her work we wished to show possible artistic trends regardless of the value of any particular piece or implying any evaluation or preference for certain approach or style.[74]

Facsimile (Lat. *fac simile*; made alike)[75]

It might be considered unusual to include the mention of the facsimile in the section devoted to the sculpture. We have seen above that a replica might be considered a subset of facsimile. The facsimile is mostly understood as a copy or reproduction of an old book, manuscript, map or art print or other item of historical value that is as true to the original source as possible. We need to note the facsimiles are essentially three-dimensional objects that are copied. Arguably, the importance of the maps is heavy on the two-dimensional information on its surface. However, in all of these cases and even with maps it is spatial objects. Facsimile differs from other forms of reproduction by attempting to replicate the source as accurately as possible in terms of scale, color, condition, and other material qualities.[76] According to Wikipedia, for books and manuscripts, facsimile entails a complete copy of all pages; hence an incomplete copy is a "partial facsimile".

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[74] Bathsheba Grossman web site: http://www.bathsheba.com/artist/, 10-08-18. «I have a grassroots business model. I don't limit editions, I price as low as costs permit, and most of my selling is direct to you, by way of this site. My plan is to make these designs available, rather than restrict the supply. It's more like publishing than like gallery-based art marketing: we don't feel that a book has lost anything because many people have read it. In fact it becomes more valuable as it gains wide currency and influence. With the advent of 3D printing, this is the first moment in art history when sculpture can be, in this sense, published. I think it's the wave of the future." Other artists also using advanced digital sculptures analogizing technologies are: George Hart, http://www.georgehart.com/sculpture/sculpture.html, 10-08-18, Bulatov, http://www.bulatov.org/metal/index.html, 10-08-18. These artists evidently find their artistic motivation principally in visualizing and expressing mathematical forms, but we will not pursue the valorization of their artistic contribution.

[75] According to Online Etymology Dictionary, 2011-08-04, http://www.etymonline.com; facsimile, 1660s, from L. fac simile "make similar," from fac imperative of facere "to make" (see factitious) + simile, neut. of similis "like, similar" (see similar).

[76] Wikipedia, The Free Encyclopedia, article Facsimile http://en.wikipedia.org/wiki/Facsimile, 11-08-05. Facsimiles are used, for example, by scholars to research a source that they do not have access to otherwise and by museums and archives (…)

As such it is clear that a facsimile not only results as a copy of a three dimensional object per se, it also involves copying activity that is highly studied and involves high degree of various skills of old techniques and knowledge about the materials and the processes of ageing. Being such a complex, knowledge-dependent activity it is clear that facsimile making epitomizes high end copying activity where there is no unauthorized copying element involved due to the usually old age of the subject original.

Without attaching additional significance to the facsimile phenomenon we wish hereby to mention that the word facsimile is the underlying term for the word fax.[77] The fax, as older among us would know, is the technology that used to serve for sending copies of documents over the phone lines.

Together with photocopying[78], faxing was one of the technologies that enabled modern reproduction of the two-dimensional surfaces that could be quickly and later on cheaply multiplied. The role of these two technologies in bringing about civilization change in perceiving and using copies cannot be underestimated and would deserve a dedicated research of its own, especially as these changes brought upon significant pressures to the existing copyright protection systems. It could be said that the change in perception of the roles of reproduction were introduced most successfully by these two technologies in the last decades of pre-digital societies. In accordance with the concept of technological layering both technologies successfully morphed into digital realm, but were pushed aside by the true digital reproduction.[79]

SISTEMATIZATION OF TERMINOLOGY

We have aimed hereinabove at establishing a methodology of language analysis and comparison from the aspect of legal lexicon and art lexicon. We will try in similar

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[77] According to Online Etymology Dictionary, 2011-08-04, http://www.etymonline.com; *fax* (n.), 1948, short for facsimile (telegraphy). The verb attested by 1970. Related: Faxed; faxing. Wikipedia, the Free Encyclopedia: http://en.wikipedia.org/wiki/Fax, 11-08-05. Term Fax encompasses different technologies that were used at different times to prepare a copy of transmission.

[78] According to Online Etymology Dictionary, 2011-08-04, http://www.etymonline.com; photocopy, (v.), 1924 in the sense of "make a photographic reproduction," from *photo-* "light" + *copy* (q.v.). The usual modern meaning arose 1942 with the advent of xerography. The noun is recorded from 1934. Photostat (1911) was a type of copying machine (trademark Commercial Camera Company, Providence, R.I.) whose name became a generic noun and verb (1914) for "photocopy." Also, Xerox™, 1952, trademark taken out by Haloed Co. of Rochester, N.Y., for a copying device, from earlier xerography "photographic reduplication without liquid developers" (1948), from Gk. *xeros* "dry" (see *xerasia*) + *-ography* as in photography. The verb is first attested 1965, from the noun, despite strenuous objection from the Xerox copyright department, also 11-08-05.

Wikipedia, the Free Encyclopedia provides the informative entries for both Photocopier, http://en.wikipedia.org/wiki/Photocopy and Reprography, http://en.wikipedia.org/wiki/Reprography, both links 11-08-05.

[79] The author wishes to thank Mr. Stuart Meyer, Esq. of Fenwick & West, past-president of the ITechLaw for his useful comments on the earlier version of this text, and for moderating a session at the ITechLaw Conference in San Francisco in May 2011, where some of the underlying ideas for this article have been presented for the first time.

fashion to analyze hereinbelow some of the fundamental copyright terms in general. In doing so, we have no ambition to be all-embracing, but we intend to outline only those terms we consider fundamental not only from the legal aspect, but mainly from the aspect of human creative activity said terms originally indicate. Furthermore, we shall attempt to encompass the terms characterizing the fight for enabling and sustaining profitability of the industries that exploit the results of creativity. We believe, thereupon, that said fight is particularly intense during the first decade of the 21st century upon the rapid growth of digitalization of reality and computer and computer users networking. Such growth has exerted unprecedented pressure on the classical copyright protection system and will certainly lead at least to legal institute changes, and probably to the redefinition of the role of legal system in the field of human creativity.

Generally speaking, it could be argued that endeavors towards language systematization currently reveal difficulties impending in the intent of finding consistency and coherence in copyright and art language. Not only is language lacking standardization between legal and art lexicon, but we could also say that neither within each of these disciplines is there any terminological uniformity and un-ambiguity. We shall not set here the final consequences of our analysis, as there is no place or need therefore. The reader shall rather be left to draw his own conclusions based on our observations and essential information provided.

Legal lexicon is characterized by another imperfection, primarily related to lack of thorough legal terminology precisely incorporating creativity phenomena and being in clear conformity with respective terminology of other disciplines. It is true that the legal system has had no need to analyze directly the processes of creativity, but focused only on regulating the exploitation of creative results. In that sense, we notice a possible analogy with the fact that copyright systems make no difference in the level of artistic quality of the copyright work as a protection criterion.[80] Consequently, legal systems protect high art under the same conditions as simple commercial works of art (excluding the most banal ones, lacking originality and the lowest level of creativity). Similarly, copyright law makes no efforts to distinguish types of copies nor it provides even for the most fundamental differentiation, including naming types of unauthorized copies whose intangible component is subject to intellectual property right protection (either by copyright law or design, trademark, patent or another law).[81]

Traces of attempts to distinguish certain degrees of similarity that must be pointed out are brought by trademark law. Thus, trademark law outlines the degrees

[80] It would be interesting to explore whether creativity, or rather the exact amount of creativity could be quantified and calculated using the

[81] Analysis of the history of comparative copyright-related legislative activity reveals very restricted application of systematicity in the development of an international copyright system and incredibly high level of inconsistency and partiality of interests that influenced certain solutions accepted nowadays with no further questioning. See Paterson, Lyman Ray, Copyright in historical perspective, Vanderbilt University Press, 1968 and Lessig, Lawrence, Remix: making art and commerce thrive in the hybrid economy, Penguin Press, 2008.

of unauthorized imitation that could be brought down to and described as three degrees of unauthorized imitation: identical (slavish) imitation, confusing similarity and mental association with the original.[82]

In the most general sense, trademark law makes use of the terms counterfeit (*ponaredek*, Slo., *Contraffazione* It., *Faelschung* Ger.), fake, to indicate objects created through copying without authorization of the holder of rights to intangible component of the original and with the intention of covering up the fact that authorization was not given, i.e., was not even requested. Before embarking upon the analysis of the specific terms characterizing various copying techniques or artistic methods, let us first try to list the fundamental terms commonly used in the legal language, despite having no grounds in the treaties or national intellectual property law. We shall commence our analysis with the terms recently dominating legal endeavors towards the reduction of "unauthorized copying" in early digitalization phases. The aggressiveness used in the implementation of intellectual property rights due to constant growth of the number of infringements, a consequence of various processes, e.g. the digitalization process, among the most dominant ones, resulted in the use of war terminology and analogy with military activities (*anti-piracy combat, campaigns*, etc.). Thus, we will also first analyze the terms related to violation of rights resulting in the mental visualization of battle and armed conflict in the fight against unauthorized copying. We must thereupon remember that the way of fighting to preserve intellectual property rights, although aggressive, is generally well founded in the applicable legal regulations. The social community today often grows feelings against this way of fighting for intellectual property rights. In our opinion criticisms expressed towards intellectual property rights holders for their aggressiveness in the protection of their rights are not necessarily criticisms towards the use of legitimate rights, but towards the perception that such use of intellectual property rights actually reflects the fight for preserving business models surmounted by social changes addressed in this article.

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[82] Trademark Act, "Official Gazette", NN No. 173/03:
EFFECTS OF A TRADEMARK, Rights conferred by a trademark, Article 7:
(1) A registered trademark shall confer on its holder the exclusive rights therein.
(2) The holder shall be entitled to prevent all third parties not having his authorization from using in the course of trade:
1. any sign which is identical with his trademark in relation to goods or services which are identical with those for which the trademark is registered,
2. any sign where, because of its identity with, or similarity to, his trademark and the identity or similarity of the goods or services covered by the trademark and the sign, there is a likelihood of confusion on the part of the public, which includes the likelihood of association of the sign with the trademark,
3. any sign which is identical with, or similar to, his trademark in relation to goods or services which are not similar to those for which the trademark is registered, where the trademark has a reputation in the Republic of Croatia and where use of that sign without due cause takes unfair advantage of, or is detrimental to, the distinctive character or the reputation of the trademark.
CIVIL PROTECTION, Action concerning the infringement of rights, Article 75:
(1) The holder of a trademark, if his rights referred to in Article 7 of this Act have been infringed or threatened to be infringed, may, by instituting an action, require from the competent court:
(…)(2) The imitation of a trademark (…) shall also be considered to be the infringement of a trademark within the meaning of paragraph (1) of this Article.

In particular, it should be pointed out that not only the large majority, but surprisingly the *entire* lexicon of the fight for preserving existing business models has no grounds in the legal language at all. On the contrary, as we will show subsequently, its terminology is introduced as a result of destructive processes of introduction of new technologies to existing business models. It is important thereupon to bear in mind that the fact that rights are being infringed is and can not be diminished by the assertion that new usage methods are being generated which lead to such infringing. It is, however, unexpected to establish that so much of the lexicon of the antipiracy and anticounterfeiting terminology is not derived from the legal terminology.

Thereafter, we shall try to conceptualize the differences ensuing from the standpoint and intentions of the person committing unauthorized copying, since it appears that the law does not take into account such aspect to the extent necessary in complex modern societies that base their wealth on human knowledge based creativity and copying of objects containing intangible component protected by intellectual property rights.

Legal Terminology Related to Unauthorized Copying

As indirectly mentioned above, it is interesting to note that intellectual property law has a relatively reduced language that concerns infringement through copying of the work. The language related to piracy and counterfeiting has developed independently of treaty's and legislative language. Let us therefore research a bit actual legal terminology and see some basic terms used by the most important international treaties and several representative laws to describe different forms of infringement through unauthorized copying. We will chose four key terms as the subject-matter of our research: *author*, *work of art*, *copy* and *original* and we will try to locate these four terms in some of the most significant international and national legal instruments.

Examples of International Treaties' Terminology:

The fundamental sources of international copyright law are the Berne Convention for the Protection of Literary and Artistic Works[83], the Universal Copyright Conven-

[83] Berne Convention for the Protection of Literary and Artistic Works of 1886; (Paris Act, 1971) October 8, 1991 – the text of the Convention was not published in the "Official Gazette". Decision on the publication of multilateral treaties the Republic of Croatia is party to pursuant to notification of succession was published in the "Official Gazette"

- International Treaties" No. 12/93 and 3/99 and 11/99, and the Universal Convention published in No. 12/93 and 3/99, and in Gliha, I., Autorsko pravo, zbirka propisa, Informator, Zagreb, 2000, pp. 188-318. Paris text of the Universal Convention is published on the web site: http://portal.unesco.org/en/ev.php-URL_ID=15241&URL_DO=DO_TOPIC&URL_SECTION=201.html, Geneva text on the web site http://portal.unesco.org/en/ev.php-URL_ID=15381&URL_DO=DO_TOPIC&URL_SECTION=201.html, 10-08-16, the last text of the Berne Convention on the web site: http://www.wipo.int/treaties/en/ip/berne/trtdocs_wo001.html, 2010-08-16, and the text of WIPO Copyright Treaty: http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html, 2010-08-16. All the texts of international conventions administered by

tion, the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (Rome Convention), the Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of their Phonograms, the Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite, the TRIPS Agreement, the WIPO Copyright Treaty (WCT), and the WIPO Performances and Phonograms Treaty (WPPT).[84] This set of international treaties started expanding in 1886 with the adoption of the Berne Convention and has become one of the most eminent international multilateral convention systems, demonstrating by its universal acceptance the relevance given by many countries to the introduction and harmonization of intellectual property laws, specifically copyright and related rights. Such nearly universal acceptance made this set of regulations one of the most successful international systems with the vast majority of world countries as members of the Berne Union. We could say that the importance of the role intellectual property law played in the industrial revolution was broadly recognized and other countries also going through the industrial revolution soon wished to achieve the same results Great Britain attained in late 19th century.[85] There can be no doubt that the first wave of global integration was powered by the industrial revolution, and the property based model that was used to protect the inventions and other form of human creativity was recognized by many other countries who wished to catch that train, so to say, and this common understanding then served as a platform for both Berne Convention and Paris Union negotiations.

As to industrial property law, the fundamental convention regulating said field shall be examined in a future version of this text. We refer to a contemporary of the Berne Convention in the field of copyright and related rights, the so-called Paris Convention for the Protection of Industrial Property.[86]

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the World Intellectual Property Organization (WIPO/OMPI) are published on the web site: http://www.wipo.int/treaties/en/, 10-08-18.

[84] Gliha, I. Copyright Law, A collection of Rules with an Introductory Text (Autorsko pravo, zbirka propisa s uvodnim tekstom), Informator, Zagreb, 2000, Matanovac, R., Changes and Amendments to the Copyright and Neighboring Rights Law of 2007 (Novela Zakona o autorskom pravu i srodnim pravima iz 2007), Informator, Novi Informator, No. 5600, of 7.11.2007, Matanovac, R., Gliha, I., Changes and Amendments to the Copyright and Neighboring Rights Law (Novela Zakona o autorskom pravu i srodnim pravima iz 2007.godine), in Matanovac, R. (op.red.), Harmonization of Croatian Intellectual Property Law with the European Law (Prilagodba hrvatskog prava intelektualnog vlasništva europskom pravu), DZIV & NN, Zagreb, 2007, all in Croatian language.

[85] Review of the book: Rosen, William, The Most Powerful Idea in the World: A Story of Steam, Industry, and Invention, Random House, 2010, in the article The industrial revolution; Fire and brimstone; Why it started in Britain, 2010-08-12, http://www.economist.com/node/16789318?story_id=16789318. "The author dismisses the more traditional explanations about why the industrial revolution began in Britain—such as an abundance of coal or the insatiable demands of the Royal Navy—concluding, instead, that it was England's development of the patent system that was the decisive factor."

[86] Paris Convention for the Protection of Industrial Property (1883) October 8, 1991 – the text of the Convention was not published in the "Official Gazette". Decision on the publication of multilateral treaties the Republic of Croatia is party to pursuant to notification of succession was published in the "Official Gazette" - International Treaties" No. 12/93 and 3/99. Considering that a part of this research is dedicated also to trademark law, we should state that the fundamental international sources of trademark law are the Convention

The easiness with which conventions remain at the surface of the issue, without immersing deeply into the substance of copyright law is unbearable for our needs. As an illustrative example we can mention, referring to *copy*, that the term is used in the Berne Convention three times in the singular, referring principally to copies of its own text, without opening the question of the nature of copy in copyright law at all. The only reference, of no interest for our needs, to the term copy in the substantial sense can be found in the context of the Appendix, Article II, which shall not be discussed here.[87] In the plural form, the term *copies* is used less than about forty times, of which ten times in headings and table of contents. One of the most significant contexts related to the term copy is Article 16, which prohibits distribution of copies infringing copyrights.[88] It is self-understandable that an international legal instrument aiming at the harmonization of national laws will begin from the content of such law known and accepted in these countries, so it does not need to restate the basic principles of copyright protection *ab ovo*. However, from our point of interest the text of the convention appears quite shallow. Similar is the case with other conventions, and in that sense, we shall not take them into consideration now.

Somewhat different is the situation with the term *original*. It appears more frequently, about fourteen times, of which about ten times in the context of the term *original work*, once related to the original text of the convention, and three times in other contexts. Perhaps the most substantial is the mentioning in Article 2 providing that derivative works will have the same status as original works of art.[89]

The term *author* appears in the text of the Convention less than forty times, but this frequency is drawing attention to the sources of the Convention ensuing from

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Establishing the World Intellectual Property Organization of 1967, the Paris Convention for the Protection of Industrial Property of 1883, the Madrid Agreement Concerning the International Registration of Marks of 1891, the Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks of 1989, the Nice Agreement Concerning the International Classification of Goods and Services for the Purposes of the Registration of Marks of 1957, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of 1994, the Vienna Agreement Establishing an International Classification of the Figurative Elements of Marks of 1973, the Trademark Law Treaty (TLT) of 1994, and the Singapore Treaty on the Law of Trademarks of 2006. See also Zlatović, D., Trademark Law (Žigovno pravo, in Croatian), Vizura, Zagreb, 2008, pp. 135, etc.

[87] Berne Convention, Appendix, Article II, 9)

(a) A license to make a translation of a work which has been published in printed or analogous forms of reproduction may also be granted to any broadcasting organization having its headquarters in a country referred to in paragraph (1), upon an application made to the competent authority of that country by the said organization, provided that all of the following conditions are met:

(i) the translation is made from a *copy* made and acquired in accordance with the laws of the said country; (...)

[88] Berne Convention, Article 16, [Infringing Copies: 1. Seizure; 2. Seizure on importation; 3. Applicable law]

(1) Infringing copies of a work shall be liable to seizure in any country of the Union where the work enjoys legal protection.

[89] Berne Convention, Article 2 [Protected Works: 1. "Literary and artistic works"; 2. Possible requirement of fixation; 3. Derivative works; 4. Official texts; 5. Collections; 6. Obligation to protect; beneficiaries of protection; 7. Works of applied art and industrial designs; 8. News]

(3) Translations, adaptations, arrangements of music and other alterations of a literary or artistic work shall be protected as original works without prejudice to the copyright in the original work.

the efforts the ALAI and the famous author Victor Hugo used to provide authors with protection they have not had before on international level.[90] Having in mind that the main purpose of the Convention text was the protection of authors, which is most likely why the term is mentioned more often than others. Without an extensive analysis, which we cannot conduct here, let us say that the term author is mentioned for utilitarian and pragmatic reasons, and it is not the Convention's intention to define substantially the content of the term author, but to ensure the most extensive level of control over the economic use of his works.

