



Criminal Protection of Copyright. Analysis from the Work and Professional Experience of its Actors

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Abstract. Attacks on copyright constitute an offense against the personality of the author, a violation of the spiritual heritage of society, or an injury to the decorum and dignity of a country. The issue addressed by this research is a reality that needs further analysis by all institutions involved in the administration of justice. The insufficiencies that exist in the legislation related to the criminal protection of Copyright and Intellectual Property, require a deep analysis of the subject. The objective would be to substantiate the need to have efficient criminal protection of these legal entities in Ecuador. For this, it is convenient to analyze the phenomenon from a practical point of view. In this way, determine their status before the legal spectrum and be able to turn their way of study. It would be a way to eradicate the legal loopholes regarding the subject of higher education. The Torgerson method will then be used through which the criteria of professionals who execute the Law in that sense will be contrasted.

Keywords: Copyright, Intellectual Property, Ecuador, Torgerson.

1 Introduction

In recent years, accelerated technological development has been taking place. This has influenced the emergence of new ways of using artistic works and others derived from the human intellect. Whenever these occur in the legal field, they will be more profitable for the author, the users, and, ultimately, the public. Thus, there would be greater and better access to culture and information.

However, sometimes, the technical and scientific development itself is used to violate the legitimate rights of authors and holders of intellectual rights. Faced with this situation, society must seek the appropriate mechanisms to avoid and repair the damage that the illicit use of works and artistic performances causes to their legitimate owners.

The functions of criminal law refer to the modes of influence of this with respect to social relations. This influence is carried out, mainly, in two ways. On the one hand, it confers particular protection on the system of social relations (protective function). On the other hand, it seeks to promote in all people the observance and development of behaviors adjusted, precisely, to the mentioned system of social relations (motivation function) [1].

Along with other legal systems, Criminal Law fulfills a restorative function of the balance of a social system. Likewise, it complies with the protection of legal assets which, due to their importance, Criminal Law is interested in protecting.

It is not possible to speak of Copyright without first referring to Intellectual Property. Intellectual Property refers to the creations of the mind: inventions, literary and artistic works, as well as symbols, names, and images used in commerce. Copyright is literary and artistic work (novels, poems, plays, movies, musical works, and artistic works such as drawings, paintings, photographs, sculptures, and architectural designs) [2].

Copyright is the branch of law in charge of regulating the subjective rights of the author in relation to his work. Only the form of expression of ideas is protected and not the ideas themselves. Creativity protected by copyright law is creativity in the selection and arrangement of words, musical notes, colors, and shapes. It consists of the set of faculties and rights that are recognized by the author concerning his works [3], [4].

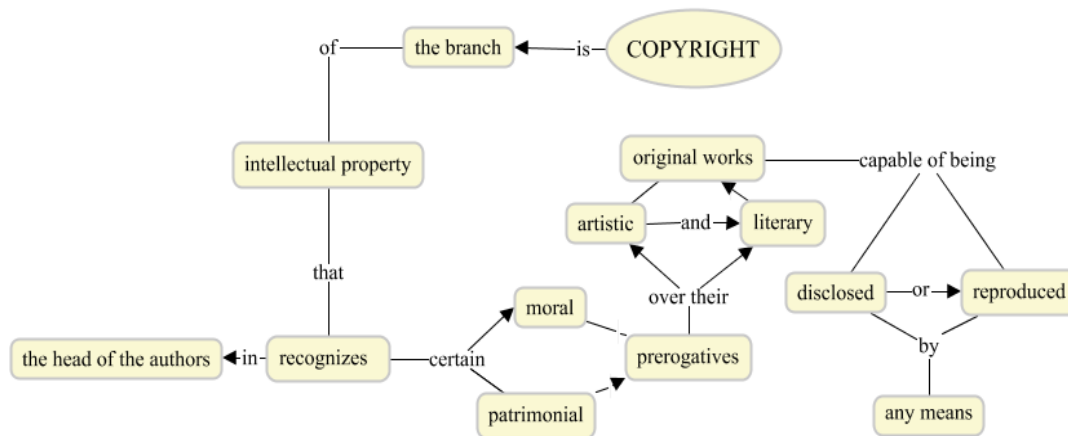


Figure 1: Concept map: Copyright. Note: Own elaboration

From the previous concept, two important concepts of copyright are detached, the subject and its object of protection. [4]–[6].

