THE "TRAGEDY OF THE ANTICOMMONS" IN MOTION: COLLECTIVE MANAGEMENT OF COPYRIGHTS IN BRAZIL AND THE IMPLICATIONS FOR ANTITRUST ASSESSMENT*

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Abstract

Different from the ordinary context, in which a *per se* illegality approach concerning harmonized behavior among competitors is reasonable to by applied (which is akin to an upfront presumption of negative net effects of such practices), collective contracting for copyrights in Brazil should be assessed under a more thorough *rule of reason* approach. Severe fragmentation of such rights in the hands of several holders -- who can individually hold up the regular licensing of the whole protected work -- allows for such joint contracting to have non-negligible positive economic effects. Since marginal costs of reproduction are negligible after the protected work has been created, setting a single lump-sum price for the whole catalog, based on the expected surplus of each customer, would be the expected to be an efficient pricing, although with redistributive issues.

Key words: *Copyrights; intellectual property rights; collective management; collective contracting; antitrust law; antitrust policy; collusion; per se approach; rule of reason approach.*

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1. Introduction

In a recent decision, the Brazilian antitrust authority (CADE) has deemed certain collective entities of copyrights holders as in breach of the competition law, for they have jointly set the price for an overarching licensing comprising the use of their collective catalog for public execution (called *blanket license*) and created difficulties for the setting up of new associations of copyrights holders[1].

This case, known as the *ECAD Case*, generated a very interesting debate among the Commissioners of the antitrust authority. The leading opinion concluded that the copyrights law allowed the joint management of intellectual rights via collective associations and created a legal monopoly for collection and distribution of the amounts paid by customers as license fees for the public execution of protected works; however, such legal provisions did not allow different collective management associations to get together in order to discuss and set the prices and ways they would license the copyrights each of them held in their portfolio; the existing legal monopoly should be limited only to the collection and distribution of amounts paid, but would not include the prior phase of deciding how licenses would be awarded and what prices should be charged.[2] By jointly discussing and agreeing on the license structure for public execution of protected works, the defendants were found in breach of the antitrust law,

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[1] *See* Administrative Procedure no. 08012.003745/2010-83. Associação Brasileira de Televisão por Assinatura – ABTA *vs*. Escritório Central de Arrecadação e Distribuição – ECAD, União Brasileira de Compositores – UBC, Sociedade Brasileira de Administração e Proteção de Direitos Intelectuais – SOCIMPRO, Asssociação Brasileira de Música e Artes – ABRAMUS, Associação de Músicos Arranjadores e Regentes – AMAR, Sociedade Brasileira de Autores, Compositores e Escritores de Música – SBACEM e Sociedade Independente de Compositores e Autores Musicais – SICAM. Reporting Commissioner ELVINO DE CARVALHO MENDONÇA, decision on 20.03.2013, by majority.

[2] *See* vote of Reporting Commissioner ELVINO DE CARVALHO MENDONÇA in Administrative Procedure no. 08012.003745/2010-83, *passim* but especially §§ 131-134, 193-195, 198-202, 205-206, 210-215, 351, 364-369, and 378. It is interesting to note that Commissioner RICARDO MACHADO RUIZ, who fully adhered to the Reporting Commissioner assessment, also acknowledged that the entity created to undertake the legal monopoly of collection and distribution of licenses fees paid did have a theoretically solid supporting argument for reducing transaction costs and enlarging the market for intellectual creations; however, based on the facts, he concluded the collective entity was *de facto* extracting rents from the players in the industry, and not actually reducing transaction costs, maximizing collection and distribution and reaching operation efficiency (*see* vote of Commissioner RICARDO MACHADO RUIZ in Administrative Procedure no. 08012.003745/2010-83, *passim* but especially §§ 12-14, 16-18, 28 and 32-34).

and were convicted in a first charge of cartel formation. The entity in charge of the legal monopoly of collection and distributions of license fees was also charged and convicted in a second charge, for abuse of dominance, by having imposed unreasonable criteria in order to allow new collective management associations to joint as member, which created difficulties for such new associations to the set up and work properly[3]. The total pecuniary fines were approximately R$38 millions, and were imposed along with other ancillary penalties.

There was not much debate on the conviction for abuse of dominance, but the charge of cartel formation was opposed in two important dissenting opinions. They highlighted not only the complementary nature of several copyrights, but also the fact the law itself allows for collective management organizations to be set up by owners of such rights; they also pointed that the legal issue in the current law would be the lack of regulatory supervision upon the entity to which a legal monopoly was granted, and envisaging a possible exploratory abuse of dominance (not cartel formation) in the set of facts under investigation.[4]

This decision on the *ECAD Case* poses very important policy discussions, such as the efficiencies of collective management of intellectual property rights -- and the efficient price for a collectively set license for the total collective catalog --, as well as the spaces for competition among associations of copyrights holders -- and the alleged lack of regulation of some natural or legal monopolies under the Brazilian copyrights law.

The main economic problem concerns the severe fragmentation of copyrights and related rights that can arise under Brazilian law, which grants different rights over a single protected work to several holders, and requests a prior license from all such holders for the regular use of the protected work. This is a particular instance of the problem known in the economic literature as the "*Tragedy of the Anticommons*". This circumstance poses an important caveat on the traditional antitrust rationale concerning joint contracting: different from the ordinary context, under which it is well established a presumption that harmonized behavior by competing enterprises leads to negative net effects, cooperation may have important economic efficiencies under excessive fragmentation of property rights, efficiencies that should not be disregarded. Therefore, antitrust assessment of contacts and/or cooperation among competitors under excessive fragmentation of property rights should be pursued under a full *rule of reason* approach, and never under the abbreviated *per se* approach.

A second associated problem concerns the efficient price and structure for a collective license concerning the collective and complementary copyright catalog: since marginal costs are negligible after the protected work has been created (reproduction costs are near zero), it would be indeed expected from a rational player to set a two-part tariff with a basic lump-sum price for the whole catalog, based on the expected surplus of each customer, and an additional small variable price -- if any -- for the repetitions.