The term *authorship* appears about ten times, including its mention in headings and table of contents, but the far more relevant reference is in the context of determining what is included in moral rights under Article 6bis, where, even though the terms author and authorship are used insistently, there is actually no substantial relation with the terms used.[91]

The term *work of art* is mentioned only once, in the context of work of architecture, again completely arbitrarily, in the manner in which several other terms are used. So, apparently it was single members of the group working on the Convention draft(s) used particular terms in the article they were working on. This linguistic analysis would be quite intriguing if we would incorporate therein historical data on experts and national delegations working on every single text of the Convention as amended. Regrettably, there is no space for such analysis here, however, we are under the impression that we could demonstrate that many terms were used very inconsistently and their usage is grouped into sections prepared either by small groups of experts or related to the period of preparation of the single Convention text (Paris, Berlin, Brussels, Rome, Stockholm and Bern, some even several times).

Examples of National Legal Terminology:

Croatian Copyright Law[92] is a modern law incorporating numerous modern-day solutions and is fully harmonized with EU acquis communautaire. A brief lexical

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[90] Wikipedia, The Free Encyclopedia, article Berne Convention, http://en.wikipedia.org/wiki/Berne_Convention_for_the_Protection_of_Literary_and_Artistic_Works, 10-08-18, states: "The Berne Convention was developed at the instigation of Victor Hugo of the Association Littéraire et Artistique Internationalle. Thus it was influenced by the French "right of the author" (*droit d'auteur*), which contrasts with the Anglo-Saxon concept of "copyright" which only dealt with economic concerns." It is quite incredible, but a traditional and long-lasting organization as the ALAI has no article dedicated thereto in the Wikipedia, which is evidence of the marginalization of its activity in the public perception. ALAI has its own web site at: http://www.alai.org/index-a.php, 10-08-18.

[91] Berne Convention, Article 6bis [*Moral Rights:* 1. To claim authorship; to object to certain modifications and other derogatory actions; 2. After the author's death; 3. Means of redress]

(1) Independently of the author's economic rights, and even after the transfer of the said rights, the author shall have the right to claim authorship of the work and to object to any distortion, mutilation or other modification of, or other derogatory action in relation to, the said work, which would be prejudicial to his honor or reputation.

[92] Croatian Copyright and Related Rights Law, Official Gazette, OG 167/03, 79/07, hereinafter referred to as CRRA.

analysis reveals that the term author (Cro. *autor*) is used about twenty times in the text of the Law, the most distinct being the context laying down that the author of the work is always a natural person who has created the work.[93] The adjective copyright/ author's (Cro. *autorski*) is used over four hundred times, predominantly as part of the syntagma *autorska prava* and *autorsko djelo* (copyrights and work of art, respectively) and is undoubtedly one of the most frequent terms in the Law. It is interesting to accentuate the disproportion between the use of the terms author and copyrights, and work of art, with large prevalence of the terms copyrights and copyright work. Without a detailed analysis, it would be difficult to establish the differences in the distribution among these two terms, and its relevance.

We must certainly point out that the term work (of art) (Cro. *djelo*) appears in the text of the Law between five and six hundred times, representing, thus, the prevailing term in the Law.

The term copy (Cro. *kopija*) is used only five times, twice in the context of photocopy (Cro. *fotokopija*, reprography) and three times in the authentic sense, which shall be analyzed in detail hereinbelow when discussing on the term copy as one of the key copyright terms.

The term original (Cro. *original*) appears three times, in Art. 5, 6 and 116, which will be also discuss below when analyzing the term. The term source (Cro. *izvor*) is used five to seven times, the adjective original, (Cro. *izvorni,* adj.) once, and the Croatian derivative of the latter original (Cro. *izvornik*, n.) is used about thirty times.

Fundamental Copyright Terms:

After the brief orientation lesson on the interpretation of the distribution of basic sculpture-related copyright terms in the first part of the article and after the analysis of the basic copyright terminology in the legislative and treaty texts, and before embarking upon the analysis of colloquial copyright language, let us briefly analyze the content of several fundamental copyright concepts these key terms indicate. We have chosen for this purpose only the fundamental terms that, in our opinion, are related to the essence of creation. These were the terms generally addressed in the research of the legislative and treaty terminologies above. We shall especially discuss the substantial content that we found missing in the legal terminology for the following terms: author, work of art, copy, original and reproduction.

[93] CRRA, Chapter 2, AUTHORS, The Author, Article 9
(1) The author of the work is a natural person who has created the work.
(2) Copyright in a work belongs to its author by the mere act of the creation of the work.

AUTHOR (Lat. *auctor*; founder, master, leader)[94]

An author, creator of a work represents undoubtedly one of the pillars of copyright and is one of basic terms in copyright law. Relatively late in its thousands-year long development law was ready to grant protection to the creator of new intangible contribution resulting from creative activity. The criteria required for that type of protection crystallized during the last three centuries and boil down to the definition of the type of contribution to be made in order to obtain protection. It is to be kept in mind, thereupon, that the law has never intended to quantify the amount of contribution to be generated by an author in order to acquire the status of author and the rights he is entitled to under copyright law. Anonymous authors of Wikipedia article *Author* point out:

> An author (…) is broadly defined as "the person who originates or gives existence to anything" and that authorship determines responsibility for what is created.[95]

The creative activity was recognized by the creators themselves, as well as by society and finally by the legal system as a specific effort whose result was subject to protection[96]. The term author is used both in the legal and artistic context signifying a person who has created a work of art (in the copyright sense), or work, piece,

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[94] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; author, c.1300, autor "father," from O.Fr. *auctor*, from L. *auctorem* (nom. *auctor*) "enlarger, founder, master, leader," lit. "one who causes to grow," agent noun from *auctus*, pp. of *augere* "to increase" (see augment). Meaning "one who sets forth written statements" is from late 14c. The -t- changed to -th- on mistaken assumption of Greek origin. The verb is attested from 1590s. Related: Authored; authoring; authorial (1796), *auteur*, fr. 1962, from French, lit. "*author*" (see author), also *authorship*, c.1500, "the function of being a writer," from author + -ship. Meaning "literary origin" is attested from 1825. In Croatian CRRA, Article 9, see note 94 above.

[95] Wikipedia, The Free Encyclopedia, article Author http://en.wikipedia.org/wiki/Author, 10-10-09: "An *author* (sometimes, in reference to a *woman* author, *authress* or *authoress*) is broadly defined as "the person who originates or gives existence to anything" and that authorship determines responsibility for what is created. Narrowly defined, an author is the originator of any written work." It is interesting to take note that, whilst many other local Wikipedia web sites contain the equivalent of the English article on author, Croatian Wikipedia has no such article. This seems to confirm our thesis that Croatian society is largely blind to the values of intellectual property law and to the creativity preceding it.

[96] From answers.com web site, http://www.answers.com, 10-08-10, the article on the noun "author" includes also the following quotation of a famous English author who describes the nature of creation based on his own experience:

...[W]riting means revealing oneself to excess .... This is why one can never be alone enough when one writes, why even night is not night enough. ... I have often thought that the best mode of life for me would be to sit in the innermost room of a spacious locked cellar with my writing things and a lamp. Food would be brought and always put down far away from my room, outside the cellar's outermost door. The walk to my food, in my dressing gown, through the vaulted cellars, would be my only exercise. I would then return to my table, eat slowly and with deliberation, then start writing again at once. And how I would write! From what depths I would drag it up! [Franz Kafka]

Anyone who has ever written is surely familiar with this description of writing as a form of creation and I quote this as a way of an excuse to my wife and my kids whom I have shamelessly asked to bear it.

artifact (in the artistic sense). In direct connection with the term author (*auctor*) in the sphere of art lexicon is the term *artist* used to indicate one who is able by virtue of talent or skill to turn his creativity into a work of art. Although today the term indicates mainly one who makes artistic contributions in the field of fine or dramatic arts, originally it denoted anyone skilled in a profession or craft. This connotation was particularly dominant after the Renaissance until the 19th century and the beginning of the romantic conception of authorship.[97]

If we focus for a moment on the definition quoted from Wikipedia, we must notice that the second part of the definition regards the element of *responsibility* the author holds *for what is created*. We should only stress that the question of responsibility constitutes, in our opinion, the central question of repositioning of the role of law in modern societies. We must emphasize that the decrease of the significance of the role of law in modern societies will advance proportionally to the increase of the role of individual's responsibility in these societies. Why do we think that after many thousands years of restricted responsibility we are likely to see an increased responsibility of natural and legal persons? We regard that this increase is already visible and measurable, and derives from an exponential improvement of person's education, and the possibility of processing information in modern societies, described in the beginning of this article. We have no doubts that the phenomenon of increased responsibility will lead to the reduction of the role of third parties as arbitrators (adjudicators) in someone else's disputes. A confirmation thereof is found, for instance, in the appearance and increased recourse to mediation as a way of dispute resolution by the parties who have generated the dispute. Last decade saw a rapid growth in mediation services, and while penetration of mediation is lower than some proponents would hope for, our perception is that mediation is flourishing rapidly in modern context.[98]

We would like to make another remark. Inversely, if the author holds responsibility for what is created, to what extent is such responsibility imputable to the author of a copy, i.e., anonymous forger who has created an unauthorized copy? This moment reveals the inferior role of the one who creates a copy with no personal contribution, and lack of responsibility represents probably the point of divergence that definitively distinguishes the contribution based on forgery skills from true au-

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[97] According to Online Etymology Dictionary, 2010-08-14, http://www.etymonline.com; *artist*, 1580s, "one who cultivates one of the fine arts," from M.Fr. *artiste* (14c.), from It. *artista*, from M.L. *artista*, from L. *ars* (see art (n.)). Originally used especially of the arts presided over by the Muses (history, poetry, comedy, tragedy, music, dancing, astronomy), but also used 17c. for "one skilled in any art or craft" (including professors, surgeons, craftsmen, cooks). Now especially of "one who practices the arts of design or visual arts" (a sense first attested 1747), related to *artiste*, 1823, from Fr. *artiste*, a reborrowing of artist after the sense of artist had become limited toward the visual arts and especially painting. Also, *artistic*, 1753, from Fr. *artistique*, from artiste (see artist). Native artist-like was recorded from 1711, and *artistry*, "artistic ability," 1837, from artist as chemistry from chemist, etc.

[98] Web sites dedicated to various mediation organizations providing dispute resolution services to assist parties in conflict resolve their problem: INTA, http://www.inta.org/index.php?option=com_content&task=view&id=71&Itemid=219&getcontent=4,, CPR, http://www.cpradr.org/, IMI http://www.imi-mediation.org, AAA, http://www.adr.org, JAMS, http://www.jamsadr.org, NAF http://www.adrforum.com, CEDR http://www.cedr.co.uk, all 10-08-19, and many others.

thor's contribution. Moreover, according to modern researches the unethical component does not only remain with the "author" of a forgery, but is transferred also to the user of such artifact. Particularly interesting in that respect is a recent research conducted by a group of scientists led by Francesca Gino.[99] Their conclusion is that use of counterfeits leads to increased users' unethicality.

Therefore, we will once more underline that constant, representing in our opinion not only the warp and woof of any reasonable legal regulation, but also a positive human quality in general, ethicality. We are of the view that the entire corpus of legal regulations of the whole human history could be reduced to: law is ethics for dummies™.[100] We have no doubts that repositioning of the role of legal systems in modern societies will lead to a greater significance of ethicality, which will also be addressed below.

One legal definition provides that the author of the work is the person who has created the work.[101] The author is presumed to be a person whose name or pseudonym appears on the work, until proven to the contrary.[102] The purpose of this provision is to facilitate the determination of authorship and seeks to introduce minimum formalities in denoting the work. It imposes to authors minimum discipline when disclosing their work, in order to avoid factual determination of authorship through the court. Other provisions on the copyright work provide in respect of collections

[99] Gino, Francesca, Norton, M. I., and Ariely, D., (scientific article), The Counterfeit Self: The Deceptive Costs of Faking It, Psychological Science 21 (2010.): 712-720., and comments of the article: Fake and counterfeit goods promote unethical behaviour, Discover Magazine, Not exactly rocket science Blog, by Ed Yong, http://blogs.discovermagazine.com/notrocketscience/2010/04/09/fake-and-counterfeit-goods-promote-unethical-behaviour/, 10-08-10: «Francesca Gino from the University of North Carolina has shown that counterfeit products actually make people behave more dishonestly. They cheat more in tests and they judge others as unethical with greater abandon. Even worse, they're completely unaware of this impact. This effect is heavily ironic. People often buy fake goods to look good to other people. But Gino's study shows that these products can affect our moral choices precisely because they *make us look worse to ourselves*. As she writes, "Feeling like a fraud makes people more likely to commit fraud.", with quite interesting discussion going on in the blog's comments; and The Economist http://www.economist.com/node/16422414, Morality, Rose-coloured spectacles?

[100] In homage to the …for Dummies series of books by Copyright © 2011 & Trademark by John Wiley & Sons, Inc., Read more: http://www.dummies.com/#ixzz1UFjPpE4H.

[101] CRRA, Article 9, see note 74 above.

[102] CRRA, Presumption of Authorship and Exercise of Copyright where the Author is Anonymous, Article 12.

(1) The author is presumed to be a person whose name, pseudonym, artist's mark or code appears in the customary manner on the copies of the work or when the work is disclosed, until proven to the contrary.

(2) If the author is not known, nor can be defined pursuant to the provision of paragraph (1) of this Article, the following shall be considered entitled to exercise copyright:

1. for a published work – the publisher who has lawfully published the work,

2. for a disclosed, but unpublished work – the person who has lawfully disclosed the work.

1. (3) The provisions of paragraph (2) of this Article shall cease to apply once the author's identity has become known, in which case the publisher or the person who disclosed the work, shall deliver to the author the economic benefits derived from the exercise of his right, according to the rules concerning the legal status of a fair possessor who must deliver the object to its owner, unless otherwise provided for by a contract.

that the author of a collection of works is a person who has created such collection, whereas the author of a translation, adaptation, musical arrangement or other alteration of the copyright work is a person who has translated, adapted, musically arranged or otherwise altered the copyright work.

But who is really an author? Different attempts to define an author or creator have been undertaken. Our preference is for some of the more intricate and profound definitions some of which reach into physics for explanation. We have already cited Oxford physics professor Vlatko Vedral. He is sharing with us the view that the most basic building block of reality is information in the sense of Claude Shannon's theory of information. When we have ventured in that direction, our conclusions were much the same. When I wrote that: "Creation is a sequence of choices made by the creator"[103] and have tried to quantify the level of creativity by stating that: "The ability to open the choices is the artistic creativity"[104] back in the summer of 1990 my analysis rested on the theory of information.[105]

Vedral shows elegantly how an author's creativity is based on her/his choices:

> Here we can draw an analogy with sculpting. A sculptor starts with a block of stone out of which he intends to make a sculpture. In some sense, we can say that the initial untouched block contains all the possible sculptures to be made. This is a bit like our initial Universe where all possible realities exist at the same time, but are not actualized. The sculptor then makes the first move, and chisels a piece away from the block. This first cut by the artist breaks the symmetry and reduces the information contained in the initial block. We now no longer have all possible sculptures available...[106]

And as a sculptor continues his activity, based on his choices he creates our reality. This process of human creation is essentially the process of creating reality:

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[103] Vukmir, Mladen, Integral protection of Intellectual Property, unfinished work published on Amazon Digital Text Platform, 2010, original text from 1990, (Kindle Edition - May 3, 2010.), http://www.amazon.com/Integral-Protection-Intellectual-Property-ebook/dp/B003KN3I94/ref=sr_1_2?ie=UTF8&m=ABZSE0W26BU7U&s=digital-text&qid=1281787230&sr=8-2, 10-08-14, Chapter 3, locations 1663 AK. ASIN: B003KN3I94

[104] Vukmir, M., *ibid.*, location 1684 AK. Also: "But the choices which are more likely to be considered as legally relevant issues if author seeks the protection from infringement, can be more easily shown on the examples involving the forms of creativity which contain higher entropy, or the higher level of information, i.e. which require of the creator more choices made and done. The higher amount of choices opened by the creator, the higher level of creativity is involved in creation." location 1675 AK.

[105] While it might be too lengthy to expose now that analysis that is undertaken in that work, we are gladly directing the reader to the text of *ibidem* publication from location 1607 to 1724 AK. While it is slightly embarrassing to reveal the youthful research that was neither properly studied nor polished to a publication requirements, I feel nowadays in the light of Prof. Vedral's research that it was quite a courageous undertaking for a young lawyer. However, in light of Prof. Vedral' research that has begun some years after many of those courageous but not too well articulated ideas seem to have been vindicated. For this, I am deeply thankful to Prof. Vedral for his amazing book.

[106] Vedral, V. *id.*, location 2274 AK. I especially like the neat coincidence with this article in the fact that Prof. Vedral also uses sculpture as an example of creativity.

> And so it continues, with every next move that the sculptor makes the number of possible futures decrease. Once the sculpture is finished, one possibility is crystallized. Even then, there are more things that could be done to change the sculpture, so we never really arrive at something final. Whenever we think we have something final, the sculptor can always make another cut.[107]

WORK OF ART (Lat. *artefact, ars+factum*)[108]

Author's creation, or a *work* in copyright law is called *work of art*. It is to be kept in mind that the original meaning of the term art/ars is actually skill, *craft*, including, naturally, artistic creative skill. It is evident that this term originally indicated human creative ability using craft skills, and only secondarily in the artistic and legal context it refers to artistic, i.e., protected works. Therefore, it should not be controversial to assert that the legal requirement of a work to be literary, scientific or artistic is somewhat limiting toward the full scope of human creativity that might be protectable.[109] In Croatian language work of art (Cro. *autorsko djelo*), appearing always in pair with the term author (Cro. *autor*), is the result of an individual's creative activity, the reflection of his creative ability, an ability representing actually, as a final consequence, the human extension of creation of material reality.[110]

> What, in short, is the strange unit designated by the term, work? What is necessary to its composition, if a work is not something written by a person called an *author*? Difficulties arise on all sides if we raise the question in this way. If an individual is not an author, what are we to make of those things he has written or said, left among his papers or communicated to others? Is this not properly a work? What, for instance, were Sade's papers before he was consecrated as an author? Little more, perhaps, than rolls of paper on which he endlessly unraveled his fantasies while in prison.[111]

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[107] Vedral, V., *ibid*. location 2284 AK. The entire book of Prof. Vedral is fascinating. It rests on integrating knowledge of classical and quantum physics with various biological and social knowledge. It is profound yet accessible.

[108] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *artefact*, alternative spelling of artifact (q.v.)., *artifact*, 1821 (artefact) "anything made by human art," from It. *artefatto*, from L. *arte* "by skill" (ablative of ars "art;" see art (n.)) + *factum* "thing made," from *facere* "to make, do" (see factitious). Archaeological application dates from 1890. Artifactual (also artefactual) is recorded from 1950.

[109] I remember our playful postgraduate student discussion with my friend and colleague Lic. Luis Schmidt Ruiz del Moral of Mexico in which we were exploring the possibility to protect culinary skills of the great chefs as a mixture of scenography and olfactory sculpture, and characteristic movements of great sport stars through choreography. We also considered possibility to build *per se* protection for those and other human creative skills that are not protected by traditional intellectual property rights.

[110] See Vedral, V., *id.*, Part 3, and Vukmir, M., Integral protection of Intellectual Property, unfinished work published on Amazon Digital Text Platform, 2010, (Kindle Edition - May 3, 2010, Chapter 3. Vedral states, *id.*, location 261 AK: "Information is the language Nature uses to convey its messages and this information comes in discrete units. We use these units to construct our reality." This is essentially what I intended to argue in my old writing, information is the building block of capability of life to create material reality.