The author, subject to copyright protection, is the natural person with the intellectual capacity to create a work. He is the one who brings knowledge and characteristics of his personality. In pursuit of obtaining a work that can be perceived and appreciated by its recipients, by any means known or unknown.

The work, as a result of the human intellect, becomes the object of copyright protection, regardless of its literary or artistic value, provided that it meets the requirement of originality. The work must be able to distinguish itself from others that precede it and deal with the same theme. Hence, what is protected is the original form of expression of ideas and not ideas without any form of externalization. Consequently, all own, original creations, whatever their merit or destination, constitute protected works, and for this, the following protection criteria are taken into account [5], [6]:

- Originality: requires its own characteristics that allow it to be identified from other works, as it is the reflection of the imprint and talent of its creator.
- Independence: they are protected regardless of gender, merit or quality, purpose, and form of expression.
- Absence of requirements: it does not require an administrative act to be recognized as protected, but from the moment it is created and is formally expressed, it enjoys the protection granted by copyright.

The author has the right to authorize or prevent with his work:

- Reproduction (make copies)
- Public representation or interpretation
- Broadcasting or other communication to the public
- Translation and adaptation of the work

It is worth noting that the Intellectual Property Law was born to provide the State with adequate protection of intellectual rights and assume their defense, as an essential element for the technological and economic development of the country, based on the principles of universality and international harmonization.

The legal regime in Ecuador is determined, by the Intellectual Property Law in force, it was published in the Official Registry No. 320, on May 19, 1998, and its Regulations were published in the Official Registry No. 120 on February 1 of 1999, where it is established that [7], [8]:

- It is the function of the State to assume the defense of intellectual rights;
- That the protection of the intellectual property is vital for the technological and economic development of the Country, encourages investment in research and development, stimulates national technological production, and gives Ecuador a comparative advantage in the new world economic order;

- That the lack of adequate protection of intellectual property rights restricts free competition and hinders economic growth with respect to the widest range of goods and services that incorporate intangible assets

The Intellectual Property Law of Ecuador [7, 33, 34, 35], clearly specifies the infringement of intellectual property rights and the penalty that such conduct deserves. They are determined in chapter III referring to crimes and penalties, in articles 319, 320, 321, 322, 323, 324, 325, and 326, of that legal body. The objective of this research is to evaluate the effectiveness of the criminal protection provided by Ecuadorian legislation to copyright, analyzed from the point of view of legal professionals. This will serve as a starting point for future modifications of the current legislation, to offer better protection to the intellectual legal asset.

2 Methods

- Analytical-synthetic, and inductive-deductive. To establish the theoretical foundations of this research specifying concepts and theories generally accepted by the doctrine, identifying irregularities and trends on the subject under investigation.
- Exegetical-legal. To establish a characterization of the fundamental deficiencies of the norms that regulate the criminal protection of copyright

2.1 Instruments and techniques

A selection of legal professionals was chosen from professors, judges, and lawyers. For the calculation of the study sample, equation 1 was used. A sample of 111 people was chosen from a total population of 180 professionals, including professors from the same career, judges, and lawyers, as shown in Figure 1.