2. Structure of the Brazilian Copyright Law and collective management provisions.

Law no. 9,610/98 sets forth the basic legal framework for protection of copyrights (*direitos do autor*) and of the so-called related rights (*direitos conexos*); all of them are

[3] *See* vote of Reporting Commissioner ELVINO DE CARVALHO MENDONÇA in Administrative Procedure no. 08012.003745/2010-83, *passim* but especially §§ 419, 422, 427.

[4] *See* votes of Commissioners MARCOS PAULO VERÍSSIMO and ANA FRAZÃO in Administrative Procedure no. 08012.003745/2010-83, *passim* but especially §§ 12, 14, 16-21, 23-25, 36-38, 41 and 44-45 (Commissioner VERÍSSIMO); and §§ 8, 10-17, 20-21, 24, 28 and 33 (Commissioner FRAZÃO).

subject to the same basic legal provisions, and are encapsulated under a broader derivative of the term "copyrights" (*direitos autorais*).

According to the law, are eligible for protection the intellectual creations expressed in any means or imprinted in any supporting material -- tangible or otherwise, known or yet to be invented -- such as (*i*) the wording of literary, artistic or scientific works; (*ii*) conferences, public discourses, sermons and the like; (*iii*) dramatic and dramatic-musical works; (*iv*) choreographic works, whose scenic performance are imprinted in writing or in any other form; (*v*) musical compositions, with lyrics or not; (*vi*) audiovisual works, either spoken/with soundtrack or mute, including also cinematographic works; (*vii*) photographic works and those produced by process similar to photography; (*viii*) drawings, paintings, engravings, sculptures, lithography and kinetic art; (*ix*) illustrations, geographic charts and works of the same nature; (*x*) projects, drafts and plastic works concerning geography, engineering, topography, architecture, landscaping, scenography and sciences; (*xi*) adaptation, translations and other transformation of original works, presented as a new intellectual creation; (*xii*) software[5]; (*xiii*) compilations, anthologies, encyclopedias, dictionaries, databases and other works that, given its selection, organization or presentation of its contents constitute an intellectual creations (raw data in itself is not subject to protection, and a protected intellectual creation upon the dataset does not preclude the composition of other protected intellectual creations) (*see* art. 7, Law no. 9,010/98).

The scope of protection is indeed broad, but the basics are to grant the author of a new intellectual work the legal ownership upon the creation as imprinted or fixated in a supporting material. Protection then lies upon (and covers only) the imprinted wording, graphic, audio or video elements; concepts, ideas, applications or discoveries are not protected in themselves, and do not prevent use by third parties or creation of protected intellectual works upon them[6]. The law expressly excludes from any protection (*i*) ideas, normative procedures, systems, methods, projects or mathematical concepts as such; (*ii*) schemes, plans or rules to perform mental acts, games or businesses; (*iii*) blank forms to be filled in by any kind of information, scientific of not, and its instructions; (*iv*) wording of treaties or conventions, laws, decrees, rulings, court decisions and other official acts; (*v*) common use information, such as calendars, agendas, registers or legends; (*vi*) isolated names and titles; (*vii*) industrial or commercial uses of ideas comprised in the protected work (*see* art. 8, Law no. 9,010/98).

Ordinary multiple ownership can arise for copyrights as for any other property right: co-authors of a work are all entitled to the property rights upon that intellectual creation, in condominium ruled by common agreement if no other rule is established (*see* art. 23 of Law no. 9,610/98). What creates particular issues in copyrights is that several other instances of

[5] In the Brazilian legal setting, software is subject to the copyright protection set forth in Law no. 9,609/98, and also to the particular provisions set forth in Law no. 9,610/98. To that extent, a software is defines as *"the expression of a organizes set of instructions in natural or code language, comprised in a physical support of any nature, for application in information treatment automatic machines, devices, instruments or peripherals, based on analogic or digital techniques, to make such automatic machines, devices, instruments or peripherals to work in ways and for determinate ends"* (see art. 1, Law no. 9,609/98).

[6] As a simple example, the *idea* of one lost survivor living isolated in an island after a transport accident enables the creation of a number of different and equally protected works, from a long literary novel until a short magazine report; from a oil painting until a set of illustrations; from a dramatic-musical work until a motion picture. The scope of legal protection lies in the *exact creations* and belong the their respective creators (the wording of the novel and the magazine report; the graphics of the painting or of the illustrations; the lines and musical soundtrack of the play; the film in itself).

common property (for the lack of a more precise word) can emerge, and they may put severe pressure on common contracting in the marketplace.

Some intellectual creations -- normally related to the music and entertainment industries -- are a bundle of copyright in its strict construction (*direitos do autor*), meaning the rights granted to the original and abstract creation (lyrics, melody, lines, instrumental setting and remaining guidelines for performing accurately the intellectual work as conceived) and the so called related rights (*direitos conexos*), which are the rights attributed to the singers and performers. Such related rights grant the *performers* an exclusive right to authorize or prohibit recordings, reproductions, public executions, offers to the public, broadcasting, and any kinds of uses concerning their performances, either related to image or voice (*see* art. 90, Law no. 9,610/98). Still in the music industry, the *producer of phonograms* -- normally a recording company -- is granted another set of specific and exclusive related rights, allowing him to authorize or prohibit reproductions, distribution (either sales or renting exemplars of the protected phonogram), public executions, broadcasting and any kinds of uses concerning his phonograms, called the "master records" (*see* art. 93, Law no. 9,610/98). The producer is also entitled to receive the rents resulting from public execution of his phonograms, and share them with the respective artists or association of artists according to their contractual agreements (*see* art. 94, Law no. 9,610/98). Broadcasting companies are also entitled to another set of specific and exclusive related rights allowing them to authorize or prohibit retransmission, recordings and reproductions of their broadcastings, as well to authorize or prohibit exhibitions of such contents in TV sets located on places of collective access (*see* art. 94, Law 9,610/98).