[111] Foucault, Michel, Bouchard, Donald F., EDT, What is an Author? (Essay), p. 118.

The question raised here by Foucault is deeply polemic, however, without being raised, the nature of creativity can hardly be properly understood. Work of art is one of the legally defined categories of copyright law. It seems that Foucault here describes creativity as a regular every-day phenomenon, almost an inevitable result of living. Works are continually developed throughout our lives, but until their creators are recognized as authors, they will have no status of a work of art. In copyright law this principle is reflected in the nexus between work fixation and individual rights ensuing from the act of creation.[112] Generally speaking, this historical definition of work of art is completely consistent with the philosophical questioning of the nature of work and this aspect of copyright law demonstrates a fully adequate relation towards the phenomenon of creation in digital environment. The aspect in which the question of work, as a fixed expression of an idea, will be put into question is when and if a direct network connection between human minds will become possible. In other words, rapid advances of brain-machine interface (BMI) technologies are leading us directly towards the possibility to exchange ideas digitally.[113] In his contribution to the collection of essays This will Change Everything, Corey S. Powell, editor in chief of the Discover magazine states:

[112] E.g. CRRA, II COPYRIGHT, Chapter 1 SUBJECT MATTERS, COPYRIGHT WORK, Article 5:

1. (1) A copyright work shall be an original intellectual creation in the literary, scientific and artistic domain, having an individual character, irrespective of the manner and form of its expression, its type, value or purpose, unless otherwise provided for in this Law.

1. (2) The Copyright works shall be in particular:

– works of language (written works, oral works, and computer programs),
– musical works with or without words,
– dramatic or dramatico-musical works,
– choreographic works and works of pantomime,
– works of visual art (in the field of painting, sculpture, and graphics), irrespective of the material they are made of, and other works of visual arts
– works of architecture,
– works of applied art and industrial design,
– photographic works and works produced by a process similar to photography,
– audiovisual works (cinematographic works, and works created in a manner similar to cinematographic creation),
– cartographic works,
– presentations of a scientific or technical nature such as drawings, plan, sketches, tables, etc.

1. (3) The subject matter of copyright may be any copyright work, except the one, which cannot be such work by its nature, and the one for which the provisions of this Law provide that it cannot be the subject matter of copyright.

1. (4) The subject matter of copyright is the work as a whole, including an unfinished work, the title of a work, and the parts thereof that fulfill the pre-conditions set out in paragraph (1) of this Article.

1. (5) The title of the work, which does not fulfill the pre-conditions for being the subject matter of copyright, and which has already been used for a certain work, shall not be used for the same kind of work, if such title is likely to create confusion as to the author of the work.

[113] In his essay The Brain-Machine Interface in the collection This will Change Everything James Geary states, quoting Miguel Nicolelis, a Duke University neuroscientist and one of the pioneers of BMI: "The body's going to be very different a hundred years from now. In a century's time, you could be lying on a beach on the east coast of Brazil, controlling a robotic device roving on the surface of Mars, and be subjected to both experiences simultaneously, as if you were in both places at once. The feedback from that robot billions of miles away will be perceived by the brain as if it was you up there." location 486 AK.

> Rudimentary brain prostheses and brain-machine interfaces already exist. Allowing one person to control another person's body would be a fairly simple extension of that technology. Enabling one person to transmit thoughts directly to another person's brain is a much trickier proposition, but not terribly far fetched, and it would break down one of the most profound isolations associated with the human condition. Broadcasting the overall state or "mood" of a brain would probably come first. Transmitting specific, conscious thoughts would require elaborate physical implants to make sure the signals go to exactly the right place-but such implants could soon become common anyway, as people merge their brains with computer data networks.

Prevailing chance for this happening makes it more a *when* rather than *if*. Obviously, the idea will be expressed digitally in such cases, but it will remain a challenge for the present copyright laws to protect such expression of the ideas adequately. In that case we will possibly have to find another criterion and object of protection. However, we will be able, until then, to observe gradual increase of computer networking in order to draw certain conclusions on possible trends in the development of law.

COPY (Lat. *copia*; plenty, abundance)[114]

In many aspects this is the key term in our efforts to understand properly the challenges the whole copyright law system, and in many things also the whole IPR protection system are faced with today. Namely, copy linguistically originally denotes the concept of abundance. As such, its positive connotation intuitively cuts across the conception whereby copyright holders today try to demonstrate that multiplication of the number of "copies" represents a danger. Naturally, it is true that those controlling copying rights will not fully obtain such remuneration they could be

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[114] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *copy* (v.), late 14 c., from O.Fr. *copier* (14c.), from M.L. *copiare* "to transcribe," originally "to write in plenty," from L. *copia* (see *copy* (n.)). Hence, "to write an original text many times." Related: Copied; copying. Figurative sense of "to imitate" is attested from 1640s. Also, copyright, "the right to make or sell copies," 1735, from copy + right. As verb, from 1806 (implied in pp. adj. copyrighted).

According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *copy* (n.), early 14 c., "written account or record," from O.Fr. *copie* (13 c.), from M.L. *copia* "reproduction, transcript," from L. *copia* "plenty, means" (see *copious*). Sense extended 15 c. to any specimen of writing (especially MS for a printer) and any reproduction or imitation. Related: copyist.

According to Answers.com, http://www.answers.com, 10-08-19: *cop·y* (kŏp'ē) n., pl., -ies. An imitation or reproduction of an original; a duplicate: *a copy of a painting; made two copies of the letter*. One specimen or example of a printed text or picture: *an autographed copy of a novel*. Material, such as manuscript, that is to be set in type. The words to be printed or spoken in an advertisement. Suitable source material for journalism: *Celebrities make good copy*; v., -ied, -y·ing, -ies., v.tr. To make a reproduction or copy of. To follow as model or pattern; imitate. See synonyms at *imitate*. v.intr. to make a copy or copies. To admit of being copied: *colored ink that does not copy well*. [Middle English *copie*, from Old French, from Medieval Latin *cōpia*, transcript, from Latin, profusion.], also copyable cop'y·a·ble or cop'i·a·ble adj., copyright, "the right to make or sell copies," 1735, from copy + right. As verb, from 1806 (implied in pp. adj. copyrighted).

entitled to. Early theoreticians, as well as politicians, starting from USA constitution-makers, already considered that society would be able to achieve its creativity reproduction system's potentials proportionally to its possibility of freely access works of art. Arguably, this entails copying. To be precise, their intention was to stimulate creative production by paying remuneration to authors, but they also wished to limit the scope and term of intellectual property rights as much as necessary to attain a balance between protection and free work of art access by members of the social community.

In a way, this balance of interests has marked the entire history of the copyright system. The main effort and guarantee of IPR protection system success has in every historical era been lying exactly in a successful achievement of a balance between access to creative goods by the public and the possibility of remuneration for the author for his effort in the creative production.

The reasons and need for recalibration of copyright creativity protection systems lurk behind the change of the meaning and role of copy in a digitally networked environment. With the general decrease of the relevance of the role of law in conditions of accelerated economy and costly legal system usage, the balance between social benefit and individual interest has clearly shifted. It is likely to continue shifting even more if expected technical advancements in the field of digital perception and communication by means of electronic components implanted in bodies turn real. In conditions of constant increase of creative contributions made by individuals and legal entities, and presuming that further creativity requires free access to past creativity results, the protection system must simply be adjusted so that access to the existing creativity products is made as simple as possible.

All this notwithstanding the changes in perception of scarcity of goods in digital economy. Without entering into the discussion on the merit of assertions that scarcity issue is indeed different in digital from the material economy let us say that while we find it difficult to accept that the value of economy in digital condition changes as a whole, we observe that the cost of distribution and copying of digital goods is lower than their equivalent in "brick-and-mortar" world.

Returning to the issue of the shift towards the "prosumers,"[115] when an increasing number of individuals are at the same time creators, they lose interest in protecting all the forms and results of their creativity. The new social balance built on public interest should recognize that and provide them, as well as other potential creators, with easy access to newly created works as a fuel for further creation. Perhaps, we could say that with an increasing number of authors, protection of all of their works in the same manner is becoming less important. It will become completely natural that particular authors will protect some of their works in one and others in another

[115] Prosumer is as term coined from the words producer and consumer and is meant to denote the union of the two in a single author/consumer, enabled by modern means of communication, consumption and computation. Our preferred interpretation of the word rests on the meaning used by "Marshall McLuhan and Barrington Nevitt suggested in their 1972 book *Take Today*, (p. 4) that with electric technology, the consumer would become a producer." Wikipedia, the Free Encyclopedia, article Prosumer, http://en.wikipedia.org/wiki/Prosumer, 11-08-06.

way. In other words, we think that it is only natural that an abundance of creativity will stimulate various modes of publication, exchange and distribution of creative results.

In that sense, we believe that the most likely form of future protection systems will be in the flexibility, variability and coexistence of present and new protection forms. We may presume that technology will make possible to monitor the usage of any work of art, enabling different protection regimes for each artistic work of a particular artist. This means that the years-long lasting *status quo* within collective protection systems, whereby the participation in many countries, is voluntary only up to the point of entry to such system will perhaps change. In many countries, once an author or a performer grants a power to a collecting society to collect his/her royalties, s/he cannot anymore keep some of his/her songs out of the system while the others remain in. It is an either/or situation, which has no flexibility that would benefit authors or performers who wish to have various regimes of protection for different works. It is either you-are-in, or you-are-out situation, which is evermore conflicting with how many authors, see best for the exploitation for their particular works. Many authors and performers did express their desire for being able to renounce the benefits of collective protections for some of their works, while keeping the benefits of the collective protection systems for other of their works. In present situation this means that they think that their works would be sufficiently protected through Creative Commons or another similar future system, exercising in each of said systems only specific rights from the traditional range of copyrights.

This means that we can expect that authors will make available some of their works to the public domain, as an investment in their popularity, should the author consider it appropriate for the specific work of art in a particular phase of his career. This means that the future of copyright protection is likely to bring mixed or blended regimes as natural form of protection, considering that such combined system will in the best manner protect diverse author's needs and intents, contributing also to public interests.

In the analysis of the term copy we believe that we should make a minor distinction between the term *copia* meaning plenty and the term *duplicate*.[116] In that

[116] According to Answer.com, http://www.answers.com/topic/copying, 10-08-18, "*cop·y* (k p'ē) n., pl., -ies. An imitation or reproduction of an original; a *duplicate*: *a copy of a painting; made two copies of the letter*. One specimen or example of a printed text or picture: *an autographed copy of a novel*. Material, such as manuscript, that is to be set in type. The words to be printed or spoken in an advertisement. Suitable source material for journalism: *Celebrities make good copy*., v., -ied, -y·ing, -ies., v.tr. To make a reproduction or copy of. To follow as model or pattern; imitate. See synonyms at imitate. v.intr. To make a copy or copies. To admit of being copied: *colored ink that does not copy well*. [Middle English *copie*, from Old French, from Medieval Latin *cōpia*, transcript, from Latin, profusion.], copyable cop'y·a·ble or cop'i·a·ble adj.

According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *duplicate* (adj.) early 15c., from L. *duplicatus*, pp. of *duplicare* "to double," from duo "two" + plicare "to fold" see ply (v.)). The noun is first recorded 1530s. The verb is attested from 1620s. Related: Duplicated; duplicating, reduplicate, 1570, from M.L. *reduplicatus*, pp. of reduplicare "to redouble," from re- "back, again" + L. *duplicare* "to double" (see duplicate). Also, *duplication* early 15c., from Fr. duplication (13c.), from L. *duplicationem*, noun of action from *duplicare* (see *duplicate*).

sense a duplicate is a unique specimen of a copy, that is to say, a copy of which only one specimen was made, so that the object exists in two specimens. The meaning of the term is very clear in the Croatian translation of the verb duplicate, *udvostručiti* (to make twofold). We are of the view that this term has no special relevance for our analysis; therefore, we will not explain it in a separate section bellow. However, we should point out that we observe that the density of copying terminology is just as elaborate as the creativity terminology. Indeed, we must note that there is no difference in the terminological approach on an abstract level; therefore, the general impression left on who is observing these two phenomenologies is of a single human creativity unit.

In order to comprehend the meaning of the term copy correctly, let us take a look at its meaning in the context of visual arts. We could say that in visual arts the term undoubtedly means a reproduction as faithful as possible of the original, preferably using the same material and technique. So, copying was valued according to the level of copy-maker's artistic skills, the more faithful to the original it was, the more success it had. With the development of analogue reproduction techniques, the relation between copy and original has for the first time significantly changed, thus, Walter Benjamin says:

> (…) (T)echnical reproduction can put the copy of the original into situations which would be out of reach for the original itself. Above all, it enables the original to meet the beholder halfway, be it in the form of a photograph or a phonograph record. The cathedral leaves its locale to be received in the studio of a lover of art; the choral production, performed in an auditorium or in the open air, resounds in the drawing room.[117]

It is evident that already with the arrival of analogue mechanical reproduction means thinkers felt that the relation between the terms used to describe creativity was changing, i.e., that such relation would go through inevitable and irrecoverable modifications. Yet, we claim that the profundity of change of the interrelation among these terms, including their meaning, in the context of mechanical reproduction appearance has by far been outreached by the advent of digital technologies. In that sense, digital copy must be described as the most faithful copy that has ever been available to people in their copying efforts history. Digital copy is absolutely identical to the original, to its source. For digitally created works this means that there is no difference between the digital "original" and its copies. Each copy is an original. Naturally, upon making digitalized models of material reality, digital copy/original will be as excellent as its digitalization process. In other words, if someone makes a low-quality copy of a real-world object, each of its following perfect and identical digital copies will be as imperfect as the first digital copy or "digital original". We can notice in this example a cancellation of the meaning "original" and "copy"

With regard to reproduction techniques see Wikipedia, The Free Encyclopedia, article Duplicating machines, http://en.wikipedia.org/wiki/Duplicating_machines, 10-08-18,

[117] Benjamin, Walter, Underwood, J.A., The Work of Art in the Age of Mechanical Reproduction, (essay) translator J. A. Underwood, Penguin Books, 2008, Section II.

in the digital environment, and we can also see that neither "molds"[118] appear in this process. Historically, a mold was an auxiliary instrument for making spatially formed objects. Today the mold is completely eliminated by digitalization, so that the form of the original object is stored in its original dimension in the form of electronic file.

A complete digital creation will nowadays be the case with different forms of painting and musical works creation. Thus, it should be pointed out that many musical works will originate in an entirely digital environment. From composition, through playing and recording, to reproduction, musical works will be and remain completely digital. A similar fate will be shared by many visual and audiovisual works, which, except at the time of their reception by the audience, will not at any moment be made available to the analogue world. Today, photography as well as the majority of film and television production is all generated in said domain. It is interesting also that we are today most probably moving towards the elimination of the analogue element in perception. As mentioned above, chip implantation technologies have advanced to such extent that in the future we will almost certainly be able to perceive digital contents by direct connections to our nervous system, without using our sensory organs, i.e., eyes, ears, nose.[119]

We should say that in the legitimate artistic sense copy has lost its past importance with the invention of photomechanical and galvanoplastic copying means, as described above or to be specified hereinbelow. The copy has maintained its importance principally when making it is used to study the skills. Namely, when conveying by hand, while looking at the original, not only the painting method (technical procedure: preparation, impasto and brushstroke) but also all the important components of the work, such as harmony of shapes, lines and colors are reproduced.

It is particularly important to stress that the difference between copy and counterfeit is significant. In fact, unlike counterfeits, copies are not intended to deceive; they are just the product of copying. Therefore, if a copy is declared as such and made upon authorization, it is completely legal also in the present protection system. If it is made without authorization, but declared as a copy, it may be completely legal since it might, depending on the circumstances of its use, fall under copyright exceptions.[120] The problems nowadays arise in connection with the presence of cop-

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[118] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *mold*, "hollow shape," 12c., metathesized from O.Fr. *modle* (Fr. *moule*), from L. *modulum* (nom. *modulus*) "measure, model," dim. of *modus* "manner" (see mode(1)). Related: Molded. To break the mold "render impossible the creation of another" is from 1560s.

[119] See note 27 above. With respect to the development of digital scent perception techniques see Wikipedia, The Free Encyclopedia, article *Machine olfaction*, http://en.wikipedia.org/wiki/Machine_olfaction, 10-08-18, Electronic nose, http://en.wikipedia.org/wiki/Electronic_Nose, 10-08-18, Digital Scent Technology Blog, http://digiscents.com/blog/, 10-08-18, digital scent reproduction technology summary Digital Fragrances, http://we-make-money-not-art.com/archives/2005/04/flysophy-the-di.php, 10-08-18. Finally, web sites of Aromajet, producer of digital aroma generating technology, http://www.aromajet.com/port.htm, 10-08-18.

[120] We consider copyright exceptions or limitations to be one of the central facilities of the copyright system. In comparison with the traditional property law they serve the role that servitudes played in

ies/originals of digitalized works on the Internet, where their inherent reproducibility creates a situation in which the civilization of digital natives[121] no longer deems necessary to request authorization for further copying. We shall discuss these issues in greater detail in the last part of this article.

ORIGINAL (Lat. *originalis*; authentic, genuine)[122]

After analyzing particular terminological and semantic aspects in the field of fine arts, we have found that term original signifies authentic, primary work. In a broader sense the term signifies also work itself as opposed to its copies, imitations and falsifications. In sculpture, more casts of a single work of art can have the character of original, so the terminological distinction in a way loses its original sense. Namely, if it is possible to have more originals that are multiplied, the question is what meaning should have the genuine term "original". We point this out since this terminological distinction is important in the digital environment, where technology's inherent reasons prevent a distinction between original and copy, as they are identical.

When we extend this vague lexical distinction from the artistic language to the copyright language we may notice that the uncertainty in the application of the term remains present in a completely identical manner. In fact, if there is a plurality of

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the traditional property, enhanced however in the digital world where copying is inherent. CRRA includes an entire chapter on exceptions and limitations of copyright. Although space does not permit us to conduct here an analysis of their content, as we are convinced that these exceptions contain the essence of the copyright permanence and are central for its successful future, we will here at least list the articles including exceptions and limitations of Chapter 6 CRRA. CONTENT LIMITATIONS OF COPYRIGHT, Common Provisions, Article 80, Temporary Acts on the Reproduction of the Copyright Work, Article 81, Reproduction of the Work for Private or Other Personal Use, Article 82, Ephemeral Recordings, Article 83, Restrictions for the Benefit of Particular Institutions, Article 84, Collections Intended for Teaching or Scientific Research, Article 85, Use of Copyright Works by Disabled Persons, Article 86, Use of Copyright Works for Judicial, Administrative or Other Official Proceedings, Article 87, Use of the Works for Teaching, Article 88, Use of Copyright Works for the Purpose of Informing the Public, Article 89, Quotations, Article 90, Reproduction of Copyright Works Permanently Located in Public Places, Article 91, Reproduction of Architectural Structure, Article 92, Posters and Catalogues, Article 93, Parodies and Caricatures, Article 94, Use of Copyright Works for the Purpose of Presentation and Testing of Equipment, Article 95, Erasure of Recordings, Article 96, Use of a Database, Article 97, Obligations of the Rightsholder, Article 98.

[121] John Palfrey, Urs Gasser, Born Digital: Understanding the First Generation of Digital Natives, Basic Books, 2010.