$$n = \frac{Z^2 pq N}{E^2(N-1) + Z^2 pq} \quad (1)$$

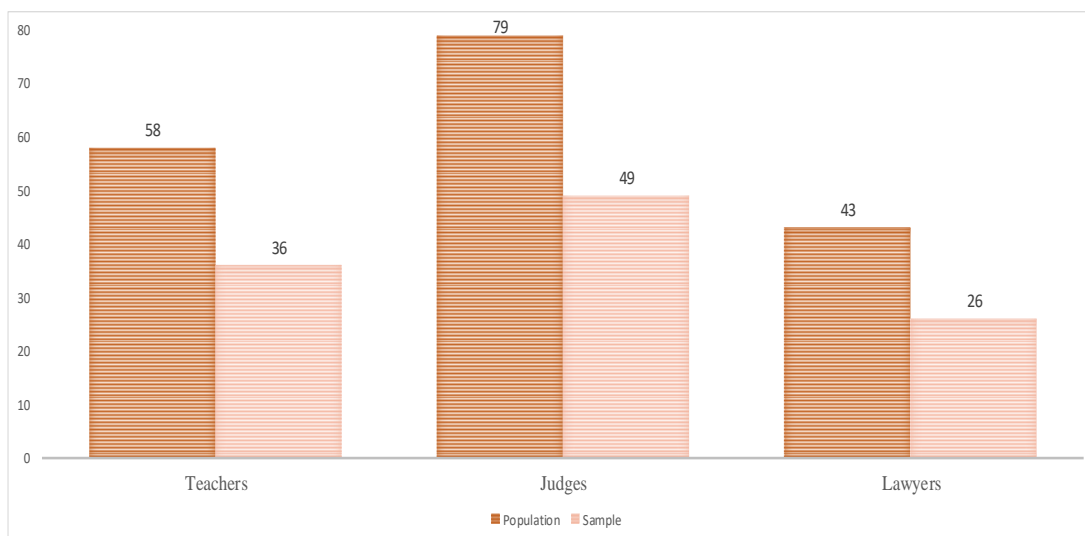


Figure 2: Description of the sample. Source: Own elaboration.

Torgerson's mathematical model [9]. Which objectivity is given to the criteria of the experts or other personnel surveyed, by converting the ordinal scale into an interval scale. This is given because the scales used for the judgments and criteria valued by the experts are ordinal, that is, they can be used to rank (eg, Indispensable, Very Useful, Useful, not useful, etc.) qualitative parameters [10]–[13]–[24]–[25]–[36]–[37]–[38]. The model is based on the following assumptions:

1. Each item corresponds to the subjective dimension of a normally distributed random variable, whose mean, m , is the scale value of that object. All variances are equal.
2. Each category limit corresponds to the subjective dimension of a normally distributed random variable, whose mean, t , is the scale value of that limit. All variables are the same.
3. The random variables that represent both the objects and the limits are independent. One variable cannot contain the values of another.

4. Decision rule: an object belongs to the k th category when its scale value x , is between the values of the order limits $k-1$ and k . This rule defines the border between each of the categories assumed for the indicators.

In this way, with the model, ordinal judgments, issued by experts, are converted into an instrument that expresses their relative position in a continuous range. [14]–[16]–[20]–[21]–[23]. In other words, it allows taking the ordinal scales to an interval scale (real numbers) and in this way knowing the limits, in real values, in which each evaluated category is found. The procedure to follow will be:

1. Frequency table: the indicators to be measured and the measurement scales established. The data is tabulated according to the frequency and its weighting.
2. Cumulative frequencies: each indicator's cumulative frequency is determined. That is the sum of the frequencies before it.

$$F_i = f_1 + f_2 + f_3 + \dots + f_m \quad (2)$$

3. Cumulative relative frequency or cumulative probability: it is obtained by dividing the absolute frequency f_i by the total data (M). That is, the cumulative probability matrix is determined with four decimal figures, which results from dividing each cumulative by the sample number.

$$F_i = \frac{f_i}{M} \quad (3)$$

4. Calculation of the cut-off points and scale of the indicators:
 - a) Determine the inverse standard normal distribution values for each indicator and evaluation using the INV.NORM function in a Microsoft Excel sheet.
 - b) For the cut-off points, the results of these previous values will be averaged for each one.
 - c) For the scales, determine the limit value (N): average of the cut-off points, which is why some authors call it the average of the average. Calculate the average by indicators (rows).