This means that a single final product offered in the market (*e.g.*, an electronically distributed music file; a DVD box with a recorded TV series) may be composed of several different intellectual protected rights, and the appropriate licenses must all be secured for the offer to be regular and according to the law. This is not common property as one would normally understand the term, but denotes an important feature: several holders are entitled to different intellectual rights upon the final product, and each of such copyrights or related rights must be in agreement for the exploration of the final product to be regular.

In parallel, mind also that new derivate works can be produced based on an original intellectual creation, and if compliant with the terms of use and the legal rights of the original work, both creations are subject each to a separate set of copyrights (*e.g.*, the translation of an original copyrighted work entitles the translator to a new property right without destroying the copyrights of the original author; an adapted motion picture from a copyrighted play entitles the studio with a new property right without destroying the copyrights of the original writer; and so on and so forth). This allows for the multiplication of intellectual creations, with new products created and offered to the market, but as is the case of the exploration of an original work, such new creations (derivate intellectual rights) may demand agreement with several holders entitled to different intellectual rights in the original work, which is the underlying base for the new intellectual creation.

There are also exclusive rights that emerge in the process of offering an intellectual work in the marketplace; even though not a new property right, such provisions separate the original bundle of copyrights among different players in the industry. This is the case of the provisions on the editing agreement, which sets forth not only the obligation of the editor to reproduce and make public the literary, artistic or scientific work, but also sets forth his exclusive right to publish and explore the work according to the contractual terms (*see* arts. 53

and 54, Law no. 9,610/98), and also ability to set the sale prices of the work (*see* art. 60, Law no. 9,610/98).

Within this context of several players each with different copyrights or related rights in an indivisible creation (or with rights unbundled from a copyright upon the intellectual creation), the law sets forth a clear framework granting the holders the ability to intervene within the regular use of the protected work. As mere examples, protected plays, musical compositions and phonograms cannot be used in public performances and executions without prior authorization of the author or copyright holders (*see*. art. 68, Law no. 9,610/98); equivalent dispositions apply for protected audiovisual works, which calls for approval of the author and performer (*see*. art. 81, Law no. 9,610/98).

In an attempt to mitigate the collective contracting difficulties that could arise, the law expressly allows that authors and holders of related rights create and join associations for collective management in order to defend and exercise their rights (*see*. art. 97, *caput*, Law no. 9,610/98). Membership is upon decision of the author, and he can choose if and which association he will join, and transfer himself from one to another at any time, insofar as he does not participate in more than one collective management association at the same time (*see*. art. 97, §§ 1 and 2, Law no. 9,610/98; these exact same provisions will be renumbered to §§ 2 and 3 when Law no. 12,583/13 enters into force). Such collective management associations -- which may comprise holders of different types of copyrights and have no assurance that will join together all holders of intellectual rights upon the individual final products[7] -- became attorney-in-fact of the members towards copyrights protection and charging of license fees, allowed the authors themselves to pursue personally such tasks (*see*. art. 98, *caput* and sole paragraph, Law no. 9,610/98).

The law mandates (hence a *legal monopoly*) that all these collective rights associations create and maintain a single central office for *collection* and *distribution* of license fees concerning the public execution of music and phonograms, including broadcasting and transmission, and also any kind of exhibition of audiovisual works (*see*. art. 99, Law no. 9,610/98). What is interesting to note is that such single central office (ECAD - *Escritório Central de Arrecadação e Distribuição*) had been created under the prior copyright law (Law no. 5,988/73), with a different configuration in a somehow key aspect: the prior law created such office for collection and distribution, but subjected it to federal oversight and expressly made references for the unification of the charged prices (*see* arts. 115 and 117- IV, of Law no. 5,988/73); the enactment of the current Law no. 9,610/98 not only extinguished the supervising authority (the former National Council for Copyrights - *Conselho Nacional de Direitos Autorais*), which had general oversight power in the matter (*see* arts. 116 and 117-III, of Law no. 5,988/73) and the specific competence to approve the price tables set by ECAD (*see* art. 23 of Resolution CNDA no. 7/76).

[7] Mind that there is no compulsory allocation on which holders of intellectual property can joint each possicle collective management association; the same entity can comprise membership from authors of literary works, music authors, singers and performers, phonogram holders and/or studios and any other copyright holder. What is even more critical is that there is no assurance that the holders of all intellectual rights upon a particular product (say, the author, all the performers and the recording studio who hold different rights upon a specific recorded music) will be members of the same collective management associations. This means that the legal provisions tend toward collective contracting, but merely resorting to the voluntary collective management organization will not solve all the issues: the party may have to contract with several collective management organizations in order to secure all the needed licenses for regular use of a protected work.

The discussion on the appropriate construction of the legal monopoly of ECAD and its public oversight was already an important debate, to which a new chapter has just been added: Law no. 12,853/13, enacted in August 14, 2013 and to enter into force in 120 days from its official publication, made some important changes in the matter. Specifically addressed to dealing with collective management of copyrights, it changes and includes several provisions to Law no. 9,610/98. In a very short summary, the collective management associations were empowered and allowed to pursue themselves the collection and distribution of the license fees, with solely the material acts of charging the licenses done via the single office (*see* new wording of art. 99, *caput*, Law no. 9,610/98), but subject to closer public scrutiny (*see*, in particular, the new wording of art. 97, § 1, Law no. 9,610/98, which states such associations develop *"public interest activities, pursuant to the law, and should abide by their social function"*; arts. 98-A, 98-B, 98-C of Law no. 9,610/98, which set the duties and obligations of the collective management associations; and arts. 7 and 8, Law 12,853/13 on the public oversight on the matter by the Ministry of Culture) and to stricter legal provisions on non-discrimination, equal treatment and transparency (*see* the new wording of art. 98, §§ 2 and 5, Law no. 9,610/98).[8]

The setting of prices for licensing the joint repertoire held by a collective management associations was clearly included within their competence, but subject to much more concrete guidelines and rules: (*i*) it is to be defined reasonably, in good faith and accordingly to the local uses, and always proportional to the actual use of the protected works and accordingly to their importance in the activities of the user (*see* the new wording of arts. 98, *caput* and § 1, and 99, *caput*, Law no. 9,610/98); (*ii*) the share allocated to holders of copyrights and related rights cannot be smaller than 77.5% of collected values in 2013, and shall increase at a 2.5% rate per year until it reaches 85% of the total collection in four years (*see* the new wording of art. 99, § 4, Law no. 9,610/98); and (*iii*) each collective management associations should set and unify the price for its own collective catalog before the single office (ECAD) (*see* the new wording of art. 99, §§ 8 and 9, Law no. 9,610/98)[9].