[122] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *origin* (n.) The point at which something comes into existence or from which it derives or jest derived. Ancestry: "We cannot escape our origins, however hard we try" (James Baldwin). The fact of originating; rise or derivation: The rumor had its origin in an impulsive remark. Anatomy. The point of attachment of a muscle that remains relatively fixed during contraction. Mathematics. The point of intersection of coordinate axes, as in the Cartesian coordinate system. [Middle English origin, ancestry, from Latin *orīgō*, *orīgin-*, from *orīrī*, to *arjeste*, be born.]

According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; original (adj.) early 14 c., from L. *originalis*, from *originem* (nom. *origo*) "beginning, source, birth," from *oriri* "to rise" (see orchestra). The first reference is in *original sin* "innate depravity of man's nature," supposed to be inherited from Adam in consequence of the Fall. Related: Originally. Originality, 1742, probably after Fr. originalité (see original (adj.)).

originals, the question is how to determine which samples are copies. Despite that many laws provide no definition of original of the work of art *per se*. In the legal texts we analyzed we did find some more limited reference to term original, such as in the context of visual works of art.[123] The relation between the visual works of art and works of art in general is neither systematic, nor is it specifically precise in the particular segment.

Besides the context of work of visual art, the term original (Cro. *original* or *izvornik*) is used on more occasions by the CRRA in a broader context as its dominant usage. It would be interesting to research comparatively whether the term *original* is elsewhere also used principally as a term characterizing the work of art, i.e., denoting the "subjective novelty" as its principal content. What is especially important to notice related to the term originality is that among copyright and art language there is a significant difference in the meaning of "original". Namely, the term originality when used in the dialogue among art historians and lawyers can raise misunderstanding. Lawyers standardly use it to indicate subjective novelty, i.e., the quality of the intangible component of the work of art, namely, with respect to the existing state of creativity, i.e., as an external characteristic of the work of art (it refers to the relation between the creator and earlier works). Art historians, on the other hand, use it with reference to the material object, i.e., artifact where the work of art is embodied for the first time, referring to the internal relation between the creator and his work.[124] We may thus say that originality of the creative achievement, i.e., the achievement of human spiritual creativity in the sense of copyright does not require absolute novelty, but the so-called subjective originality, or novelty in the subjective sense. The work of art is considered subjectively original if the author does not imitate another work known to him. Works of art can be further divided into *absolutely original works* and *relatively original works* or *derived* works".[125] To sum it up collo-

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[123] In the more strict sense, in the context of author's economic rights provisions, precisely with respect to resale right, CRRA, e.g. provides that in visual art the original work of art will be considered as such if it is made by the author himself. CRRA, Original of a Work of Visual Art, Article 35.

(1) The original of a work of visual art, referred to in Article 34, paragraph (1) of this Law, shall mean a work of visual art such as picture, collage, painting, drawing, engraving, print, lithography, sculpture, tapestry, ceramics, glassware or photography, where created by the author himself.

(2) Copies of works of visual art which have been made in limited numbers by the artist himself or under his authority, shall be considered to be originals of works of visual art, referred to in paragraph (1) of this Article. Such copies shall normally be numbered, signed or authorized by the author.

The fact that in the absence of a broader, basic definition of the term *original*, said definition is provided in the context of a marginally applied right, perhaps reflects the relation of the law and the essential content of the terms describing creativity.

[124] Vukmir, Mladen, Feldman, Božidar, Zakon o Autorskom Pravu (in Croatian), Zagreb, 1994, ISBN 9539618703, pp. Also, this is to thank Ms. Janka Vukmir, an art historian specialized primarily in contemporary art who read the original version of this text and commented on the terminology used in its Croatian version. She also contributed to the discussion on the meaning of "original".

[125] CRRA; Alterations, Article 6:

(1) Translations, adaptations, musical adaptations and other alterations of a copyright work, which are original individual intellectual creations, shall be protected as independent works.

(2) Translations of official texts in the domain of legislation, administration and judiciary, shall be protected, unless made for the purpose of officially informing the public and are disclosed as such.

quially, the meaning of original in the art language means simply a copy designated as principal among various attempted renderings, while in legal language it denotes the copy that has evolved and has been rendered by an author being sufficiently remote from the copies other than his/her own, that s/he has known prior to his rendering.

REPRODUCTION (Lat. *reproductio*; the act of producing again)[126]

The term reproduction is according to our semantic criteria also at the top of the pantheon of central copyright concepts it denotes. Namely, the act of copying is actually that process which serves to divulgate the idea fixed in a work of art. In the trinity *idea –work of art – copy* the act enabling cycle repetition in successful works of art is the reproduction of the work. That is to say, to reproduce, i.e., to copy is a verb expressing actions that transform these more or less abstract nouns into processes leading to the creation of those new works that are not even in the stage of idea, nor would they without copying of earlier works easily enter into such stage.

Namely, let us use here a figure of speech: if a copy is not consumed there will be no fuel to activate a new creation cycle. We remind that, in our opinion, the creativity at its first stage requires internalization of information through consumption of a work of art in order to enable creation of new artistic contributions at all. Term reproduction is expressly defined by law that was subject of our study in the way that confirms our thesis. Namely, its definition is all-embracing and encompasses both first copying of the original work and any following copy-making. The term incorporates any and all the acts of copying, from fixing in the material medium, to electronic storage of the work as a form of fixation, which is especially significant for the present digital context analysis.[127]

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(3) Provisions of paragraph (1) of this Article shall not affect the rights of the authors of the works, which have been altered.

According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *parody*, 1590s (first recorded use in English is in Ben Jonson), from or in imitation of L. *parodia* "*parody*," from Gk. *paroidia* "burlesque song or poem," from *para-* "beside, parallel to" (in this case, "mock-") + *oide* "song, ode" (see ode). The meaning "poor or feeble imitation" is from 1830. The verb is attested from c.1745. Related: Parodic; parodical.

[126] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *reproduction*, 1650s, "act of forming again;" see re- + production. Of generation of living things, from 1782; of sounds, from 1908. Meaning "a copy" is from 1807, also *repro*, 1946 as a shortening of *reproduction*.

[127] Reproduction, Article 19

(1) The right of reproduction shall be the exclusive right of making one or more copies of copyright works, in whole or in part, directly or indirectly, temporarily or permanently, by any means and in any form. The right of reproduction includes fixation that shall mean the fixing of copyright works in the material or other corresponding medium.

(2) A copyright work is fixed and reproduced in particular by graphic procedures, photocopying and other photographic procedures with the same effect, by sound or visual recording, by building or carrying out works of architecture, by storage of the work in electronic form, and by fixing of the work transmitted by computer network on a material medium.

The term reproduction is in many aspects the reason for misunderstandings in the present interpretation of intellectual property law. It appears as if the possibility of easy, instant copying of digitalized works is the cause of difficulties in the notion of the copying process. As if users of the digital reality feel that the inherent copying quality of any work in the digital environment in a way generates a state where copying is not such anymore. It appears that our heirs, generations born in a digital environment, have come to the conclusion that the digital reality does not actually involve copying, but every copy is *de facto* an original which exists simultaneously, or even permanently, in more places.[128] Even if this was the case, we deem that the single copy, the omnipresent digital original, actually still partially belongs to its author in that timelessly constant way that has been the fundamental element of copyright law over its entire history. What is even more confusing is that contemporary authors, in particular the authors from the coming generation, which was born in the digital environment, actually often renounce by themselves their copyrights.[129] However such right, which as all intellectual property rights is simply a civilization's form of ownership adjusted to the fact that the object of protection is intangible, continues to exist in its original form regardless of the new environment causing many renouncements by the authors. Therefore, we must not confuse the fact that today there are many different forms of compliance or relinquishing of the intellectual property rules over intangible creativity objects, with the simple fact that such right still exists in its original form. Because we do believe that property in the creative results is equally important in the context of digital at it was in the analogue reality.

Let us use an analogy from natural sciences that may help us understand the foregoing. Take, for instance, one of the most ordinary physical facts, a force which every person (except for astronauts) encounters every day. Gravitation is something we accept without questioning; we almost abstract it out from our perception of the world. Even though our hand weights several kilos we feel such weight only if we devote particular attention to it. Also, when we decide to swim, we do not sink to the bottom of the lake, since we have learned to master gravity with swimming movements. Tens of thousands of years after our ancestors learned to swim, only a few generations before us, mankind mastered the art of flying. Thanks to appliances heavier than air we are today able to raise our bodies in the air and once again overcome the force of gravity without falling to the ground, at least in the majority of cases. As by the ability of swimming and flying we do not deny the existence of gravity, in the same way with digitalization and networking through computer connection we do not deny the existence of ownership rights over creative results we call intellectual property. As flying is enabled by a technology called airplane, we may expect to use on the Internet a technology that will enable greater freedom of movement and creation, while complying with property regulations as we had done in the analogue world.

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[128] If this is bringing our civilization closer to the intuitive understanding of quantum behavior, so be it!

[129] See the results of researches in the field of authors' and copyright work consumers' behavior in digital environment attained by Counterfeiting & Piracy Research FPS Project. The Project has its own web site at http://www.counter2010.org/, 10-08-20.

The question of development of technologies enabling to monitor works of art usage in a digitally networked context is one of the most controversial issues of development of human creativity protection. There is no doubt that the matter deserves our attention within the framework of this research. However, due to the space constraints we prefer not to attempt formulating here the full scope of preconditions on which we base our previsions about the future development and the role of this technology.

Without arguing here our assertions, let us just say that DRM (Digital Rights Management) technologies and their equivalents are in our view going to play a crucial part in the transformation of the role of law by compensating a significant part of present works of art management efforts and enabling to manage copying of works. The retreating present systems of collective enforcement of copyright and performer's rights will be partly compensated by technical means, as will be the case with many segments of individual rights enforcement. We believe that, whilst copyright law will continue to exist and be recognized as so far, new forms of its usage shall generate changes in its definition and regulation methods.

Terminology of the Anti-piracy and Anti-counterfeiting Services Industries:

Although it has no roots in treaties' or legislative language, the industry related to unauthorized copying prevention developed a language that has became common in the public discourse on rights infringement prevention. Hence, by industry dealing with prevention we do not refer only to rightholders, in particular multinational economic entities whose rights are mostly infringed, but also to service providers assisting rightholders in that combat. We refer to various types of copyright and related rights agents providing assistance, individually or collectively, in the protection of rights, i.e., distributors in the trade of goods, who occasionally also play a role in this fight. These activities involve equally also private investigators, marking technologies providers (holograms, computer codes, invisible ink, laser engraving, genetic ink, etc.), patent and trademark agents, and public authorities, such as the police, customs and other administrative oversight authorities. This entire "ecosystem" is oriented towards the maintenance and enforcement of intellectual property rights and jointly represents the principal generator of the lexicon we will analyze subsequently.

Colloquial Professional and Working Terminology:

The terms analyzed hereinbelow indicate some of the fundamental copying concepts. At the same time, the almost complete absence of these terms in treaty's and legal language gave us the impetus to devote thereto a special section in this article. In fact, without ever being part of the legal lexicon and professional language, these terms have today become dominant in the social communication regarding the phenomena of copying of copyright-protected works.

Plagiarism (Lat. *plagium*; stealing (of goods, human souls))[130]

Plagiarism is a term traditionally associated specifically with copyright, and is not used in other intellectual property laws to indicate infringement of rights. It has been used since antiquity where, in the lack of developed legal language, a "borrowed" term originally indicating the crime of stealing a slave of another was used. Despite the long-time usage, this term does not appear in treaty's or legislative language.

In science and art the term plagiarism is used to indicate a work generated by use of someone else's ideas, entirely, in substantial or recognizable part, appropriation of the work of others represented as one's own. Traditionally, in science and art a plagiarist would be ethically stigmatized and his behavior would be often judged as socially unacceptable.[131] In our opinion, it is important to bear in mind this constant, as many report on change of these principles in conditions of accelerated and increasingly deeper society digitalization.[132]

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[130] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *plagiarism*, *plagiarism*, 1620s, from L. *plagiarius* "kidnapper, seducer, plunderer," used in the sense of "literary thief" by Martial, from plagium "kidnapping," from *plaga* "snare, net," from PIE base *p(e)lag- "flat, spread out." *Plagiary* is attested from 1590s.

Vukmir, M., The Roots (…), in a footnote: Stephen P. Ladas, *The International Protection of Literary and Artistic Property*, (1938), Vol. I, at 13, also states that "[t]he Roman booksellers did a flourishing business, and slave labor was employed to furnish copies promptly, cheaply, and on a large scale." For this, in the footnote 3 he refers to Friedlander, *Roman Life and Manners under the Empire*, III, 36. *See* also Streibich, *op.cit.,* footnote 22, at 5. *So* Philip Wittenberg, *The Protection of Literary Property*, (1957, 1968), at 4-5, referring to Martial, Horace, Pliny, still concluding that there was no notion of copyright developed at the time. He especially singled out Atticus, who

"responding to the demand for many copies of the works of popular authors, went into the mass publishing business. He had a reader work with a large number of trained slaves who took the dictation directly in book form so that a thousand copies of a small volume of epigrams and poems could be produced in a day. The books thus produced were both plentiful and cheap, selling for as little as what would now be seventy-five cents. 'Everyone,' says Martial, 'has me in his pocket; everyone has me in his hands.'

Ladas, *id.*, at 13. Although Ladas briefly reports on the history of legal protection under Roman law, in the footnote 2 he cites sources for his opinion that plagiarism "was undoubtedly condemned by public opinion. He refers to Martial, *Epigrams to Fidentinus* (Book I, LIII, LXII, LXVI), and Cicero, who complained that Epicurus borrowed bodily all his physical theories, his philosophy as well, spoiled what he borrowed and gave no credit at all, as in Snyder, *The World Machine*, at 134. He also cites Renouard, *Traite des droits d'auteurs* (1838), at 16 in stating that the term in Roman law "was derived from *plagium* - the crime of stealing a human being."

[131] See ABA (American Bar Association) Journal article published in August 2010 entitled Law Prof Sees More Plagiarism, Allows Do-Overs, http://www.abajournal.com/weekly/article/law_prof_says_more_students_are_plagiarizing_paper, 10-08-10.

[132] See New York Times article published in July 2010, Plagiarism Lines Blur for Students in Digital Age, http://www.nytimes.com/2010/08/02/education/02cheat.html?_r=1, 10-07-30. "The notion that there might be a new model young person, who freely borrows from the vortex of information to mash up a new creative work, fueled a brief brouhaha earlier this year with Helene Hegemann, a German teenager whose best-selling novel about Berlin club life turned out to include passages lifted from others. Instead of offering an abject apology, Ms. Hegemann insisted, "There's no such thing as originality anyway, just authenticity." A few critics rose to her defense, and the book remained a finalist for a fiction prize (but did not win)."

Due to the individual and ethical responsibility components that have always been prominent in the assumption of somebody else's creativity without authorization and indication of the author, it is self-understandable that the legal system developed a proper solution in the form of introduction of author's moral (individual) right to recognition of authorship.[133]

At the same time, it should be taken into account that given its individual and ethical character the institute of incorrect indication, i.e., non-indication of author's name falls under the provisions on the protection of author's moral (individual) rights. The CRRA, as well as other copyright laws, regulates the issue of (non-)indication of the author's name upon exploitation of the work of art. The author is, thus, entitled to choose a pseudonym ensuring his anonymity with respect to the work, if he wishes so. Also, fake authorship is not permitted and the author has the right to oppose to the use of his name to indicate the work of another.[134] As to plagiarized work, the author is entitled to oppose to the appropriation of authorship of his work by another person.

Piracy[135]

Piracy is a contemporary term having no roots in legal or treaty's language, and it is used to indicate unauthorized copying activities related to works protected by copyrights and related rights. Nowadays, we often use the term anti-piracy to indicate fight against unauthorized copying of the objects embodying protected copyright and related rights.

Curiously, the relatively new usage of this term caused necessary alignments of the newly introduce term with the existing meanings. For instance, in Croatian language, the term piracy (Cro. *piratstvo*) has been taken form the international terminology related to the fight against IP rights infringement. Early on, during the development of Croatian anti-piracy language the question of use of the term piracy (Cro. *piratstvo*) appeared. In fact, some were of the opinion that the term *piratstvo* was characteristic of the Serbian language, whereas *gusarenje* would be proper

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[133] In the following articles of Chapter 3.1 Moral Rights of the Author, the CRRA defines the scope of author's individual rights: Right of First Disclosure, Article 14, Right of Recognition of Authorship, Article 15, Right of Respect for the Work and Honor or Reputation of the Author, Article 16, Right of Revocation, Article 17.

[134] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *pseudonym*, 1706 (in pseudonymous), from Fr. *pseudonyme* (adj.), from Gk. *pseudonymos* "having a false name," from *pseudes* "false" + *onyma* dial. form of "name." Properly of made-up names; the name of an actual author or person of reputation, affixed to a work he or she did not write, is an *allonym*. An author's actual name affixed to his or her work is an *autonym* (1867).

[135] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com, *piracy* early 15c., from M.L. *piratia* (see pirate). Also, pirate (n.) mid-13c., from O.Fr. pirate, from L. pirata "sailor, sea robber," from Gk. *peirates* "brigand, pirate," lit. "one who attacks," from *peiran* "to attack, make a hostile attempt on, try," from *peira* "trial, an attempt, attack," from PIE base **per-* "try" (cf. L. peritus "experienced," *periculum* "trial, experiment, risk, danger," see peril). Meaning "one who takes another's work without permission" first recorded 1701; sense of "unlicensed radio broadcaster" is from 1913. The verb is first recorded 1570s. Related: Pirated; pirating.

Croatian equivalent of the term. Thus, in the heated post-war discussions the introduction of the simple intellectual property terminology has caused rather intricate ideological discussions. Soon, a more informed point of view became crystallized where the term *gusarenje* (privateering) signifies war-like act against vessels, authorized by government, committed for the purpose of attacking and taking the property of parties at war by authorized private entrepreneurs. Piracy, on the other hand, includes the same acts committed against all persons and vessels, without any criteria, including those sailing under their own national flag without any authorization by national authorities, being, therefore, completely illegal. In that sense, the term piracy was in the end correctly chosen to indicate unauthorized use of copyright works and works protected by related rights.

Counterfeits[136]

Historically the concept of counterfeiting, i.e., unauthorized manufacture of objects that are identical to or imitate the original object with the intent to defraud is called counterfeiting, whereas counterfeited objects counterfeits. Today, activities against illegal copying of objects protected by trademark and design law are called anti-counterfeiting. Wikipedia specifies the following counterfeiting characteristics and fields:

> A counterfeit is an imitation, usually one that is made with the intent of fraudulently passing it off as genuine. Counterfeit products are often produced with the intent to take advantage of the superior value of the imitated product. The word counterfeit frequently describes both the forgeries of currency and documents, as well as the imitations of clothing, software, pharmaceuticals, watches, electronics and company logos and brands. In the case of goods, it results in patent infringement or trademark infringement.[137]

This description reveals that in the majority of cases production of counterfeits includes the intention to deceive, thus, we should also distinguish possible products that are imitations, but are not made with the intention to deceive. In that sense, we can refer to cases of putting into sale discarded goods which could be sold as defective goods or are intended for destruction, but were put on the market by mistake or some type of illegal intent. We also refer to goods manufactured with the rightholder's approval, but put into the market in a quantity which, again by mistake or other type of illegal intent, may exceed the approved quantity, despite having all the characteristics of the genuine product. These are situations where, regardless of

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[136] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *counterfeit* (v.) late 13c., from O.Fr. *contrefait* "imitated" (Mod.Fr. contrefait), pp. of *contrefaire* "imitate," from *contre-* "against" (see contra-) + *faire* "to make, to do" (from L. facere; see factitious). M.L. *contrafactio* meant "setting in opposition or contrast." Related: *Counterfeited*; *counterfeiting*. The noun and adj. are from late 14c.