To determine in which category each one of the indicators is found, the limit value N (average) is subtracted from the average of the evaluations obtained in each indicator, and in this way, its result can be compared with the cut-off points. In such a way that, if the calculated value is less than or equal to the cut-off point, then the analyzed indicator belongs to this interval. [17]–[19]–[26]–[27]–[28]–[29].

5. Determination of the level of consensus: the level of consensus (C) is determined by the expression:

$$C = \left[1 - \left(\frac{V_n}{V_t} \right) \right] * 100 \quad (4)$$

Where C : agreement coefficient, V_n : negative votes, and V_t : total votes

Decision rule: Yes $C > 75\%$, it is considered that there is consensus.

6. Conclusions: it is decided which indicator, variable, or measure is important, influential, or preferable for the study.

The indicators were established according to the criteria:

- Very Effective (VE)
- Effective (E)
- Indefinite (I)
- Low effective (LE)
- Ineffective (IN)

For the selection of the group of experts, a competency validation survey was applied where it is carried out through self-assessments, on an ascending scale from 1 to 10:

- Degree of knowledge that the potential expert possesses about the subject
- Degree of influence that each of the sources of argumentation

The processing of the form was based on the calculation of the rating factor of the experts through the following mathematical expression:

$$K = \frac{FA + GC}{2} = \frac{\left(\frac{SI + EP + IR + FB}{4} + GC\right)}{2} \tag{5}$$

Where:

Si= Intuition

PS= Practical experience

IR= Research conducted by you

FB= Consultation of bibliographic sources

CG: Degree of knowledge (1-10).

3 Results

To empirically evaluate the effectiveness criterion of the penalty for crimes against intellectual property, the Torgerson method was applied, with the classifications of Very Effective (VE), Effective (E), Indeterminate (I), Low Effective (LE), and, Ineffective (IN), obtaining the following results. They are shown below. [30], [31], [32]

The study and surveys were carried out based on the criteria of the importance that a future modification of the penalties for crimes committed against intellectual property rights may have. For this reason, the criterion of the three sample groups was studied. In this sense, professors, lawyers, and judges contributed their criteria regarding the effectiveness of each of the punitive actions endorsed in articles 319 to 326 of the Ecuadorian Intellectual Property Law. In short, if these legal pronouncements meet the punitive and social re-educational objective for which they were designed.

EIP Articles	VE	E	I	LE	IN	TOTAL
Article 319	5	9	6	12	4	36
Article 320	3	11	4	16	2	36
Article 321	9	9	8	4	6	36
Article 322	3	8	7	15	3	36
Article 323	6	10	9	11	0	36
Article 324	3	9	5	11	8	36
Article 325	2	13	7	14	0	36
Article 326	1	13	3	13	6	36

Table 1: Frequency established according to the criteria of teachers. Source: own elaboration

EIP Articles	5	4	3	2	1
Article 319	5	14	20	32	36
Article 320	3	14	18	3.4	36
Article 321	9	18	26	30	36
Article 322	3	11	18	33	36
Article 323	6	16	25	36	36
Article 324	3	12	17	28	36
Article 325	2	15	22	36	36
Article 326	1	14	17	30	36

Table 2: Accumulated frequency. Source: own elaboration

EIP Articles	5	4	3	2	1
Article 319	0.1389	0.3889	0.5556	0.8889	1,0000
Article 320	0.0833	0.3889	0.5000	0.9444	1,0000
Article 321	0.2500	0.5000	0.7222	0.8333	1,0000
Article 322	0.0833	0.3056	0.5000	0.9167	1,0000
Article 323	0.1667	0.4444	0.6944	1,0000	1,0000
Article 324	0.0833	0.3333	0.4722	0.7778	1,0000
Article 325	0.0556	0.4167	0.6111	1,0000	1,0000
Article 326	0.0278	0.3889	0.4722	0.8333	1,0000