[8] The role played by ECAD was drastically reduced in the legal regime, and it seems its legal monopoly has been reduced solely to the material acts of collection of license fees, pursuant to the terms defined by the collective management associations. Other than that, what remained with ECAD seems to be only the distribution of the remaining amount after the minimum legal share attributed to copyright holders is paid, to be decided according to *"the single vote by each association member"*, pursuant to the new art. 99-A, sole paragraph; it is not clear the number of votes needed for approval, but it seems the law could be intended to say approval by majority of the present members, with each member entitled cast one vote in the deliberation.

[9] It seems that this new legal provisions should clearly be construed as to grant each association the complete ability to discuss internally and set the price for its own collective catalog, and that no antitrust charges should be targeted against that collective management association for internally discussing pricing issues among its own members. However, the wording of the law is not clear whether different collective management associations would be allowed to discuss their respectively pricing decisions with one another, especially because the new art. 99-B states that *"the collective management associations* [...] *are subject to the antitrust rules set forth in the specific legislation concerning the prevention and repression to antitrust offenses"*. A systematic constructions of the law should allow that collective management associations discuss with one another, at least for three reasons: *one*, they could merge or reorganize themselves as a single entity of copyright holders; *second*, it makes no sense whatsoever for the law to allow free transfer of copyright holders among collective management associations and that the ultimate holders could jointly discuss pricing directly -- within their collective management association -- and would not be allowed to do so indirectly -- via setting of more than one collective organization --; *third*, there is indeed closer public scrutiny on the rules for setting of the price for the collective catalog, and several provisions mandating transparency and public disclosure of pricing information by each collective management association (see new art. 99-B-I/II of Law no. 9,610/98). The explicit reference to the

What emerges from the current legal setting is twofold: (*i*) there are several kinds of intellectual property rights and some serious collective actions problems in connecting all such rights, either for marketing an intellectual original creation -- since there may be several concurrent copyrights or related rights upon a single product, held by different persons, all of whom are necessary to be contracted with --, or for creating a new derivate intellectual creation -- since the regular use of the underlying original work may require agreement with several different holders of copyrights or related rights upon it; (*ii*) the law itself created some instances or devices for solving these collective action problems, by allowing and sometimes imposing collective contracting (that is to say, collaboration among the involved parties).

3. Commons and Anticommons: two opposing tragedies.

Discussing the general problem of population as one of with *"no technical solution"*, GARRET HARDING concludes for the necessity some kind of mutually agreed limits on population growth recalling the prospects of the a *tragedy of the commons*: rational decisions taken by isolated individuals may not be the best decision for the society, and may lead to complete ruin[10]. As population grows, commons-disciplined matters are substituted by other mandatory social devices in order to secure a better outcome; private property on material goods plus inheritance law is acknowledged as one of such emerging solution, in spite of its problems and injustices[11]. Further economic discussions applied the reasoning to particular contexts, especially to show how the emergence of private property or other social management systems were the devised solutions to an otherwise tragic social result[12]. The opposite side of the discussion, the excessive or misaligned setting of property rights that would be labeled the *tragedy of the anticomomons* remained in the shadows for a long time before it received some attention.

The earlier definitions on the *anticommons problem* drew heavily on the idea of a *regulatory regime* whereby *every* person would have rights upon the goods, and consequently, no one was ever actually allowed to use the goods except as expressly authorized by all the others[13]. At such a level of generality -- a overarching property regime concerning every and all persons comprised in a community --, the concept would have a very limited application and would resemble more to a "thought experiment", as duly noted by HELLER; however, if

application of the antitrust law should, then, be read as addressing other kinds of anticompetitive behavior but horizontal cooperation, such cases of abuse of dominance (collective boycotts, illicit discrimination, creating of barriers to entry, raising rivals costs and the like).

[10] GARRETT HARDIN, "The tragedy of the commons" in *Science*, New Series, v. 162, no. 3.859 (Dec. 13, 1968), *passim*, but especially pp. 1243-1244, 1247-1248.

[11] GARRETT HARDIN, "The tragedy of the commons" in *Science*, New Series, v. 162, no. 3.859 (Dec. 13, 1968), pp. 1247-1248.

[12] *See*, among others, H. SCOTT GORDON, "The economic theory of a common-property resource: the fishery" in *Journal of Political Economy*, v. 62, no. 2 (Apr., 1954), pp. 124-142; ANTHONY SCOTT, "The fishery: the objectives of sole ownership", in *Journal of Political Economy*, v. 63, no. 2 (Apr., 1955), pp. 116-124; HAROLD DEMSETZ, "Toward a theory of property rights" in *American Economic Review*, v. 57, no. 2, (May, 1967), pp. 347-359; GARY LIBECAP, *Contracting for property rights*, New York, Cambridge University, 1989; ELINOR OSTROM, *Governing the commons: the evolution of institutions for collective action*, Cambridge, Cambridge University, 1990.