[137] Wikipedia, The Free Encyclopedia, article Counterfeit, http://en.wikipedia.org/wiki/Counterfeit, 10-08-01.

the rightholder's will, the authorized manufacturer puts into the market products that exceed the approved quantity or products which do not meet rightholder's standards for finished goods.

As portrayed above, human counterfeiting activity is documented also in antique societies and we could say that it is present in all periods of historical progress in unreduced form. Counterfeit may also indicate fake copyright protected work of art in cases where the work of art is made or sold as a product with the intent to deceive the buyer, such as e.g. counterfeit pen holders with copyright protected cartoon characters on it. If an artistic work of art is copied illegally we must clearly also distinguish the question of intention, considering that in the artistic field a work of art that imitates the original made for the purpose of practicing the technique can be made for study of the techniques, and it can even have the copyright holder's approval. However, if it is put into sale without the relevant approval its sale will remain illegal if the buyer is not informed that the product is not genuine.

We should emphasize that many counterfeit works of visual art involve no copyright infringement, since inasmuch as the work is an imitation of another work of art, copyrights in such work of art, in cases of imitation of old masters, have often long expired.[138] This will be the case with many counterfeits of notorious paintings of historical authors, but since copyright is expired or has never existed, the counterfeit has no element of copyright infringement, but only the intention to defraud.

Counterfeits were often brought into association with forms of illegal trade and transportation named *smuggling*. Also, in global economy conditions these two types of activities often appear in pair and are difficult to separate. In other words, a consequence of distribution of illegally manufactured copyright protected goods in nearly all cases involves, as a form of supranational market distribution, some form of smuggling or other illegal sale, such as *street hawking*, outside set up and legally regulated channels. The term smuggling indicates principally illegal activities in violation of customs regulations. Furthermore, counterfeit goods often remain outside ordinary economic flows, involving also tax consequences, i.e., and fiscal losses for the country. Nowadays one of the often-smuggled types of branded goods is tobacco. In the past, tobacco smuggling, just as is the case with some type of illicit drugs today, were not branded, although they might have been identified to the customs by their geographic origin.

With regard to smuggling it is important to point out that this illegal behavior is also loosing its significance in digitalized reality. Given the non-territoriality of the Internet, there are no physical objects passing state borders, thus, we can not talk about the illegal act of smuggling in the traditional sense of the word. Fiscal losses, however, do still occur.

[138] Wikipedia, The Free Encyclopedia, see e.g. the article on the famous forger Han van Meegeren: http://en.wikipedia.org/wiki/Han_van_Meegeren, 10-08-02, and the forger of his forgeries, Jacques van Meegeren: http://en.wikipedia.org/wiki/Jacques_van_Meegeren, 10-08-20.

Falsification *(Lat. falso*; mistaken, false *+ fare;* to make*)*[139]

Falsification (Cro. *krivotvorina*, Ger. *falsifikat*, especially related to copyright infringement) is a traditional term indicating copies, imitations or alterations of works of art or other objects made to defraud or deceive, with the purpose of passing them off as genuine. In some European languages, such as in Croatian, falsification (Cro. *falsifikat*) has been taken over as the fundamental term indicating fraudulent copies. Today, thus, in colloquial Croatian the term "*lažnjak*" (*fake*, see below) indicates copy made with the intention to represent it as genuine. The term is used particularly in the context of counterfeits when creating trademark-protected products. Also, the term falsification is used both in trademark and copyright law.

We may notice that the term falsification is nowadays used principally in the context of art counterfeits, and is consequently often used in the description of copyright protected works infringement. In the context of art, falsification implies that a falsifier crated a completely new work, imitating insofar as possible the style and techniques of an artist or a particular era, with the intention to disguise that it is a copy.

We are also familiar with partial falsification, a term used when the falsifier places on the work of a less famous or completely unknown artist the signature of a famous artist to achieve a higher price. This category includes also original works of which only fragments survived, where the falsifier reconstructed destroyed parts without indicating so. From the art trade viewpoint, particular collectors' desire that the objects in their collections were not fragmented led to the restoration of works of art, i.e., reconstruction of destroyed parts by trying to cover up that the reconstructed parts were not part of the original work. The result thereof was actually analogue to the production of copies without the authorization of intellectual property rights holder, and hiding such fact from others. In this case the situation is additionally modified, in fact, it is possible even that the buyer orders such "false" reconstruction, which will become false since it is not visible and evident to others as a subsequent intervention into the work of art.

The term *forgery*[140] nearly overlaps with the meaning of the term falsification and to an even more all-embracing extent indicates all works produced imitating

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[139] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *falsify*, mid-15c., "to prove false," from Fr. *falsifier*, from L.L. *falsificare*, from L. *falsificus* "making false," from *falsus* (see false). Related: Falsified; falsifying. Meaning "to make false" is from c.1500. Also *false*, c.1200, from O.Fr. *fals*, *faus*, from L. *falsus* "deceived, erroneous, mistaken," pp. of *fallere* "deceive, disappoint," of uncertain origin. Adopted into other Gmc. languages (cf. Ger. *falsch*, Dan. *falsk*), though English is the only one in which the active sense of "deceitful" (a secondary sense in L.) has predominated. Related: Falsely. (...)

According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *pseudo*, comb. form meaning "false, feigned, erroneous," from Gk. *pseudo-*, comb. form of *pseudes* "false," or *pseudos* "falsehood," both from *pseudein* "to deceive." As stand-alone, "false, spurious;" see pseudo-.

According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *trump* (v.), "fabricate, devise," 1695, from trump "deceive, cheat" (1513), from M.E. trumpen (late 14c.), from O.Fr. tromper "deceive," of uncertain origin, perhaps from a verb meaning "to blow a trumpet." Trumped up "false, concocted" first recorded 1728.

[140] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *forgery*, 1570s, from forge + -ery; forge (n.), late 13c., from O.Fr. forge, earlier faverge, from L. fabrica "workshop,"

the original with the intention of covering up that the resulting copy is unauthorized. Due to more frequent use of the term "forging" in the context of trademark infringement, nowadays forgery is equally or more frequently used in the context of infringement of industrial rights than copyrights.

Fake[141]

Fake is a term used in colloquial context to describe or induce someone to believe that something is not real or that it is false. Today, this colloquialism complemented or even replaced the terms *falsification* and *counterfeit* to indicate an artefact created with the intention to deceive. We will, in this context, try to carry out here a broader analysis of the appearance of fake works of art and behavior. Wikipedia article on fake points theta, among others, fake can signify the following:

The term *fake* in the context of fiction can indicate novels with made-up characters and places. Furthermore, *fake* can signify fictional examples used as case studies in law, medicine, etc. Also, in the context of Internet, for instance Facebook or other social networking services, often photos do not represent real persons. In fact some users utilize transgender avatars, therefore, these identities may also be marked as false. In the context of fiction in art we can say that *fake* indicates those dramatic portrayals in films or plays showing invented, fictional events, in particular when romanticizing history in apparently documentary form. Furthermore, this implies that actors can show fake emotions (Cro. *šmiranje* routine acting based on improvisation, poor acting catering to audience's lowest instincts) and, finally, that a screenplay or playscript often include, according to the nature of things, use of fake objects, such as fake houses or whole settlements. Moreover, fakes can also signify certain choreography sports, for instance professional wrestling shows organized by World Wrestling Entertainment.[142]

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from faber (gen. fabri) "workman in hard materials, smith." Sense of "to counterfeit" is in Anglo-Fr. verb forger "falsify," from O.Fr. forgier, from L. fabricari "to frame, construct, build." Related: Forged; forger; forging, –ery, suffix forming nouns meaning "place for, art of, condition of, quantity of," from M.E. -erie, from L. –arius. Also: *forge* (n.), late 13c., from O.Fr. *forge*, earlier *faverge*, from L. *fabrica* "workshop," from *faber* (gen. *fabri*) "workman in hard materials, smith." Sense of "to counterfeit" is in Anglo-Fr. verb *forger* "falsify," from O.Fr. forgier, from L. fabricari "to frame, construct, build." Related: Forged; forger; forging.

Wikipedia, The Free Encyclopedia, see article Art Forgery, http://en.wikipedia.org/wiki/Art_forgery, 10-08-10. The page contains many bibliographic and Internet references to this topic.

[141] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *fake*, attested in London criminal slang as adj. (1775), verb (1812), and noun (1851, of persons 1888), but probably older. A likely source is *feague* "to spruce up by artificial means," from Ger. *fegen* "polish, sweep," also "to clear out, plunder" in colloquial use. "Much of our early thieves' slang is Ger. or Du., and dates from the Thirty Years' War" [Weekley]. Or it may be from L. *facere* "to do." Related: Faked; faker; fakes; faking. Finally, the French adopted term "*faux*" is also used, according to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; *Faux*, from Fr. *faux* "false" (see false). Used with English words at least since 1676 (Etheredge, faux-prude). Used by itself, with French pronunciation, from 1980s to mean "fake."

[142] See e.g. organization's web site http://www.wwe.com/, 10-08-02, and Wikipedia, The Free Encyclopedia, article Fake, http://en.wikipedia.org/wiki/Fake, 10-08-20.

Interestingly, in many languages word fake, or its translations became a name for the fact of civilization of the turn of the twentieth century. Big segments of populations in the emerging economies and in developing world come into contact with the prevailing global trends in big parts exclusively through fakes. It is no wonder that for the consumers who have only known fakes this fact of their lives becomes the true life itself and that the term fake acquires and almost endearing meaning. However, if we take into account the research by Prof. Gino it is important to keep in mind the ethical consequences to the society which using fake goods, even unknowingly, might have.[143]

Imitation (Lat. *imitatio*; the product of imitating; copy) [144]

In art the term indicates a work of art that imitates an existing model, created without required creativity or inspiration. Perhaps, one way we could consider an imita-

[143] See note 100 above. In private communications with my relatives and acquaintances, including the fb contacts which I had in connection to the publication of the results of this research I was surprised to which level people were ready to reject its findings. One of the most frequent reactions was that the study must have been sponsored by the brand owners and presumably slanted, followed by the speculation that it was not properly conducted under the double-blind scientific requirement.http://en.wikipedia.org/wiki/Blind_experiment, 11-08-07. These arguments is also repeated on the blogs commenting the findings, but are apparently refuted by the study itself which seem to have found that people tend to behave less ethically even when they think that that the original objects they are using are fake. See e.g. http://madisonian.net/2009/12/16/the-costs-of-counterfeiting/, 11-08-07. “Although people buy counterfeit products to signal positive traits, we show that wearing counterfeit products makes individuals feel less authentic and increases their likelihood of both behaving dishonestly and judging others as unethical.” http://pss.sagepub.com/content/21/5/712, 11-08-07.

[144] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; imitation, c.1500, from O.Fr. imitacion, from L. imitationem (nom. imitatio) “imitation,” from imitari “to copy, portray, imitate,” from PIE *im-eto-, from base *aim- “copy.” (Related to L. *imago*, see image). Also, eng. simulation, mid-14c., “a false show, false profession,” from O.Fr. simulation, from L. simulationem (nom. simulatio) “an imitating, feigning,” noun of action from simulare “imitate,” from stem of similis “like” (see similar).

According to Answers.com, http://www.answers.com, 10-08-19, im·i·tate (m’ -tāt’), tr.v., -tat·ed, -tat·ing, -tates. To use or follow as a model. To copy the actions, appearance, mannerisms, or speech of; mimic: amused friends by imitating the teachers. To copy or use the style of: brushwork that imitates Rembrandt. To copy exactly; reproduce. To appear like; resemble.

[Latin imitārī, imitāt-.] imitator im’i·ta’tor n. SYNONYMS imitate, copy, mimic, ape, parody, simulate. These verbs mean to follow something or someone taken as a model. To imitate is to act like or follow a pattern or style set by another: “Art imitates Nature” (Richard Franck). To copy is to duplicate an original as precisely as possible: “His grandfather had spent a laborious life-time in Rome, copying the Old Masters for a generation which lacked the facile resource of the camera” (Edith Wharton). To mimic is to make a close imitation, often with an intent to ridicule: “fresh carved cedar, mimicking a glade/Of palm and plaintain” (John Keats). To ape is to follow another’s lead slavishly but often with an absurd result: “Those [superior] states of mind do not come from aping an alien culture” (John Russell). To parody is either to imitate with comic effect or to attempt a serious imitation and fail: “All these peculiarities [of Samuel Johnson’s literary style] have been imitated by his admirers and parodied by his assailants” (Thomas Macaulay). To simulate is to feign or falsely assume the appearance or character of something: “I ... lay there simulating death” (W.H. Hudson).

tion is as a work of art that represents such low creativity level that it might never reach the step necessary to obtain copyright protection.[145]

Copyright law provides for a clear solution in a situation of authorized imitation of the original work. We refer to a form of humorous reinterpretation called parody, one of the named exceptions/limitations of copyright reflecting historical human ability to comment its reality reinterpreting the original in a way that reflects specific imitator's viewpoint.[146] We could say that it implies the principle of freedom of speech incorporated into copyright law from its beginnings. It is our opinion that when the historic pendulum of intellectual property protection reached its apogee at the turn of the centuries a decade ago, the important relation between free speech and intellectual property protection was tilted in favor of the legal protection of intellectual property. This trend seems to have peaked, and we are seeing now the balance being restored, sometimes to the surprise of the counsel and right's holders.[147] The court in a recent case stated that: "the importance of (*artist*) Pilsner (freedom of expression through her work) outweighs the importance of (*rightholder's*) Vuitton (protection of property)". The Danish artist Nadia Plesner who was a defendant in this case herself stated: "Today is a great day for art. If I had lost this, I believe it would have caused many artists to censor their own work to avoid legal trouble. Now we have won back our freedom to make reference to the modern society we live in."

Modern societies are often self-referencing and often correlated its use of symbols. Pop artists of the twentieth century introduced the usage of visual symbols that might have been or are a property of private parties. However, the free speech principles have been invoked justifiably whenever the usage of proprietary symbols has been all except in direct competition to the goods and/or services of the rightsholder in such a symbol. The underlying social logic is presumably that, should the rightholders impose on the society the omnipresence of their signage, they sure should allow the society some degree of freedom to relate itself to that omnipresence which is sometimes seen as intrusive. We expect further redefinition of this balance in the future, not least by the changes in consumer's habits caused by the recent financial and economic crises. Again, this research if taken further here, would lead us to stray too far of the overall picture we are trying to sketch.

In the general, colloquial use imitation outside of the intellectual property terminology indicates an object made to be presented to others as something else, more valuable (e.g. brass as gold, etc.). In some languages' anti-counterfeiting terminology it has become customary to refer to imitation as a product that is not identical to the original, but it is presented to potential buyer as sufficiently similar to the

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[145] Nevertheless, we believe that such romantic interpretation, seeking special "inspiration" when creating is relatively conservative and modern copyright law is less concerned with the level of special inspiration as a precondition for obtaining protection than two centuries ago.

[146] CRRA, Parodies and Caricatures, Article 94.

It shall be permitted to transform the work into a parody or caricature to the extent necessary for the purpose thereof, by indicating the work being transformed and its author.

[147] Words (artist) and (rightholder) added by this author. http://www.thelmagazine.com/TheMeasure/archives/2011/05/06/artist-wins-copyright-case-brought-by-louis-vuitton

original to mislead him and incite consumption of the imitation. Most often, such imitations constitute trademark infringement or unfair competition practices.

Dummy, Hoax[148]

Before concluding this brief language analysis, there is no harm to present briefly also other forms of imitation that, in different social contexts, in a way have the function to deceive others. This is to say that our societies in the fields outside of the intellectual property rights protection did develop a stance towards the copies. In fact, from the listing of these functions, as done by Wikipedia, ensues that these imitations have a social function and that they form integral part of human creative activity. A short listing of the terms used to indicate something false reveals that the same terms are used not only for objects, but the same term, in this case dummy or hoax, indicates the quality of being untrue and the ability to fool.

We may talk about deception occasionally when using counterfeits, i.e., fake document or photo or other object. Also, use of decoy, for instance in the form of wood tank model intended to fool the enemy is a completely accepted military technique used, for instance, on a massive scale by the Allies before their landing in Normandy in 1944.

Within the framework of artistic, for instance, performer's activity we can also find numerous examples of more or less fraudulent behavior. Not only do the performers often change their biographies arbitrarily or express deliberately planned standpoints in interviews to gain wider success, which do not correspond to their true beliefs, but we can also find true distortions of reality, e.g. a stage performance with pre-recorded sound accompaniment. Thus, often in television studios performers actually only lip-synch or mime the playing of an instrument. They move their lips or drum sticks to match their own-recorded musical interpretation accompanying the apparent performance, or in some cases those of the others. It is interesting that this context does not invoke particularly high level of scorn, or is considered as an unethical practice, although we could think that some musically sensible con-

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[148] According to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; hoax, 1796 (v.), 1808 (n.), probably alt. of hocus "conjurer, juggler" (1640), or directly from hocus-pocus, also sham (n.), 1677, "a trick, a hoax, a fraud," perhaps from sham, a northern dialectal variant of shame (q.v.). Sense of "Something meant to be mistaken for something else" is from 1728. The meaning in pillow-sham (1721) is from the notion of "counterfeit." The adj. is attested from 1681; the verb from 1677. Shamateur "amateur sportsman who acts like a professional" is from 1896. There are many other terms in English used to indicate «fakes», e.g.: according to Online Etymology Dictionary, 2010-08-04, http://www.etymonline.com; dud, c.1825, "person in ragged clothing," from *duds* (q.v.). Sense extended by 1897 to "counterfeit thing," and 1908 to "useless, inefficient person or thing." This led naturally in WWI to "shell which fails to explode," and thence to "expensive failure." Also bogus, "counterfeit money," 1839, Amer.Eng., apparently from a slang word applied in Ohio in 1827 to a counterfeiter's apparatus. Some trace this to *tantrabobus*, a late 18c. colloquial Vermont word for any odd-looking object, which may be connected to tantarabobs, recorded as Devonshire name for the devil. Others trace it to the same source as bogey (1).

See also articles Dummy, http://en.wikipedia.org/wiki/Dummy, 10-08-08, and Hoax http://en.wikipedia.org/wiki/Hoax, 10-08-08 Wikipedia, The Free Encyclopedia.

sumer is likely to ignore these programs. This also, we believe, should be evaluated in light of the Prof. Gino research mentioned above.

Deceiver, charlatan, e.g. a person who pretends to be a physician or lawyer is also called a dummy or hoax. In this sense the term implies an individual, and not the object, hence, specific terms are used for these two examples. In the case of physician we use the term quack doctor and in the case of lawyer we use quack lawyer. In the personal sense the terms implying falseness, dishonesty are used to indicate persons who tend to show different personalities with different people or who in different contexts express different opinions of the same person. Hence, in a depreciatory sense the term dummy or hoax is used to indicate a person who lies, pretends to be something he is not.

Various types of substitutes have to a certain extent the role of deceiving object, and they can have the same purpose, integral or partial, of the original item they replace. In addition to food and flavor substitutes, fake objects may replace other materials in order to obtain lower construction weight (e.g. imitation of oak beam hollow from the inside, but covered by a thin layer of oak veneer). Similarly, in the desire of sparing the life of animals it is possible to substitute meat with soya steak prepared so as to resemble a meat steak. Fur for coats will be substituted with a faithful or less faithful imitation of fur, although this is done nowadays for entirely different reasons such as ecology, and piano keys will have imitation ivory coating instead of the real material.