Table 3: Relative frequency, cumulative probability. Source: own elaboration

EIP Articles	5	4	3	2	1	Average	N- Avg.
Article 319	-1.09	-0.28	0.14	1.22	3.50	0.70	0.07
Article 320	-1.38	-0.28	0.00	1.59	3.50	0.69	0.08
Article 321	-0.67	0.00	0.59	0.97	3.50	0.88	-0.11
Article 322	-1.38	-0.51	0.00	1.38	3.50	0.60	0.17
Article 323	-0.97	-0.14	0.51	3.50	3.50	1.28	-0.51
Article 324	-1.38	-0.43	-0.07	0.76	3.50	0.48	0.29
Article 325	-1.59	-0.21	0.28	3.50	3.50	1.10	-0.33
Article 326	-1.91	-0.28	-0.07	0.97	3.50	0.44	0.33
Cut-off points	-1.30	-0.27	0.17	1.74	3.50		N = 0.77

Table 4: Calculation of cut-off points and scale of the indicators. Source: own elaboration

EIP Articles	VE	E	I	LE	IN	Total
Article 319	3	4	15	23	4	49
Article 320	7	12	9	13	8	49
Article 321	7	21	4	11	6	49
Article 322	3	14	9	15	8	49
Article 323	8	23	3	14	1	49
Article 324	7	18	7	10	7	49
Article 325	11	13	9	9	7	49
Article 326	3	16	9	19	2	49

Table 5: Frequency established according to the criteria of the judges

EIP Articles	5	4	3	2	1	Mean	N- Avg.
Article 319	-1.54	-1.07	-0.13	1.39	3.50	0.43	0.31
Article 320	-1.07	-0.29	0.18	0.98	3.50	0.66	0.08
Article 321	-1.07	0.18	0.39	1.16	3.50	0.83	-0.09
Article 322	-1.54	-0.39	0.08	0.98	3.50	0.53	0.21
Article 323	-0.98	0.34	0.51	2.05	3.50	1.08	-0.34
Article 324	-1.07	0.03	0.39	1.07	3.50	0.78	-0.04
Article 325	-0.76	-0.03	0.45	1.07	3.50	0.85	-0.11
Article 326	-1.54	-0.29	0.18	1.74	3.50	0.72	0.02
Cut-off points	-1.20	-0.19	0.26	1.31	3.50	N=0.74	

Table 6: Calculation of cut-off points and scale of the indicators. Source: own elaboration

EIP Articles	VE	E	I	LE	IN	TOTAL
Article 319	2	3	7	8	6	26
Article 320	2	4	5	9	6	26
Article 321	1	9	8	7	1	26
Article 322	4	5	5	10	2	26
Article 323	1	7	2	12	4	26
Article 324	8	9	2	2	5	26
Article 325	6	6	6	7	1	26
Article 326	7	8	1	8	2	26

Table 7: Frequency established according to the criteria of lawyers. Source: own elaboration

EIP Articles	5	4	3	2	1	Average	N- Avg.
Article 319	-1.43	-0.87	-0.10	0.74	3.50	0.37	0.32
Article 320	-1.43	-0.74	-0.19	0.74	3.50	0.38	0.31
Article 321	-1.77	-0.29	0.50	1.77	3.50	0.74	-0.05
Article 322	-1.02	-0.40	0.10	1.43	3.50	0.72	-0.03
Article 323	-1.77	-0.50	-0.29	1.02	3.50	0.39	0.30
Article 324	-0.50	0.40	0.62	0.87	3.50	0.98	-0.29
Article 325	-0.74	-0.10	0.50	1.77	3.50	0.99	-0.30
Article 326	-0.62	0.19	0.29	1.43	3.50	0.96	-0.27
Cut-off points	-1.16	-0.29	0.18	1.22	3.50	N = 0.69	

Table 8: Calculation of cut-off points and scale of the indicators. Source: own elaboration