[13] *See* FRANK I. MICHELMAN, "Ethics, economics and the law of property" in *Nomos XXIV: Ethics, Economics and the Law*, JOHN CHAPMAN & RONALD PENNOCK (eds.), 1982, p. 665; also reprinted in Tulsa Law Review, v. 39, no. 3, 2003, p. 3. For another reference along the same lines, *see* ROBERT C. ELLICKSON, "Property in land", in *Yale Law Journal*, v. 102, 1993, p. 1.322, footnote 22.

limited in a few dimensions and redefined as *"a property regime in which multiple owners hold formal or informal rights over a scarce resource"*, the concept would much more workable and would show several possible applications.[14]

One such application was put forward by HELLER for explaining why storefronts remained empty in Moscow after its transition from the old Communist regime to the new Capitalist order, at the same time plenty of metal kiosks, stacked with goods, were setting shop and working on the cold streets; HELLER convincingly explains that the transition regimes failed to endow each individual with an appropriate bundle of rights upon storefronts (*i.e.*, rights that represented full ownership and full decision-making concerning such asset); instead, the standard bundle of rights necessary for unitary decision was split and distributed among several and heterogeneous holders, in a way that a single player could block all the others from exercising their rights (a kind of multiparty bargain with each participant as a veto-player, with all the corresponding incentives to strategic behavior).[15]

A key insight of HELLER was that much more attention should be paid to the *contents* of property bundles, in addition to the clarity of such rights, especially when property rights are being defined or redefined by the legislators[16]. Anticommons problems may emerge whenever the endowment of property rights is discussed and allocated at the level of individual rights, rather than as complete bundles: a particular object is held in anticommons property when each owner holds a *core right* within the default bundle which would allow unitary decision, and there is no hierarchy of conflict settlement rules, a setting that means the holding of each core right as a right to exclude others from use (for the object to be used, all owners must reach an agreement).[17] Building well functioning market system demands not only the traditional concerns of delimiting and enforcing property rights and contracts in a

[14] MICHAEL A. HELLER. "The tragedy of the anticommons: property in the transition from Marx to markets" in *Harvard Law Review*, v. 111, no. 3 (Jan., 1998), pp. 53-54. The restricted dimensions concern the universality of the rights (*i.e.*, refers only to multiple owners and not to any and all member of the community), excludes the assumption of optimality of the non-use, relaxes the need for formal delimitation of the rights by the legal order so that the concept would apply, and further limits the scale to single objects (*i.e.* anticommons may refer only to a particular use of a scarce good, and not to the level of the entire regime) (*idem ibidem*, p. 54-55).

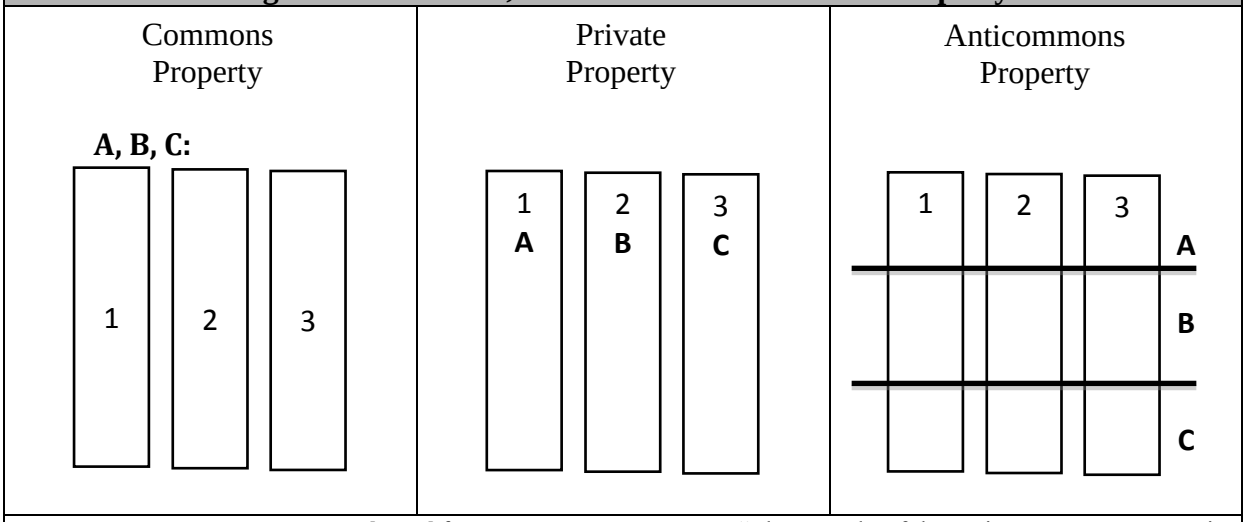
[15] MICHAEL A. HELLER. "The tragedy of the anticommons: property in the transition from Marx to markets" *cit.*, *passim* but especially pp. 1-2, 18-20, 30. What is interesting to note is that the prior Communist regime had a gradient of different levels of protection concerning State socialist property, and the more protection under the socialist law, the poorer the performance under the new market economy; this may have happened, argues HELLER, because private property emerged more divided among different groups for such key and more protected assets, while the originally less protected assets were allowed to emerge concentrated in a single owner (*idem ibidem*, pp. 10-12).

[16] MICHAEL A. HELLER. "The tragedy of the anticommons: property in the transition from Marx to markets" *cit.*, p. 84.

[17] MICHAEL A. HELLER. "The tragedy of the anticommons: property in the transition from Marx to markets" *cit.*, pp. 23 and 55-56. As summarized by HELLER himself: *"In a sense, private property breaks the material world 'vertically', with each owner controlling a core bundle of rights in a single object* [...], *while anticommons property creates 'horizontal' relations among competing owners of rights in an object.* [...] [footnote 219:] *A common property regime might be shown without either horizontal or vertical heavy lines"* (*idem ibidem*, p. 56). As further discussed by HELLER, excessive fragmentation could emerge not only on unbundling legal rights and allocating them to different holders, but also by spatially dividing the good to such an extent that each of the several owners cannot use the object properly; hence, besides *legal anticommons*, there could also emerge *spatial anticommons* (*idem ibidem*, pp. 28, 33 and 57).

stable, legal and credible market environment, concludes HELLER, but also bundling property rights adequately as to avoid anticommons situations to arise[18].

Figure 1: Commons, Anticommons and Private Property



Source: Adapted from MICHAEL A. HELLER. "The tragedy of the anticommons: property in the transition from Marx to markets" *cit.*, p. 56.