There may be different reasons for using a fake item instead of the real one, principally when the real object does not exist because it was destroyed, lost or even invented. In the reconstruction of historical items, fakes may be created on the basis of historical data or speculations. In the reconstruction of invented items, for instance replicas of swards used in movies, some of which have become famous, as *Excalibur*, the gear of *Indiana Jones*, or *Light Saber* from *Star Wars* TV series, we come to the situation where objects of our imagination are transformed into reality. It is interesting that players of digital games use today the abovementioned 3D printing technology to print a 3D object of their interest for cyberspace games, which is almost akin to making a material object out of the immaterial, imaginary world.[149]

Fake versions can also be made for easily accessible originals, for the purpose of price reduction (e.g., artificial fruit flavor used in lollipops requires no real fruit or glass costume jewelry, vinyl imitation leather, etc.) or to reduce the risk of damage or theft (e.g., when a famous panting replica is placed into the original location, while the original painting is being exhibited elsewhere). Furthermore, the risk of injury from dangerous products can also be reduced in this manner (e.g., weapons used as movie props).

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[149] The Economist, A Factory on your Desk; Manufacturing: Producing solid objects, even quite complex ones, with 3-D printers is gradually becoming easier and cheaper. Might such devices some day become as widespread as document printers?, 09-09-03, http://www.economist.com/node/14299512, 10-08-15: «Z Corporation's machines are being used by companies to let players of video games, including "World of Warcraft", "Spore" and "Rock Band", produce colourful, 3-D models of their in-game characters, for example."

Fake weapons may be used in bank robberies. Due to their similarity to real weapons, there are regulations that forbid taking fake automatic rifles or other weapons to certain areas. In case the original product is illegal it may be replaced on the market with a modified substitute (e.g., replicas of automatic AK-47 rifle made for the American civilian market capable of delivering only semi-automatic fire).

Similarly, substitutes are used also when the original requires a license for its operation, e.g., replica of flintlock muskets without powder ignition. The history of warfare has also seen the construction of fake objects covering the actual movements or the presence of military forces to trick the enemy (e.g. wooden dummy versions of tanks parked at their regular places in military bases, while the actual tanks are secretly sent to the front), or targets resembling airplanes, pulled by actual airplanes from a certain distance.

We will conclude here the analysis of the different aspects of reproduction and copying history. Let us now take a look at the likely development of technical means of control of copyright works usage.

Expected Framework of Contemporary Social Reorganizations and Future Role of Intellectual Property Law

A strong upsurge in creativity, copying and use of works of art resulting from the introduction of digital technologies and computer networking has lead to uncontrolled and uncontrollable increase of unauthorized copying. We have seen already that copying naturally flows from the way life creates and is being created. If the event we copy and we create changes, it naturally follows that systems of protection are likely to follow. Societies have already faced and must face even more deeply the fact that in the future authors will prefer to choose themselves among very different forms of protection of their works of art. Thereupon, in case the authors will settle for a regime of charging for and controlling of the use of their works in globalized digital economy conditions, it seems unlikely that law is to maintain the role of primary copyright protection system. We will try to delineate briefly the trends and consequences of technical protection systems development, which along with current trends on a broader intellectual property front, are already giving rise to the marginalization of the role of law. It may be advisable, in this regard, to explore the trends observable in the field of legal enforcement of intellectual property rights over the last decades. Some of the most notable events recently has been World Intellectual Property Organization (WIPO) accepting the challenge in rethinking the approach to copyright regulation. WIPO has reached out to some vocal proponents of changes in the copyright field and has invited Prof. Lawrence Lessig to address their organization in October 2010, where he expressed the following thoughts:

> A functioning copyright system must provide the incentives needed for creative professionals, but must also protect the freedoms necessary for scientific research and amateur creativity to flourish.

> In the digital environment, copyright has failed at both, said Lessig. "And its failure is not an accident," he said. "It's implicit in the architecture of copyright as we inherited it. It does not make sense in a digital environment."
>
> The copyright system will "never work on the internet. It'll either cause people to stop creating or it'll cause a revolution," said Lessig, citing a growing system of copyright "abolitionism" online in response to a worrying tendency to criminalize the younger generation.[150]

Following up on this line of thought the WIPO Director General, Francis Gurry expressed his view on the issue in the following way:

> Digital technology and the Internet have had, and will continue to have, a radical impact on those balances. They have given a technological advantage to one side of the balance, the side of free availability, the consumer, social enjoyment and short-term gratification. History shows that it is an impossible task to reverse technological advantage and the change that it produces. Rather than resist it, we need to accept the inevitability of technological change and to seek an intelligent engagement with it. There is, in any case, no other choice *– either the copyright system adapts to the natural advantage that has evolved or it will perish*.[151]

Not only did WIPO move. Various national governments are also pondering their options in response to the erosion of the copyright and intellectual property erosion. Recently, the UK Government has published its response to the Professor Hargreaves Review of Intellectual Property and Growth. The Hargreaves Report is an independent study commissioned by the Prime Minister in November 2010, and it is important in the context of our research as an illustration of the institutional awareness that the status quo is behind us in all senses. While acknowledging that the IP framework is a vital part of the business environment and it must adapt to new forms of innovation, creativity and technology, the Government has endorsed all ten of Professor Hargreaves' recommendations related, among others to introduction of an copyright exchange in order to stimulate the copyrights market, and which would also include raising the market exploitation and accessibility of the orphan works. In our view, rather importantly it also suggest a reform of the copyright limitations/ exceptions is necessary.[152]

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[150] As reported by the IP Watch: http://www.ip-watch.org/weblog/2010/11/05/lessig-calls-for-wipo-to-lead-overhaul-of-copyright-system/, 11-08-07

[151] 2011-02-25 at the Blue Sky Conference in Brisbane, Australia: http://www.wipo.int/about-wipo/en/dgo/speeches/dg_blueskyconf_11.html, 11-08-07. Emphasis added.

[152] Due to the space constraints we shall remain on the level of reference to the sources. In that sense the material is available at: http://www.culture.gov.uk/publications/8365.aspx, 11-08-10. The report is available at: http://www.ipo.gov.uk/ipreview, 11-08-10, and the UK Government Response is available at: http://www.ipo.gov.uk/ipresponse, 11-08-10. The very first words of the introduction by Prof. Ian Hargreave state: "When the Prime Minister commissioned this review in November 2010, he did so in terms which some considered provocative. The Review was needed, the PM said, because of the risk that the current intellectual property framework might not be sufficiently well designed to promote

What consequences could have been noted in the field of practice of intellectual property rights protection? Considering the simple fact that over the last ten or fifteen years there has been a significant change in the way trademark right holders exercise their rights as a consequence of their efforts to control unauthorized flow of counterfeit goods into the market, in analogy to similar practices in the field of copyright law, we will understand more clearly the nature of the changes in the general position of law as means of social behavioral control in the field of intellectual property rights protection. In fact, from a situation where exclusive individual trademark rights were standardly exercised initiating litigation more than a decade ago, through the phase in which recurring to criminal law and harnessing the power of the *ex officio* action by the enforcement apparatus became the standard, we have come to a state where rights are enforced through the administrative apparatus, such as customs authorities or inspection services interventions.

Litigations are today used only in a small number of infringement cases involving no counterfeiting or piracy elements. Even in such cases rightholders more and more often chose a business-to-business approach and negotiations with infringing parties, rather than litigation. Even a significant number of initiated litigations are concluded through negotiations, mediations and settlements. We could say that we have come to certain automatism in the enforcement of intellectual property rights resulting from rightholders aims to maintain their budget, in conditions of increased infringement, within acceptable limits. We would like, hence, to point out that due to high costs, complexity and ultimately the unpredictability of the legal proceeding, rightholders have difficulties in pursuing traditional options in the legal enforcement of their rights.

Based on a twenty-year work experience in the fight against piracy and counterfeiting and contacts with persons responsible for the implementation of antipiracy and anticounterfeiting programs on behalf of corporations holding intellectual property rights, we can conclude that such trend shall continue and due to accelerated economic flows in conditions of internet economy, the law will be less and less effective in said fight. Namely, as sales are intensified by Internet offer and ordering, and copies are becoming increasingly available with the digitalization of material reality, the length, intricacies, methodicalness and cost of the legal system are becoming less and less adequate for the purposes of the rights' holders in the fast moving economies. All these difficulties are being compounded by the financial and economic crisis. Conversations with many rightholders confirmed such sentiments and increased skepticism towards the purpose of recurring to the legal system, on which basis they structure the budget for their campaigns.

Furthermore, considering that international trade is conducted in cross-border environment, and besides the length of legal proceeding there is also the complex

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innovation and growth in the UK economy. (…) Could it be true that laws designed more than three centuries ago with the express purpose of creating economic incentives for innovation by protecting creators' rights are today obstructing innovation and economic growth? The short answer is: yes. (…) *Copying has become basic to numerous industrial processes*, as well as to a burgeoning service economy based upon the internet." *Emphasis added*.

question of territorially or otherwise competent jurisdiction in multi-jurisdiction conditions, the recourse to law as the essential means in the fight for intellectual property protection does not seem probable. Naturally, law will continue to be present and used in specific conditions and cases, however, such use will remain in a very law percentage with respect to the total number of IPR enforcement matters.

We may, in this regard, notice that the anti-piracy fight is often led by investigative means, and many large corporations, which are holders of rights, to an increasing extent hire persons having extensive police and investigation experience in their anti-piracy and anti-counterfeiting teams. Attempts to build legal campaigns on RoI (*return on investment*) or other profitable bases can also be interpreted as an expression of rightholder's frustrations over the efficiency of legal proceedings.

If we look at the nature of changes occurring within the legal system, we will conclude that there is an international consensus over constant growth of the scope of intellectual property rights protection. It seems self-evident that contemporary societies have reached the conclusion that intellectual property rights constitute the basic means for generating social wealth in post-industrial societies and they must be protected as central social values. Hence, we must not be surprised by the expansion of the role of criminal-law protection and continuous reinforcement of the protection regime in the civil law system. The litigation system has undergone numerous changes pointing towards profound doctrinal advances due to the perceived importance of IP protection in modern economies and obstacles to an efficient protection of IP rights.

For instance, we refer to the enhancement of the institute of protection of particular IP holders' rights to levels not available twenty years ago or earlier. The TRIPS Agreement[153] has, thus, introduced into many jurisdictions the right to hold civil hearing for the purpose of adopting provisional measure without the presence of the other side (*inaudita altera parte*), which before its introduction was hardly conceivable. The right to statutory damages in the civil procedure, as it was introduced e.g. in Croatian copyright law, was practically contrary to the doctrinal interpretation of the civil law indemnity system in traditional civil law legal systems. In the decade prior to its introduction objections of various types have been expressed against its introduction, for instance incompatibility with fundamental theoretical principles of the indemnity institute in continental legal systems. Today, that system of statutory damages is completely accepted. Copyright term extension represents another hardly imaginable expansion of the scope of intellectual property rights.

Nowadays, those who harbor anti-IP sentiments take the fact that said changes were brought without many discussions to which the general public would participate as evidence that such changes were made under the influence of intellectual property rights holders and should in a way be seen as if they occurred contrary to social interests. We cannot agree with this standpoint. The fact that the general

[153] Wikipedia The Free Encyclopedia, article Agreement on Trade-Related Aspects of Intellectual Property Rights, http://en.wikipedia.org/wiki/TRIPS, and World Trade Organization (WTO) web site related to TRIPS, http://www.wto.org/english/tratop_e/trips_e/trips_e.htm, 2011-01-09

public has now finally taken part to intellectual property rights discussion is as welcomed as it is late. Nevertheless, in increasingly rapid social advancements it is better that this finally happened, although later than we could have hoped for. The nature of democratic discourse is such that delay is better than silence. We could say that public involvement is seen as a final affirmation of the role of intellectual property rights in modern societies and that after two centuries, intellectual property law has in conditions of digitalization and networking experienced its historical acceptance among the majority of modern societies.

Until approximately fifteen years ago intellectual property rights were strictly in the work domain of experts and rightholders and the two-hundred-year development of the system was taking place far away from public scrutiny. Precisely the abrupt increase of the use of human knowledge-based creativity results has generated changes in economic systems where added value is brought by intellectual property rights. In conditions of reduced sovereignty, new mass consumers and new mass creators (*prosumers*) have suddenly started looking at the development of intellectual property rights with newly opened eyes. That is the reason lying behind recent controversies inciting intellectual property rights debates. When we add thereto the strong changes in social relations brought by new technologies, the situation becomes quite complex. Consequently, the discourse of those harboring anti-IP sentiments is often not fully taking into account the basic historically opposed poles of IPR protection systems. We have stated earlier that every successful intellectual property protection system had to satisfy the issues of stimulating creativity with enabling access, so that the society at large can continue creating. In this sense we feel that there is no full awareness of historical tensions defining the success of a protection system in the history of intellectual property rights. To repeat, we base this on the understanding that throughout history those protection systems that managed to regulate the balance between availability and exclusivity in a way that leveled between such opposed interests in the most adaptable and flexible manner were the most successful. In addition, anyone engaged in intellectual property rights discourse must take into account questions of competition law, privacy, employment law and other related aspects as well.

We wish to say that, despite their frequently very realistic, even practical solutions, it appears that anti-globalist activists do not take sufficiently into account the swing of the social balance pendulum which must satisfy opposite interests of the broadest possible availability of the newly generated creativity result and the question of creator's protection and reward so as to stimulate further creation. On the other hand the traditional community of intellectual property experts, after a hundred-year-long position of a social avant-garde, representing the expertise in a cutting edge legal field, did not get used yet to be placed in a reactive posture and being marked as conservative. After some hundred fifty years of seeing itself as proponents of modernity, intellectual property community did not wake up easily to the new reality where they were experts in a mature skill which is lagging behind the quickly emerging new social needs. Upon such change, the community of intellectual property rights experts and specialists took a defensive tone in the discussion in progress. Without looking into the proposals put forward by the other side, the

IP community accuses activists of lack of understanding and knowledge of inherent system rules, similarly as we outlined above. Naturally, the future lies in the escalation of dialogue, rather than in the escalation of controversy. First signs of mutual appreciation are noticeable, from addressing the issue of anti-IP sentiments at conferences of intellectual property expert associations[154], to, for instance, involvement of leading experts who until now have criticized the IPR system in the work of traditional authorities with leader role in the promotion of IP rights.[155]

In an increasingly frequent use of criminal law system for the purpose of enforcement of intellectual property rights in many countries there has also been a shift from procedure initiation by filing a claim or private suit to automatic (*ex officio*) action of the repressive apparatus resulting in increased short-term functionality of intellectual property rights protection system. However, limited resources of countries whose well-being was not built up on mature IP exploitation systems obstruct the full implementation of the principle of use of repressive apparatus to prevent infringement of IP rights. This, nevertheless, does not mean that further use of self-generated intellectual property and introduction of new forms of multilateral international agreements, such as the ACTA[156], will enable these countries to reach a protection level similar to post-industrial countries.

We have no intention to remain superficial when generally stating that, in our opinion, many countries misjudge that by introducing intellectual property rights protection system they actually protect only the interests of foreign intellectual property rights holders from developed countries. Although we cannot here embark upon economic analyses in support of this thesis, we believe that, even to a casual observer clearly emerges that the introduction of legal protection system cannot remain self-aimed, nor it realizes its full purpose protecting only the interests of foreign rightholders. What we wish to point at is that transition societies[157] do not gain the full benefit of acceptance of the system for the protection of intangible values generated by human knowledge-based creativity by bare introduction and improvement of the system for legal protection of intellectual property rights. The full sense of intangible assets acceptance by a society is achieved only by initiating systematic creation of added value by creating and using own locally generated intellectual property and creating economic value as a result of its exploitation. In

[154] See International Trademark Association (INTA) Leadership meeting, Phoenix, AZ, USA, October 2010, where «Anti IP sentiment» panel was held. A follow up is planned for the next Annual Meeting.

[155] Already mentioned meeting held in Geneve, 2010-10-27 announced on official World Intellectual Property Organization (WIPO) web sites: http://www.wipo.int/pressroom/en/articles/2010/article_0045.html, 2011-01-09. Numerous comments have been released, e.g. on the following blog: http://hblog.org/2010/11/07/wipo-needs-a-blue-sky-commission-says-lessig/, 2011-01-09. Finally, video recording of the speech of Prof. Lawrence Lessig, a prominent critic of the traditional copyrights protection system can be seen on http://blip.tv/file/4341980, 2011-01-09.

[156] Wikipedia The Free Encyclopedia, article Anti-Counterfeiting Trade Agreement: http://en.wikipedia.org/wiki/Anti-Counterfeiting_Trade_Agreement, 2011-01-09.

[157] We do not refer only to transition from communist to capitalist system, but also to other transitions from non-democratic to democratic society or from industrial or pre-industrial to post-industrial society.

other words, it is hard to accept a lack of political awareness of the importance of intangible values and intellectual property rights creation and protection, too frequently characterizing transition societies, which have decided to complete a transformation into democratic market societies. Although we could presume that such decision was part of informed political process and commitment, many transition societies seemed surprised of the extent to which intellectual property rights need to be respected in order to complete the transition to economies able of creating value based on human knowledge-based creativity results. At the same time, we are surprised of the lack of awareness of the necessity that such transition process is completed as soon as practicable, and that the transformation of intellectual property rights into central social value is inevitable to finalize the social wealth creation process. Since it is inevitable, we believe that this must become a social priority and gain adequate political status enabling rapid implementation in societies that have not yet completed such transition process. Many countries simply overlook their vital interests due to the inability of understanding the nature of such transition process, and lack of self-reliance into own resources. If no resources are available, they must be gradually brought in using international aid mechanisms. In our opinion it is hard to find a suitable alternative to this type of social development.

We would like to illustrate two moments that have in many aspects defined modern civilization. Firstly, many modern societies and their legislators were evidently of the opinion that intellectual property rights are a fundamental lever for the development of social wealth and that production of high value-added goods by use of human knowledge-based creativity represents an essential requirement for social development. This revelation has generated an impressive increase in intellectual property rights prominence and their protection in modern economies, at a level to be seen as civilization advancement, especially noticeable over the last hundred years. Despite the fact that the period was characterized by upward and downward trends in the significance of intellectual property rights, we can conclude that regardless of the oscillations, the trend was constantly towards the increase of the importance of intellectual property rights.

Secondly, it is important to understand that the role of law in the conception and protection of intangible values including human knowledge-based creativity protection rights (intellectual property rights) is at least two-fold. The first step was to bring societies in the position of comprehending the value of intangible assets, to be achieved through the introduction of the right of invention, perceived reputation (by consumers) and other forms of creativity protection. Thus, patent rights, trademark rights, copyrights and other intellectual property rights were established. The second step was to secure the efficient enforcement of the IPRs protection for the ever more intense trade of goods having human creativity-based value added protected by intellectual property rights.

We described above the course of this process in industrialized countries, especially upon their transition to post-industrial societies. In transition countries, on the other hand, there has been an inversion where political integration dynamics, in line with general commitment to transition, has, roughly speaking, first resulted in the introduction of the protection system, and only subsequently, to gradual concep-

tion of the value of intangible assets and use of intellectual property rights. In other words, transition societies did the top down, inverted introduction of intellectual property rights protection whereby the societies themselves were not producing any immaterial assets created on the basis of creativity protected by human knowledge-based creativity protection rights (intellectual property rights).