4 Discussion

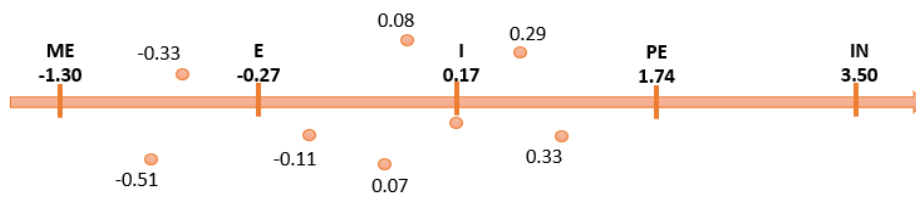


Figure 3: Graphic analysis of results with teachers, of the calculation of cut-off points. Source: Own elaboration

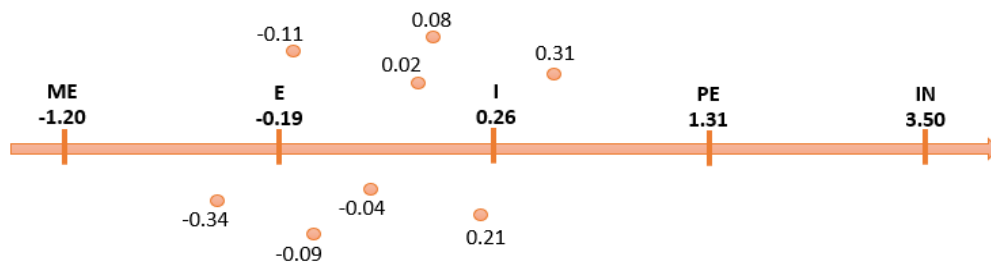


Figure 4: Graphic analysis of the result with judges, of the calculation of cut-off points. Source: Own elaboration

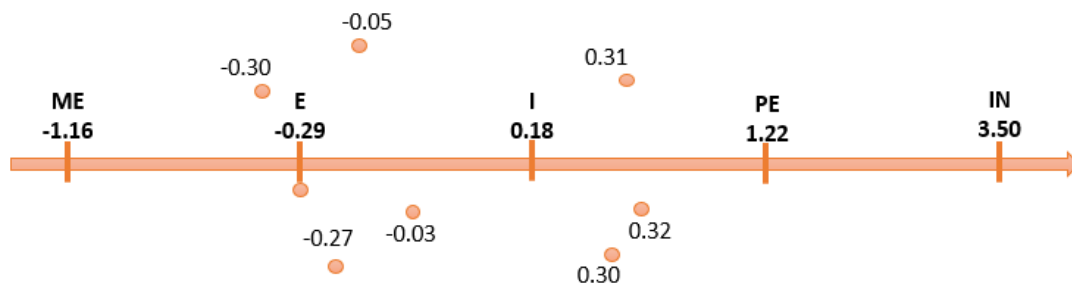


Figure 5: Graphic analysis of the result with lawyers, of the calculation of cut-off points. Source: own elaboration

As a result of the study carried out, it is evident that the participating professionals consider that the articles that regulate criminal offenses have certain effectiveness. However, a diversity of criteria tending to the need to provide better protection for copyright and intellectual property rights was evident. (Figures 3, 4, and 5).

Conclusion

Corresponding to the technological and scientific development of today's world, there is a need to provide efficient criminal protection for Intellectual Property and Copyright. The Ecuadorian State, in compliance with its constitutional principles, must offer the necessary legal tools for proper legal protection in this regard.

To preserve and increase the Ecuadorian cultural heritage, as well as to stimulate creators, society must be provided with efficient copyright protection. This must be tempered to the new technological conditions. Developed with national needs in mind. Likewise, provide protection not only for the creators of works but also for those who collaborate in the dissemination of the mentioned works (owners of related rights) concerning their rights.

Intellectual rights must be protected from a criminal perspective so that they have their true effects. For this, the legislator must be in technical conditions to be able to establish the criminal types that are harmful to a legal interest as precious as intellectual rights and artistic performances. In this way, the penalties that are imposed will fulfill a function that is not only repressive but at the same time dissuasive. In such a case, effective legal protection would be provided to the rights recognized to the authors and users of protected works, as well as to the owners of related rights.

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