Another materialization of the anticommons problem was specifically discussed by MICHAEL HELLER & REBECCA EISENBERG in the biomedical industry. According to them, biomedical research in the United States went through an important transformation towards more privatization in the 1980s; before that period, the activity was basically conducted under the commons model, with basic research on premarket or upstream innovations sponsored by the federal North-American government, which also encouraged broad dissemination of the results into the public domain; hence, several unprotected biomedical discoveries were free to be incorporated into marketable downstream products for treatment and diagnosis; after 1980, the North-American Congress started encouraging federally supported discoveries to be duly patented and that basic research passed on to be conducted under a more private regime (*i.e.*, supported by private funds, carried out in private organizations, and privately appropriated via patents or other legal devices)[19]. They posit that an unintended (and paradoxical) consequence of this change would be the possible proliferation of intellectual property rights for basic research, which could eventually prevent further innovations in the downstream markets, via a somewhat more enduring anticommons problem caused by three structural characteristics: excessive transaction costs on rearranging entitlements, heterogeneous interests of the involved players and cognitive biases among researchers[20]. Such privatization on biomedical research, they conclude, call for policymakers *"to ensure coherent boundaries of upstream patents and to minimize restrictive licensing practice that interfere with downstream product*

[18] MICHAEL A. HELLER. "The tragedy of the anticommons: property in the transition from Marx to markets" *cit.*, p. 43.
[19] MICHAEL A. HELLER & REBECCA S. EISENBERG, "Can patents deter innovation? The anticommons in biomedical research", in *Science*, v. 280, no. 5364 (1 May 1998), p. 698.
[20] MICHAEL A. HELLER & REBECCA S. EISENBERG, "Can patents deter innovation? The anticommons in biomedical research", *cit.*, pp. 698, 700-701.

development", otherwise a damaging proliferation of fragmented intellectual property rights could emerge and lead to fewer useful products in the marketplace[21].

It is clear that both the commons and anticommons problems are theoretically complementary, meaning that each represents a departure from the optimal ownership setup towards opposing sides[22]. In a very interesting paper, BUCHANAN & YOON summarize that each tragedy refers to either the excessive dispersion of *usage rights* -- in the case of the *commons problem* --, or to the excessive dispersion of *exclusion rights* -- in the case of the *anticommons problem* --, and defend that these tragedies represent the two sides of the same problem, with symmetrical results: excessive assignment of usage (exclusion) rights to a exhaustible but common resource creates economic problems because the independent persons to whom these rights were assigned would exercise them in a decentralized way, and may not take into account an occasional diseconomy caused to the other holders of usage (exclusion) rights, rendering the common good overused by excessive application of inputs (underused by excessive setting of prices).[23]

The symmetry originally posited by BUCHANAN & YOON was followed and further developed by PARISI, SCHULTS & DEPOORTERE. They clarify that the *right to use* and the *right to exclude* are complementary attributes of an unified bundle of property rights, and *unity of ownership* occurs whenever these complementary rights are exercised over a similar domain: in a commons situation, the right to use stretches beyond the right to actual exclude others, while in an anticommons situation, such right to use is in fact compressed by the actual exercise of exclusion rights from third parties; such non-conformity in the domains complementary rights cause welfare losses from the forgone efficiencies in relation to fully

[21] MICHAEL A. HELLER & REBECCA S. EISENBERG, "Can patents deter innovation? The anticommons in biomedical research", *cit.*, p. 701.

[22] *See*, as example, MICHAEL A. HELLER. "The tragedy of the anticommons: property in the transition from Marx to markets" *cit.*, pp. 3-4. It should be noted that HELLER clearly posits that both commons and anticommons problems could be framed as *prisoner dilemmas* for game theoretical assessment (*idem ibidem*, pp. 65-73). For a broader treatment on the subject, *see* MICHAEL HELLER, *Gridlock economy: how too much ownership wreck markets, stop innovation, and costs lives*, Basic Books, Philadelphia, 2008.

[23] JAMES M. BUCHANAN & YONG J. YOON, "Symmetric tragedies: commons and anticommons" in *Journal of Law and Economics*, vol. 43, no. 1 (Apr., 2000), *passim* but especially pp. 1-4. As further discussed by the authors with an hypothetical example, both sides of the story are not different than the Cournot-Nash equilibrium in an oligopoly game for inter-firm competition: in the commons side, players setting their quantities independently (*i.e.*, deciding how much to use of the common good) will bring to the market an excessive amount than what would be optimal; on the anticommons side, players setting independently the price of complementary products (*i.e.*, restricting the possibility of other players using the common good) would lead to an excessive total price for the good than would be optimal (*see* JAMES M. BUCHANAN & YONG J. YOON, "Symmetric tragedies: commons and anticommons" *cit.*, pp. 5-10). But differently from fierce competition in the market, efficient implications are "*diametrically different*": "[With inter-firm rivalry], *optimality is attained when net rents are zero, when firms are forced by competition to allow consumer-buyer to secure all potential surplus. In the common* [and the anticommon] *setting, by contrast, optimality is attained when net rents are maximized. Competition among users, on the one hand, or among excluders, on the other, tends to reduce rents as in the inter-firm model, but, instead of reflecting transfers of value to consumer-buyers, such rent reductions represent destruction of value. Fully 'competitive' equilibrium is in either the commons model the pessimal rather than the optimal result"* (JAMES M. BUCHANAN & YONG J. YOON, "Symmetric tragedies: commons and anticommons" *cit.*, p. 10; for an analogous result concerning the matter of generation of public bads, *see* JAMES M. BUCHANAN, "A Defense of Organized Crime?" in *The Economics of Crime and Punishment*, Rottenberg, Simon (ed.), Washington, American Enterprise Institute for Public Policy Research, 119-132, 1973).

unified ownership[24]. One key contribution was to put in evidence that such problems are not only related to insufficient *versus* excessive fragmentation of ownership, but rather to *inefficient dismemberment* on the internal entitlements comprised in full property, meaning that dysfunctional fragmentation occurs when closely complementary attributes concerning a good are dismembered, with use and exclusion rights being only the most paradigmatic example of separable strict complements[25]. PARISI, SCHULTS & DEPOORTERE also posit that any theoretical symmetry in the framing of the problem does not mean the solutions of each problem would be similar; as a matter of fact, there is a clear asymmetry in the transaction costs involved in the solution, with a one-directional stickiness in the process of dividing rights: reunification of fragmented rights usually involves transaction costs and strategic issues of greater magnitude than the original fragmentation of a given bundle of rights; this means that sub-optimal fragmentation can be more easily corrected *ex post* while excessive fragmentation tending to be more difficult to reverse[26].