Therefore, it must be kept in mind that the dynamics of these two processes have not always coincided in terms of time and territory. This has generated a situation where the civilization debate on the introduction of intellectual property rights has not always been conducted with the same understanding of the participants coming from the different sides. The fact that human creativity represents potentially the most uniformly distributed resource was not a plausible argument for countries who understood that their population did not have the same education level as the population in those countries already creating value-added by means of knowledge and knowledge-based creativity. At the same time their political elites did not fully understand nor trust that the wealth could be indeed created using the human creative resources. Even developed countries have gone through different periods where the pendulum of IP rights protection was swinging in different directions in the fear that overprotection of IP rights could negatively affect the functioning of the market, due to the monopoly and exclusive nature of those rights.[158] This complexity further complicates present discussions with advocates against giving high social relevance to intellectual property rights, especially in light of global integration processes intensifying at the same time specific social problems in transition countries.

The raised tone often characterizing current debates on the future of intellectual property rights is a consequence of never clearly defined discourse of discussion. In fact, in increasingly complex social development conditions or simply increasingly complex social communities, the general aversion against the role of law and the above described legal system imperfections influences the debate on the role of intellectual property rights. Thereupon, the general public normally anticipates that the protection of human creativity is principally a question of protection of economic values, which only subordinately pertain to the legal category. Consequently, they deductively extend their aversion against the legal system and inability to comprehend the complexity and inconsistencies thereof also to economic aspects of intellectual property rights. Although we can observe some signs of the pendulum of increase of the role of intellectual property rights protection already being pulled away towards reduction of the scope of protection, the general historical trend is, still, towards increase. Argumentation and profundity of analysis of fundamental principles of intellectual property rights is perhaps unprecedented in conditions of modern debate. It seems as if our societies have only now become aware of the process going on for about three hundred years where humanity com-

[158] *E.g.*, in the USA, Supreme Court Justices, Douglas and Black, rendered a series of decisions aimed at restricting certain aspects of the power of intellectual property. *E.g.*, in: Herbert Hovenkamp, Mark D. Janis, Mark A. Lemley, IP and antitrust: an analysis of antitrust principles applied to intellectual property law, Volume 1 of IP and Antitrust, Aspen Publishers Online, ISBN 0735522073, 9780735522077 2001, ISBN 0735528365, 9780735528369

menced to perceive as assets the value added by human knowledge-based creativity, and are now trying to determine with delay whether we should benefit therefrom. Of course, this is a consequence of the definitive penetration of intellectual property rights exploitation mechanism into increasingly wider social pores, thus, we could hardly imagine that these discussions could result in any radical turning away from intellectual property. As a civilization, we have simply reached a higher level of perception of intangible assets as part of the economic model we used over the last century, with sudden and momentous increase of the number of individuals perceiving such increase personally.

Coincidently with changes in the notion of sovereignty, where paradoxically members of anti-globalist movements and multinational companies have both demonstrated with their actions the same modern tendency towards removing frontiers and synchronized action on a supranational front, the debate on intellectual property rights has taken more severe tones. Although intellectual property law was during the majority of its historical course a very international field of relatively high legal harmonization between countries-nations, today the consequence of that period is actually one of the most anachronistic elements of intellectual property law. The principle of territoriality, a reflection of the time of establishment of Paris and Berne Convention in late 19th century, has come into severe collision with modern global economy needs. Apparently there is no doubt that the costs and complexities caused by territorial validity of law and requirement of territorial law enforcement are actually an encumbrance on the economy aiming at conducting business activities at the lowest possible level of friction and cost. Hence, it seems logical to expect further evaluation of the possibility of overcoming the limitations set by traditional territorial organization, based on jurisdictions that coincide with the territories of sovereign national countries. We believe that the entire European integration project is undoubtedly the result of efforts to eliminate the inefficiencies embodied in such inherited organization. Its success at the field of intellectual property rights streamlining is so far a mixed bag. Having successfully integrated trademark and industrial design regimes, it paradoxically lags in achieving the same in the field of patents, and in copyrights and neighboring rights, with its own specifics for each of those fields.

Over the last ten years many authors studied the changes digitalization and networking made to the law in general and in particular to the IPR system. Thus, Prof. Lessig asserted that computer code represents the architecture, i.e., structure of the system for future access to works of art.[159] The theses proposed by Lessig over the

[159] Wikipedia The Free Encyclopedia, 2011-01-06 outlines related to book X: The primary idea, as expressed in the title, is the notion that computer code (or "West Coast Code", referring to Silicon Valley) may regulate conduct in much the same way that legal code (or "East Coast Code", referring to Washington, D.C.) does. More generally, Lessig argues that there are actually four major regulators -- Law, Norms, Market, Architecture -- each of which has a profound impact on society and whose implications must be considered. The book includes a discussion of the implications for copyright law, arguing that cyberspace changes not only the technology of copying but also the power of law to protect against illegal copying (125-127). It goes so far as to argue that code displaces the balance in copyright law and doctrines such as fair use (135). If it becomes possible to license every aspect of use (by means of trusted systems created by code), then no aspect of use would have the protection of fair use (136). The importance of this side

last decade have proven reasonable. Despite his sometimes rather gloomy world-view and his continuous accentuation of the dangers new technologies create to human freedoms, the fundamental processes are described with great precision and have endured the test of time. Even though we do not completely share his concern, we agree with Lessig that the quantity of new technologies introduced has alone generated a situation of easy misuse with respect to existing expectations. In that context, without going into technical and historical development details, we will try to portray in short possible trends in the development of the role of technical intellectual property rights management means. Namely, as we are of the view that due to the nature of digital networks and modern supranational markets the introduction of more efficient IPR management means than those available today is inevitable, we deem appropriate to incorporate in the conclusion of this text few predictions on that front.

Technical Means of Transmission of Information on Author, Work of Art, Usage Monitoring and Royalties Collection

The above title lists functions that are very often called Digital Rights Management (DRM) technologies. DRM technologies have been present both as a concept and through limited application in practice for about ten years, coinciding with the bandwidth development that was allowing an ever-increasing number of the works of art to be uploaded in the realms of the digital network. There is no harm in stating immediately that during their existence DRM technologies have caused great resistance to their diffusion and great skepticism towards their future application. Many point out that DRM history has actually always been accompanied by failures, or at least divergence from expectations and intentions. Less frequently, the term ACTPM (Access Control Technological Protection Measure) is used related to DRM to indicate technologies for controlling access to protected work, which enable setting of specific technical and commercial restrictions to types of use. Similar, but in our opinion extremely important, are technologies permitting flow of Right Management Information (RMI). Technologies enabling circulation of right management information include information enabling the identification of the work itself, the author of the work, particular rightholders and work of art usage terms. They are used by rightholders in digital environment for exclusive identification of their works of art or to provide information on the pertaining rights.[160]

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of the story is generally underestimated and, as the examples will show, very often, code is even (only) considered as an extra tool to fight against "unlimited copying". See Lawrence Lessig et al., Code: Version 2.0 (2006), ISBN 978-0-465-03914-2 - available as a free Creative Commons Attribution-ShareAlike (by-sa) licensed download. Part 1, pp. 38-61, is particularly relevant for this discourse.

[160] For a more exhaustive view of the functioning of legal system in tandem with technical protection measures we refer to several modern solutions. For instance, Singapore regulations intend to introduce and protect DRM and RMI systems. Information are available on Intellectual Property Office of Singapore website: http://www.ipos.gov.sg/ipos/Template/LeftNavigation.aspx?NRMODE=Published&NRNODEGUID={405D00FB-F050-4084-9BFB-BC11232282DE}&NRORIGINALURL=%2fleftNav%2fcop%2fSpecific% 2bCopyright%2bIssues.htm&NRCACHEHINT=Guest#Measures, 2011-01-08

Digital Rights Management Systems - DRMs – are a term commonly used to describe a wide range of technical measures that are licensed for controlling, measuring and enabling use of copyright protected digital content. Such systems cover a range of technologies with different purposes. The UK Intellectual Property Office on their web pages describes briefly the following fundamental types of measures of protection against unauthorized copying:

> * Systems to identify owners of rights and give information on licensing, e.g. to enable collecting societies to accurately pay royalties - Rights management Information (RMI);
>
> * Copy protection systems to prevent unauthorized copying, e.g. may prevent consumers from transferring films stored on DVD to a computer hard drive - Technical Protection Measures (TPM)[161]

The website also outlines the aspects that DRM critics present as negative sides of DRM technology usage model. For instance, whilst it may be legitimate for rightholders, use of DRM tools to prevent copyrights infringement can also prevent permitted activities that fall under copyright exceptions. This constitutes one of the aspects whereon opponents of DRM technologies base their objections.

Furthermore, many DRM technologies opponents constantly and obstinately point at both theoretical and technical limitations preventing successful implementation and introduction of DRM technologies. Among loud and eloquent opponents, a recent BBC article presents the viewpoint of Cory Doctorow:

> There are some who think DRM represents a blind alley for authors and publishers, and risks alienating readers. Cory Doctorow, novelist and co-editor of the Boing Boing blog, is one. "[Anyone who believes in DRM] has never met a typist," he says. The ability to specify you will read a book in one way on one device is unreasonably proscriptive, Doctorow believes. "DRM is not an effective way of preventing copying nor is it a good way of making sales. There isn't a customer out there saying 'what I need is an electronic book that does less'. "It's as if Borders do a deal with IKEA and say you can only read this book under an IKEA bulb and have it on IKEA shelves."[162]

Whilst we would generally advise refraining from drawing any conclusions on the basis of direct analogies between digital and analogue worlds, in our opinion Doctorow wishes just to point out that neither in the digital world consumers have any desire for any substantial rightholders' intrusion or their intended limitations on

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[161] See UK Intellectual Property Office website: http://www.ipo.gov.uk/types/copy/c-other/c-protect.htm, 2011-01-07.

[162] BBC website, 2011-01-07 http://news.bbc.co.uk/2/hi/uk_news/magazine/8314092.stm. Moreover, we also refer to Doctorow's elaborated argumentation in that regard in his book Content: Selected Essays on Technology, Creativity, Copyright, and the Future of the Future, Tachyon Publications, particularly in the essay Microsoft Research DRM Talk, pp. 3-26, including inbuilt cryptographic defects pp. 4-7. The essay «The DRM Sausage Factory» is also very critical towards the introduction of DRM technologies, pp. 27-37.

the use of the work of art. In our view Doctorow has a point when he is defending users (*prosumers'*) rights to use the work they have legally acquired in a measure commensurate to the inherent nature of the digital environment that really appears to be broader than the analogue one.

Judging from the number of results from a simple Google search, the discussion on those issues seems to have taken the most polemic tone around 2007, when the largest number of skeptical articles and statements on DRM technologies can be found. Thereafter, it appears that the discussion lost its intensity and the number of articles is dropping, whereas the industry seems to be trying to find a way to please consumers, whilst protecting its interests. The success of Apple's iTunes service, which, during its advancement, has gone through various phases of use or rejection of DRM technologies, also seems to have contributed with its experience to moderate the tones of discussion which has become less and less general, and more and more focused on particular practical usage aspects.

On the other hand, many renowned commentators state that, regardless of the frequent obstacles, DRM is here to stay.[163] In fact, despite the tardive and disproportionate presence, more and more reproduction technologies are using DRM. Even extremely successful services such as Apple's iTunes have managed to successfully incorporate DRM technologies without affecting its business model. Commentators state that DRM technologies will be accepted if they fit consumers' expectations, which seems to be the case. As long as consumers encounter no limitations to ordinary usage there is no resistance to technologies introduction.

Among the first ones to address this question, at the time of major debates on the future of DRM, was Prof. Odlyzko in his brief article on DRM technologies. After a short microeconomic and behavioral analysis of consumers, Odlyzko comes to the conclusion that due to the particular interaction of market laws, DRM technologies introduction and acceptance is simply inevitable. In his equally concise, but also equally systematic review of Odlyzko's text, Bradner summarizes the dilemmas on the low success of DRM technologies stating: "Andrew politely says that "the record of DRM so far is not too inspiring." That is far kinder than I feel. As far as I know every major DRM system where the customer has possession of the computer on which it is used has been broken.

Organizations such as the Trusted Computing Group[164] have been working diligently for years on ways to cripple your computer to protect (among other things) DRM systems."[165]

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[163] Slate magazine web site, brings an interview of 2010 where the columnist and author, Farhad Manjoo, claims that DRM technology is not dead. «DRM Isn't Dead», 2011-01-07 http://www.slate.com/id/2208441/. Manjoo is author of the book True enough: learning to live in a post-fact society, John Wiley and Sons, 2008. Amongst others, Manjoo says: «Surveys show that when asked about "DRM," most people aren't opposed to the concept. But there is an obvious downside to DRM as it's been implemented—by inconveniencing law-abiding users, copy protection increases the allure of illegal trading.»

[164] Trusted Computing Group web sites https://www.trustedcomputinggroup.org/home/, 2011-01-08.

[165] General review of Prof. Odlyzko's article on Networkworld web site where Scott Bradner approaches very concisely and critically towards Prof. Odlyzko's standpoints, reporting his statements:

We must remember that the referenced text is entitled: *Digital rights management: Desirable, inevitable, and almost irrelevant* and in a way reflects on contested aspects of DRM in the most straightforward, mathematical manner and in the end reaches the same conclusions as we deem likely – use of DRM technologies is inevitable.[166]

Outlining the reasons of the modest success of DRM technologies, Odlyzko points out that DRM all too often gets in the way of full achievement of the value of intellectual property and concludes that whilst the role of DRM system shall not be crucial as it shall not contribute to the economic growth of the market, for many practical reasons and in many segments, including in particular those having greater economic value, it shall almost certainly lead to a situation where adjusted and barely noticeable DRM systems shall subsist.[167]

Thus, Brander also concludes that Odlyzko's analysis is plausible.[168] We also embrace this assessment and give similar prognosis. It simply seems likely that in a technological era the most simple and convenient way to implement fundamental legal principles shall be by way of available technological means.

As to the length of DRM technologies introduction, one of the major barriers to their acceptance remains nowadays their diversity and incompatibility. For instance,

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http://www.networkworld.com/columnists/2007/100207bradner.html, 2011-01-08. Bradner proposes other concise reviews of recent technological events: http://www.networkworld.com/columnists/2007/040207bradner.html, 2011-01-08. Bradner also refers to the archaic viewpoints of Richard Stallman, the Open Source Movement guru: http://www.linux.com/articles/25842. Other authors also devoted their research to the DRM issues with more or less focus: see e.g. Tobin, J., id. pp. 21-23.

[166] The Article can be found on University of Michigan web site where, at the time, Odlyzko was Head of Mathematics Department: http://www.dtc.umn.edu/~odlyzko/doc/drm2007.pdf, 2011-01-08.

[167] Ibid.: pp. 2-3: So what is the likely role of DRM? It seems certain that huge further investments in research, development, and deployment will be made, since content industries love the concept and are prepared to pay for it. But actual applications are likely to be far more modest. Still, it is likely that DRM will play a non-trivial role. In the online world, speed is key, and even small speed bumps are often going to be sufficient to change people's economic decisions [3]. So some small barriers, even ones that are laughably insecure, may very suffice to enable new economic models that let content industries nourish. Let us not forget the long history of content providers opposing new technologies and businesses models, from libraries to the VCR (which was likened by Jack Valenti, the main Hollywood spokesman, to the Boston Strangler) yet learning to live with and love them as time went on [5]. (And indeed, the VCR became one of the main money makers for the movie studios soon after Valenti's infamous claim.) What we are likely to end up with is a huge universe of free material, much of it of little interest to all but a handful of people. But the usual Pareto and related distributions will probably apply, so that some of these creations will attract the public's attention, and will also bring in substantial money flows. Some may be from advertising, some from explicit payments that DRM will help stimulate. And there will likely continue to be very expensive items that will be produced by large organizations and will be protected heavily. And in this wide spectrum of information goods, DRM will play a role in extracting money flows to producers, professional and amateur alike, but this DRM is likely to be often very insecure. Usability will continue to matter much more than tight control.

[168] Bradner id.: "Andrew does conclude that DRM will not go away - the content owners just think there is far too much money at stake - it may be a lot to tem but its not a big part of the Internet economy. (…) His last point in the article is that DRM is too important to the content owners to go away but that "usability will continue to matter much more than tight control."

In the end, the title Andrew chose for his article says it all: "Digital rights management: desirable, inevitable, and almost irrelevant."

if you buy music through Microsoft's Zune Store you will not be able to use it on Apple's devices and vice versa. This applies to other technologies as well. We are, nevertheless, of the opinion that a more adequate approach to this issue resolution is within the framework of competition law (anti-trust and consumer protection), rather than in the field of intellectual property law. We believe that it is important to emphasize this aspect to disburden the intensive tone of discussion with intellectual property rights opponents.

With respect to the efforts to remove the obstacles emerging form the incompatibility and fragmentation of present DRM technologies, it may be illustrative to refer to European efforts to contribute to the unification of technological platforms. So, The Fraunhofer Institute for Open Communication Systems (Fokus) is conducting a project for generating of technical preconditions for technologies unification in Germany. The project is led under the name Webinos, as the technical solution should be rooted on web technologies utilization.[169] It is possible that this or similar projects will in the future create conditions for the introduction of single DRM technologies. It is also imaginable that such technical efforts will be followed by the national and supranational legislators' moves in the similar directions, comparable to the EU micro-USB mobile phones power supply standardization efforts.[170] The feasibility of this project is, however, accompanied by considerable skepticism. Thus, it is probable that insecurity over definitive introduction will continue to mark the way towards DRM system acceptance and introduction.

What seems likely is that any system of works of art usage monitoring and royalties collection will have success only if the technology on which it is based is technologically neutral, if it respects privacy to the extent required according to future digitalized societies standards and if it permits all protected content usage related actions required by consumers.

Although we do not accept most of the Doctorow's previsions, we agree with him on one important aspect: technologies that will succeed will have open standards, be interoperable and universal. Doctorow is absolutely right when bringing out and criticizing the imperfections of DRM systems that are not in line with such criteria. In our opinion he is wrong to claim that there is no place for DRM technologies. We believe that DRM technologies which fit above-said criteria without limiting consumer's expectations in terms of freedom of use will probably constitute the way technology might replace law in the control of the usage of works of art and royalties collection, where applicable.

It is to be kept in mind that the technical possibilities of usage control and royalties collection are very extensive. For instance, owners of databases containing stock photos, i.e., images purchased from authors for the purpose of commercial licensing, protect their interests in a variety of technologically developed ways. Pro-

[169] BBC News web site, Technology, 2010-10-22: http://www.bbc.co.uk/news/technology-11389416, 2011-01-09.

[170] See e.g., 2011-01-09: http://ec.europa.eu/enterprise/sectors/rtte/chargers/index_en.htm, http://phandroid.com/2009/06/30/microusb-becomes-european-standard-in-2010/, http://www.onecharger-forall.eu/en/

fessionals of the industry, whose interest is to control unauthorized use of the photos they have rights in, use various computer programs similar to spiders and crawlers to track usage, authorized or not, of their photos on the Internet. On a sample of digital matrix of only few pixels these programs can detect whether a particular photo has been used. A minimal sample of a few pixels is sufficient, since the probability that their combination overlap with another photograph is so low that the uniqueness of each photograph can be determined almost perfectly and without the use of dedicated DRM protection system.

In other words, technical solutions must not necessarily be based on cryptography principles to conduct successful control over works of art usage. There is no doubt that the same can be performed on databases of any other digitalized work of art. Automatized or semi-automatized systems of delivery of royalties payment requests to detected unauthorized users is part of a monitoring system which only in extreme cases of refused cooperation result in legal enforcement of intellectual property rights. Hence, different forms of electronic monitoring, use and royalties collection can be achieved even without the problem of cryptographic access restrictions described by Doctorow. Of course, these types of access again raise questions of privacy and access to computers without the owner's consent, and we understand that their adversaries are opposed to such in principle.

At the same time, we believe that the notion of privacy will also go through further changes. Without entering into discussions on possible progresses of this issue, we must stress that researchers and commentators seem to agree on the fact that privacy is intensely eroding away. Whilst many are concerned with this course of events, we shall here only refer to the bibliography of this article for some of the titles addressing the issue of privacy vanishing. It is not very opportune to introduce at the end of a so extensive text a topic that would require special consideration, however, considering the relevance and unbreakable connection between these issues in modern societies, we believe that at least a few brief comments explaining the context of our anticipations must be made. Those surprised by the easiness of privacy erosion should bear in mind a thesis explaining such phenomenon. Namely, we may notice that as long as an activity is not illegal, nothing seems to be holding individuals to maintain their behavior private, provided that other persons in the social interaction show the same behavioral pattern. This dynamics leads to rapid change of the perception of the information representing the private sphere and year after year we witness a gradual reduction of the limits of what used to be considered private and is not subject to intrusion. So long as the persons feel they are in control of their information they seem to be willing to share them. Only if they feel that the information that they would otherwise be willing to share is obtained without their consent and bypassing the controls they believed they have had, will they object.[171]

[171] During the preparation of the last version of this article the "phone-hacking" scandal was unfolding in the UK. Unauthorized access to users' phone mailboxes caused a huge outcry. Interestingly, on the sides some individuals have suggested that the practice was so widespread and well known that many public figures were deliberately leaving their passwords on the default value, thus enabling the journalists to pore over their private records. BBC Radio 2, Daily ail, The Guardian reporting in mid July 2011.

We believe that these trends will also contribute to easier introduction of DRM systems in the near future. When we observe with what easiness many music lovers permit to scrobblers such as Last.fm or Apple's Ping to collect information on their consumer behavior model, clearly the conception of privacy is very individual. In fact, their desire to provide their friends with guidance on their musical taste has in many cases prevailed over any possible hesitation towards possible use of such information for profile-making by corporations having access to such information. The long-lasting privacy restriction process has generated different reactions, but they were limited to a small segment of members of the digital world and to a somewhat larger number of persons who are not part of the digital environment and are concerned with changes whose extent and deepness they can assess only with difficulties.[172] Actually some governments in countries that try to protect such segment of population leave the impression of anachronistic, rather than real protectors of such group of their voters. We are not underestimating here the dangers and unethicality of unauthorized gathering and use of private information, but we are of the view that we can expect great further re-examinations of the scope of traditional persons' rights to privacy.

In order for the DRM system to succeed, consumers' desires and unpredictable expectations regarding the freedom of use of works of art in conditions of digitalized networking must be consistent with the restriction levels set by the technology. This means, for instance, that consumers would need to agree that it is "cool" to pay usage fees. We presume that this condition will be met when rightholders agree to make their contents available for regular private use at an acceptable price and within the functional framework consumers consider acceptable. When this economic framework becomes manifest, individuals are likely to accept such social consensus, including the technical measures of its implementation. We would like to provide specific economic findings and researches in support of the above, but we shall refrain therefrom in this article.

It is also interesting to give consideration to the results of a research conducted by a group of scientists in the interdisciplinary European FP7 project named COUNTER.[173] Sociologists, marketing experts, economists and legal practitioners from five European universities conducted a research on customer behavior in digital environment and reached several conclusions. Even though, while we are writing this article, we are familiar with several preliminary results, we look forward to the final project report which will certainly reveal further possible trends in the development of works of art protection system in postmodern digital networking conditions. A project such as COUNTER is, in our opinion, very important for its interdiscipli-

[172] It was interesting to see the reaction the German citizens expressed towards the Google cameras recording the streets of Germany. Media were making strides at explaining this particular behaviour on the historic reasons, while the citizens of some other countries seemed to be totally unfazed by the same process. When it was discovered that Google collected some personal data, such as network access passwords in similar instances a much bigger outcry resulted much more broadly.

[173] See EU web site: http://ec.europa.eu/research/social-sciences/projects/361_en.html, 2011-01-09, providing project coordinates, and project web site: http://www.counter2010.org/, 2011-01-09.

nary approach. Results were sought by a team of legal practitioners, economists, psychologists and marketing experts and this all-embracing character has certain qualities that mono-disciplinary teams simply do not have. When we add also the nature of modern consumer behavior in digital environment, dictated by generations of digital natives, it is hard to leave the research and conclusion drawing to experts of a generation that simply lives in a different environment. Considering that the generation of digital natives will soon take over leading managing and political roles in our society, we must be ready for changes in the assessment and decision-making structure of phenomena such as piracy seen from different angles than they are perceived today.[174]

When authors who study generations of digital natives come through their analyses of user – technology relations to conclusions that the issue of new generations' relation towards innovations and law is deeply conflictual, we believe that such findings must be taken into analysis also by us, legal professionals. In the book "Digital Natives", after analyzing the sharing phenomenon (sharing of digital files), the authors conclude that:

> In a way unintended by the courts involved, copyright law in today's quicksilver technological environment has a negative impact on innovation – innovation being the goal that intellectual property law is supposed to serve in the first place. (…)
>
> Probably the most important lesson of all, however, is that all these issues are not things that can be delegated completely to lawyers and lobbyists. Copyright legislation, in particular, shapes the further evolution of technology. (…)[175]

It is interesting that in the further analysis authors make an attempt to provide several guidelines enabling societies to find a way out of the current situation whose resolution seams difficult to achieve by existing principles. In doing so they are led by the same instinct as we are: a period of experimentation with the clear goal of searching for the most successful creative result where present commercial interests would be subordinate to the different emerging dominant business relation models. In any case of doubt, it seems that authors propose to follow ethical norms and principles until new rules appear and solidify and to use legal rights in ways consistent with the purpose and ethicality of social behavior.[176] We are not putting forward these conclusions as ours, as we would not regard them necessarily conclusive and complete enough. We deem them relevant nevertheless, as they are oriented towards the affirmation of ethicality and reasonability instead of hasty legislation of ever more rules that in a digital environment seem to gradually be losing sense. It appears that they are ready to accept that in the near future we will not be able to

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[174] Analysis of the digital natives' relation towards piracy is provided, e.g. by Palfrey, John, Gasser, Urs, Born Digital: Understanding the First Generation of Digital Natives, Basic Books, 2010, pp. 136-150, in particular pp. 137 and 142, and related to DRM 145-147. Of course, Lessig analyses the problem in its numerous components with significant analytical efforts and appropriate results.

[175] *Ibid.* pp. 147-148.

[176] *Ibid.* pp. 150-153.

solve all similar situations in the same established ways. We believe that the time of attempted achievements of consistency of legal systems is irrevocably gone and in the kaleidoscope of facts emerging from thousands of relations in interaction-saturated information societies it is better to abandon consistency scaffolding in favor of ethical integrity foundations whose absence is now so alarmingly evident to the digitally-wired world population.[177]

If we go back to the practical aspects of the necessity to reward author's endeavor so as to encourage further creativity, we are convinced that the existing model based on romantic nineteenth-century visions of creativity is also subject to the critical judgment of the generation of digital natives. Naturally, we have no intention of disqualifying the model itself; there is nothing inherently bad in a romantic creative vision of an inspired individual. We simply believe that this is only one of the creativity models to be considered and its dominance within the present legislative model is potentially harmful. What needs to be done is to put such model into valid relative relation with the other models of creativity, especially collaborative models, characterizing digital environment and massively, serially, creative societies in order to derive benefit from a historical perspective as enabled by the privilege of intimacy with historical models. It is not only us who note that present policy makers and those thinkers who are now at the peak of their output hold especial responsibility for opening way to the ideas that might be more applicable to the present problems in regulating copyright. Others have noted that:

> It is a year where we should definitively recognize that we live in a completely new reality. The context for global cooperation, for national policies and for business models has substantially if not fundamentally changed. New movers have emerged at a much greater speed than previously foreseen. The Millennials, a generation born digital, will have a much stronger impact on social behaviour than we currently assume.[178]

We are not particularly skeptical towards the survival of royalty-based works of art exploitation models and find them certain to survive. We simply believe that in the future authors will more frequently willfully chose various models of usage of their works which will be distinguished both with respect to the single works and the different contexts of their exploitation. Authors will likely have at their disposal greater freedom of choice over business and legal models of exploitation of their works, whose monitoring and diversity will be ensured by the technology itself, i.e., technological intellectual property rights management means (i.e. DRM/RMI).

From the consumers' point of view we anticipate also a continuation of the flexibility period. In other words, when contents will be available at very low prices,

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[177] Rather than quoting from it, we should direct interested reader to Prof. Vlatko Vedral's book quoted several time hereinabove. The profound questions of correlation, information and entropy that so aptly describe and explain this unprecedented social moment we are living are good way to understand by analogy the social processes we have tried to capture and explain in this article.

[178] The Economist magazine, article: The predictions of Davos-man, Klaus Schwab, http://www.economist.com/blogs/theworldin2011/2010/11/predictions_davos-man_klaus_schwab, 11-08-11

with minimal technological friction, i.e., with no further consumers' effort, consumers will probably start accepting payment of low personal usage royalties in an increasing number of cases. Thereupon, a redefinition of private versus commercial exploitation in a digitally networked environment is required, as we must keep in mind that the purpose and imminent characteristic of exploitation of any work of art in digitally networked environment is content sharing. The points at which such "shared" private use becomes commercial use will emerge gradually. This might easily be the central point of the future copyright protection systems, technologically based or otherwise.

Finally, the issue of privacy, i.e., amount of information users agree to transfer to the holders and their technological agents must be defined according to the expectations of the generation raised in a continuous decline of privacy brought by current "Lords of the Internet", leading to increasing restriction of the private sphere with no major frictions thus far.

In short, everything that has been happening recently in the field of copyright management suggests probable increase of the role of technical usage monitoring means (DRM/RMI) principally because such way of use is inherently consistent with digitally networked environment and it is the simplest way to fulfill its task.

Instead of a Conclusion

After being present in modern societies for over two hundred years, intellectual property is starting to an increasing extent to be seen as a fact of civilization. Assuming gradually the role of underlying element for creating wealth in modern societies and complementing traditional property, said fact is still becoming subject of debates and polemics. Present polemical tones of discussion over intellectual property rights are, in our opinion, a direct consequence of increased real presence of those rights in modern societies. Perhaps more than ever before in its history, intellectual property has become a controversial topic implying no easy social consensus. This, in our opinion, is not a result of the fact that intellectual property would in a way become more controversial than in another phase of its history, but simply a consequence of the convergence of two moments:

> First: Intellectual property is indeed for the first time at the threshold of general social perception, where the emergence of these rights is noticed by the major part of the social community. Current suspicion on the possibility of achieving social wealth through use of intangible goods contributes to the skepticism towards the importance of protecting those rights. This distrust seems more pronounced in societies with a lower average education level and transition societies that have not yet achieved post-industrial production level, nor have they affirmed knowledge and service skill values. Meanwhile, in post-industrial societies there is a need for re-examination of the principles of IP law resulting from a series of other reasons, principally the appearance of driving new business models.

> Second: Post-industrial societies attain high level of their social wealth through knowledge, creativity and management of immaterial values by means of intellectual property rights. As use of intellectual property rights is still based on industrial society models in the new contexts of social and increasingly of material reality digitalization and networking, the old models show inadequate and are confronted with many social criticisms. Reform of existing business and IPR exploitation models results inevitable, whereupon reform of legal IP doctrines appear absolutely unavoidable – perhaps for the first time more radically after its first two or three centuries.

There is no doubt that intellectual property law is inevitable to support established models of exploitation of human knowledge-based creativity results and that present controversies will not lead to the abandonment of intellectual property rights. In fact, given that our civilization is actually increasingly oriented toward the use of intangible goods resulting from the use of knowledge, intuition and creativity, we could expect that intellectual property will enhance its role in future societies. We believe there is a chance for this not to happen through growth of legal protection of immaterial property. This absence of law in the leading role will come as a consequence of general change of the role of law in modern societies.

In our view it is likely that the future role of law might be leading towards a more specialized role in these societies than it has in ours. We foresee that as the role of law will be changing and undergoing relative marginalization, the role of technical protection means will be increasing. Eventually, new ethical and behavioral values will, in our opinion, be established and affirmed by society and become dominant in respect of legal regulations. We must remember that the changes we are facing are unprecedented in the history and that we must establish by ourselves the behavioral models to be followed, without relying on existing models. The task is not easy, but, as there will be no other choice, we propose to get down to work right now. This text is only a minor contribution in that direction.

Due to the force and inevitability of the described processes, in the attempts to predict the future of social decision-making processes impending in relation to intellectual property rights, we must clearly analyze those constants that appear as regularly accompanying intellectual property rights throughout its history. In doing so, we must primarily stress that in our opinion there is no doubt that the civilization's IPR inheritance is an essential reflection of the needs of modern creativity-based societies. Our societies will not renounce from the civilizations' achievements that the results of creativity are regarded suitable for economic exploitation and for protection by the intellectual property rights. Signs of these needs can be traced long before the introduction of defined intellectual property law into the legal system. Property over intangible human creativity results we just learned to recognize will not disappear in conditions of digitally networked environment and upon a migration of reality in such sphere. In other words, paraphrasing the title of this article, we are certain that human creativity, including the development of new forms of creation, exploitation and protection of intellectual property rights protected works will in the future to an even greater extent represent a SOURCE OF ABUNDANCE for future societies.

In order to predict future development of IPR protection system we must bear in mind a characteristic human communities demonstrate in a variety of contexts, e.g. historical or technological. Namely, researchers often describe the so-called layering concept as the property of simultaneous mutual separability and inseparability of various ideas from different historical periods.[179] We are of the opinion that any prediction of the future must take into consideration this characteristic of historical development that, in practice, boils down to the fact that once a model is created it may change its social role, but it will be hardly completely abandoned or forgotten. In that sense, we believe that the existing protection system will undoubtedly remain one of the options and will constitute the primary element of choice between protection alternatives at the authors' disposal. Along with a wider change of the role of the legal system in future societies, other two elements will constitute the cornerstone of future relation towards the results of creativity. One of them will be of technological character, which in the context of digitalization and networking means that we will use computer code-based technologies as elements of intangible goods management.[180] The other is the element, upon whose creation our generation has embarked, of increased responsibility and decision-making based on clearer ethical principles we anticipate as a result of ongoing changes marking our societies.

[179] See, e.g. Countryman, Edward, The Layers of New York History: A Look Through Time at Rensselaer County. New York History 89.1 (2008): <http://www.historycooperative.org/journals/nyh/89.1/countryman.html>, 10-08-15, also, Wikipedia, Free Encyclopedia, article Collage, http://en.wikipedia.org/wiki/Collage, 10-08-15 states: "A collage in literary terms may also refer to a layering of ideas or images." In technological terms we also talk about interlayering, see The Economist, Information technology in transition; The end of Wintel; As Microsoft and Intel move apart, computing becomes multipolar, 10-07-29: «The shift to mobile computing and data centres (also known as "cloud computing") has speeded up the "verticalisation" of the IT industry. Imagine that the industry is a stack of pancakes, each representing a "layer" of technology: chips, hardware, operating systems, applications. Microsoft, Intel and other IT giants have long focused on one or two layers of the stack. But now firms are becoming more vertically integrated. For these new forms of computing to work well, the different layers must be closely intertwined.»

[180] Lessig, Lawrence, Code and other laws of cyberspace, Part 11, Basic Books, 1999, e.g. chapter *Regulation by Code*, pp. 20-21, and chapter Five, *Regulating Code*, pp. 42-60.

SAŽETAK

OBILJE IZVORA - PRAVA ZNAČENJA TERMINA KOPIJA I ORIGINAL; PROMJENE ZNAČENJA UMJETNIČKE I AUTORSKOPRAVNE TERMINOLOGIJE U DIGITALNOM OKRUŽENJU

Mladen Vukmir

Ovaj rad posvećen je proučavanju društvenih promjena koje čine vjerojatnim da će autorsko pravo doživjeti određene promjene. Te su promjene prvenstveno uzrokovane tehnološkim mijenama uzrokovanim pojavom računala i Interneta. Naime, činjenica da je ljudski okoliš u sve većoj mjeri digitaliziran te istovremeno umrežen stvorilo je okoliš u kojem se kreativnost u nekim aspektima odvija na način koji nema presedana u ljudskoj povijesti. Pri tome se posebno ističe da činjenica da je svaka kopija istovremeno i svevremeno prisutna u obliku identičnome svom digitalnom originalu radikalno utječe na poimanje autorskopravnog sustava.

Tekst nastoji slijediti nekoliko terminoloških grupa te kombinacijom semiotičke analize s komparacijom značenja pojmova koje označuju izabrani stručni termini u autorskopravnoj, umjetničkoj i kolokvijalnoj terminologiji nastoji izvesti zaključke o društvenom poimanju sustava zaštite kreativnosti. Postavljaju se pitanja o povijesnoj adekvatnosti pojedinih rješenja, a osobito otvaraju pitanja o održivosti dosadašnjeg poimanja u projekciji promjena koje se odvijaju pod pritiscima digitalizacije i umrežavanja.

Sa svrhom određivanja onih konstanti povijesnog razvoja autorskog prava tekst prati grupu termina koji na području skulpture označuju pojmove vezane uz umnažanje autorskog djela. Iduća grupa termina su neki od centralnih pojmova autorskog prava te se njihovom komparativnom analizom s identičnim terminima koji se koriste u umjetničkoj terminologiji nastoji razumjeti i ukazati na ona središnja značenja koja se ukazuju pod novim svjetlom u digitalnom kontekstu. Konačno, analizira se kolokvijalna stručna terminologija koja se odnosi na fenomene umnažanja bez dopuštenja svojstvenog čitavoj povijesti zaštite intelektualnog vlasništva, a koji izgleda doživljava eksploziju u kontekstu digitalizacije i umrežavanja, sa zaključkom da gotovo niti jedan od tih termina nema svoje zakonske, odnosno pravne izvore.

Eksplozivni porast stvaralaštva, umnožavanja i korištenja autorskih djela koji se pojavio kao rezultat uvođenja digitalnih tehnologija i umrežavanja računala doveo je do nekontroliranog i nekontrolabilnog porasta nedopuštenog umnažanja. Društva se moraju suočiti s činjenicom da će sami autori u budućnosti željeti birati između vrlo različitih oblika zaštite pojedinih svojih djela. Pri tome, u slučaju izbora naplatnog i restriktivnog režima korištenja svojeg djela u uvjetima globalizirane digitalne ekonomije ne čini nam se vjerojatnim da će pravo zadržati ulogu prvenstvenog sustava zaštite autorskih prava. Tekst ukratko nastoji prikazati i smjerove razvoja tehničkih sustava zaštite i njihove posljedice, koji uz sadašnje trendove na širem području intelektualnog vlasništva već dovode do marginalizacije prava. Drugim riječima, iako će pravo ostati kao struktura kojom će se zasigurno regulirati određena razina društvenog ponašanja ono će «odozgo» biti potisnuto povećanjem uloge regulacije etičnosti i odgovornosti, a «odozdo» nagrizena kako samoregulacijom brojnih društvenih segmenata i tehničkim mjerama koje će nastajati kao posljedica poduzetničkih i tehnoloških nastojanja.

Iako tekst nema namjeru ponuditi čvrste zaključke o mogućim promjenama, nekoliko se teza nameće samima po sebi. Promjene su vjerojatne, ali teško predvidive jer je i obujam promjena u društvima bez presedana, a priroda digitalnog medija radikalno je drugačija od analognih mehaničkih sredstava reprodukcije. Promjene u pravnom sustavu neće se odnositi samo na autorsko pravo i druga prava zaštite nematerijalnih rezultata ljudske kreativnosti, već na cjelovitu promjenu uloge prava u društvima.