What is noteworthy is that the elegant theory on the perfect symmetry of the results is quite stringent.[27] Empirical studies indicate that the results could actually be asymmetrical, with the anticommons problem often much more problematic. VANNESTE, HIEL, PARISI & DEPOORTER, for instance, show that anticommons experimental situations generate greater opportunistic behavior than the corresponding commons setting, and yield greater risk of ineffective use; they also indicate that behavior attitudes toward property and psychological aspects may have different impacts in cooperation in either setting, and should the commons problem lead to a "tragedy", the anticommons setting could lead to a "disaster" in terms of welfare effects[28]. In discussing the empirical results, some interesting behavior explanations

[24] FRANCESCO PARISI, NORBERT SCHULTS & BEN DEPOORTERE, "Duality in Property: commons and anticommons" in *International Review of Law and Economics*, v. 25, no. 4, (2005), pp. 583-585.

[25] FRANCESCO PARISI, NORBERT SCHULTS & BEN DEPOORTERE, "Duality in Property: commons and anticommons" in *International Review of Law and Economics*, *cit.*, pp. 584 and 588, and footnote 14.

[26] FRANCESCO PARISI, NORBERT SCHULTS & BEN DEPOORTERE, "Duality in Property: commons and anticommons" in *International Review of Law and Economics*, *cit.*, pp. 579, 585-586 and 590-591. This specific situation allows the authors very interesting insights: (*i*) *liability rules* (in opposition to either *property rules* and *inalienability rules*) emerges as good candidates for the problematic task of balancing individual autonomy against efficiency concerns in the presence of positive transaction costs and strategic costs (*idem*, *ibidem*, pp. 586-587, 590); (*ii*) legal provisions may create default rules and mechanisms for reunification of non-conforming rights back into full property (*e.g.*, time limits, statute of limitation, leberative prescription, rules of extinction by non-use and the like), like a sort of gravitational force towards the reunification of complementary rights that ought to be held by a single owner (*idem*, *ibidem*, pp. 586-587, 589); (*iii*) legal rules or judicial discretion normally verified against the proliferation of entitlements protected under property rules (*e.g.*, the *numerus clausus* principle on real property), or against property rules in the context of enforcing non-conformity property arrangements (*idem*, *ibidem*, pp. 587-588). On the definition and the construction of the concepts of property rules, liability rules and inalienability rules, *see* GUIDO CALABRESI & DOUGLAS MELAMED, "Property rules, liability rules, and inalienability: one view of the cathedral" *in Harvard Law Review*, v. 85, no. 6 (Apr., 1972), pp. 1089-1128.

[27] BUCHANAN & YOON themselves acknowledge that such perfect symmetry holds in their model only in the case of linear demand; whenever productivity curves are concave, exact symmetry does not hold (JAMES M. BUCHANAN & YONG J. YOON, "Symmetric tragedies: commons and anticommons" *cit.*, p. 8, footnote no. 6). The setting of perfect symmetry is also posited by FRANCESCO PARISI, NORBERT SCHULTS & BEN DEPOORTERE, "Duality in Property: commons and anticommons" in *International Review of Law and Economics*, v. 25, no. 4, (2005).

[28] *See* SVEN VANNESTE, ALAIN VAN HIEL, FRANCESCO PARISI & BEN DEPOORTER, "From 'tragedy' to 'disaster': welfare effects of commons and anticommons dilemmas" in *International Review of Law and Economics*, vol. 26, no. 1, March 2006, p. 117. In this paper, the authors report two empirical studies that presented equivalent

are put forward: anticommons dilemmas seem normally framed by individuals as *selling problems* rather than *sharing problems*, and that owner prerogatives under the anticommons setting are more perceived as protection of their entitlement; in this sense, anticommons owners seems to perceive no harm in fully exercising their property rights even if third parties suffer, while commons users realize more clearly they were allowed to jointly use a resource and that overexploiting it could cause economic harm to others; ambiguities in accurately identifying the future implications of anticommons dilemmas are also remembered as possible explanations, in the sense that people more readily understand the possible exhaustion of a common good in the long run in case of excessive exploitation[29].

Even though the welfare effects may not be perfectly symmetrical, it is indeed possible to see the commons and anticommons problems under an *unified framework of property*, with the important caveats that legal solutions would take different forms in each problem, and that possible welfare losses on the neglected -- and perhaps less visible -- anticommons side could be rather large.[30]

This latter remark is especially clear when it comes to *intellectual property rights*, which are *non-rival goods*, and hence, a resource non depletable by its nature. This indicates that some provisions on collective management and collaboration of copyright holders set forth in Law no. 9,610/98 and Law 12,853/13 make perfect sense; they are legal devices created to mitigate the otherwise daunting transaction problems that would arise for individual negotiations when property on complements is fragmented among several holders.[31] Other

situations in all respects but the type of dilemma (*i.e.*, the rules governing property rights under a commons regime and under an anticommons regime), in order to assess whether a significant difference in behavior occurs (which should be attributed to the manipulated variable). The first experiment shows that participants demanded a higher amout of money for resources within and anticommons property regime than they take from the similar resource in a commons regime (*idem ibidem*, pp. 108-112). The second experiment shows that participants under an anticommons regime request an amount higher than the sale price to be certainly agreed by the purchaser (which is akin to underuse of the good), while the participants in the commons regime request an amount higher than the sale price for certain replenishment of the resource (which is akin to overuse of the good); however, bids in the anticommons situation was significantly higher that the bids in the equivalent commons situation (*idem ibidem*, pp. 112-116).

[29] SVEN VANNESTE, ALAIN VAN HIEL, FRANCESCO PARISI & BEN DEPOORTER, "From 'tragedy' to 'disaster': welfare effects of commons and anticommons dilemmas" *cit*., p. 117.

[30] BUCHANAN & YOON make a rather accurate remark on the statement on the importance of the breakthrough of HELLER: *"Anticommons is a useful metaphor for understanding how and why potential economic value may disappear in the 'black hole' of resource underutilization, a wastage that may be quantitatively comparable to the overutilization wastage employed in the conventional commons logic"* (JAMES M. BUCHANAN & YONG J. YOON, "Symmetric tragedies: commons and anticommons" *cit.*, p. 2).

[31] As well illustrated by PARISI, SCHULTS & DEPOORTERE: "[W]*hen considering the optimal choice of rules and the optimal structure of remedies, legal systems take into account these asymmetric costs and select rules designed to minimize the total deadweight losses of dysfunctional fragmentation.* [...] *The presence of one-directional transaction and strategic costs necessitates a relatively more liberal use of property-type remedies in favor of non-fragmented owners, while justifying a limited liability-rule protection in favor of fragmented or dysfunctional right holders. The different protection is justified by the fact that the unified owner faces no strategic impediments when deciding among alternative uses of his property (or when internally reallocating his resource). Conversely, fragmented and dysfunctional owners face transaction impediments that necessitate the use of liability-type remedies. The selective use of legal remedies can this be analogizes to a lubrication mechanism to overcome anticommons and persisting fragmentation in property. These legal mechanisms promote the reunification of rights and privileges that, given their complementarity, should naturally be held by a single owner (re)generating the natural conformity between complementary attributes of a right (e.g., between use and exclusion rigts)"* (FRANCESCO PARISI, NORBERT SCHULTS & BEN DEPOORTERE, "Duality in Property: commons and anticommons" *cit.* p. 588 and 590).

provisions, on the other hand, may create new instances of the anticommons problems, such as inserting a public authority and granting it full supervision on the fees to be negotiated for licensing, which may be similar to including a new veto player, with a somewhat very different objective function. We address these and other policy issues in the following section.

4. Antitrust assessment, efficient pricing and policy discussions.

BUCHANAN & YOON take direct reference on the Cournot-Nash competitive *equilibria* to discuss the symmetry of the commons and anticommons problems; but differently from fierce competition in the market for ordinary goods, efficient implications are "*diametrically different*" when it comes to competition from different holders of property rights upon one single product (*i.e.*, the anticommons setting).[32]

This circumstance poses an important question to the traditional antitrust rationale concerning cooperation among competitors: different from the ordinary context, under which it is well established a presumption that harmonized behavior by competing enterprises leads to negative net effects in the market, cooperation may have important economic efficiencies under excessive fragmentation of property rights, efficiencies that should not be disregarded. Therefore, antitrust assessment of contacts and/or cooperation among competitors under excessive fragmentation of property rights should be pursued under a full *rule of reason* approach, and never under the abbreviated *per se* approach.

Such division between the *per se* and the rule of reason approaches originates from the North-American tradition, and even under this jurisdiction has been termed several times as exaggerated: rather than a dichotomy, these approaches are more of the two opposite ends of a single continuum for *"measuring the reasonableness of the challenged conduct"*[33]. They are actually methodological rules on which *amount of information* is necessary before reaching a conclusion that a challenged behavior has negative effects and, therefore, is a breach of the antitrust law[34]. Resorting to the *per se* rule -- normally applied to hardcore practices, such as price-fixing cartels and the like -- does not mean that the practice is punished irrespective of its effects, but that such kinds of behavior are almost always detrimental to competition that there is no need to conduct further inquiries before passing judgment on the matter once the facts are well established. The legal meaning of the *per se* and rule of reason approaches is that they are *standards of antitrust investigation*, and not different kinds of *anticompetitive behaviors*[35].

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[32] "[With inter-firm rivalry], *optimality is attained when net rents are zero, when firms are forced by competition to allow consumer-buyer to secure all potential surplus. In the common* [and the anticommon] *setting, by contrast, optimality is attained when net rents are maximized. Competition among users, on the one hand, or among excluders, on the other, tends to reduce rents as in the inter-firm model, but, instead of reflecting transfers of value to consumer-buyers, such rent reductions represent destruction of value. Fully 'competitive' equilibrium is in either the commons model the pessimal rather than the optimal result"* (JAMES M. BUCHANAN & YONG J. YOON, "Symmetric tragedies: commons and anticommons" *cit.*, p. 10).

[33] *See* ABA, *The rule of reason*, ABA Antitrust Section – Monograph 23, 1999, p. 9.

[34] *See* HERBERT HOVENKAMP, *Federal antitrust policy: the law of competition and its practice*, West Group, 1999, pp. 251-252.

[35] *See* LUIS FERNANDO SCHUARTZ, "Ilícito antitruste e acordos entre concorrentes" in *Ensaios sobre economia e direito da concorrência*, MARIO LUIS POSSAS (org.), Singular, p. 117. LUIS FERNANDO SCHUARTZ also correctly points to the wrong conception that the Brazilian law would not allow for a *per se* approach (*idem ibidem*, pp. 115-116). In fact, Brazilian law states that are antitrust violations, subject to strict liability rules, any act that had the potential effects (even if not actually produced) to: (i) limit, distort or harm free competition and free

HELLER & EISENBERG show some doubts on the possibility of private contracting and free market to overcome the anticommons problem; they acknowledge that some institutions can emerge as solution to cope with this issue; among such solutions, they expressly refer to *collective management of copyrights* in the music industry, and to the creation of *patent pools* in the automobile, aircraft manufacturing and synthetic rubber industries; they also comment the hostile approach of the antitrust enforcers against the aircraft patent pool in 1975 as a possible deterrent of such cooperative (yet transaction-cost-reducing) devices.[36]-[37] Another particularly interesting market solution was *source-licensing* from the US motion picture industry to movie theaters, emerged from a consent decree in an antitrust litigation: in 1948, the courts found that the collective licensing was illegal under the antitrust law, and copyrights holders had to abandon and replace it for source-licensing (*i.e.*, contracting a bundle o rights that allowed the producer of the movie to not only to use the copyrighted material, but also to publicly perform it afterwards and also authorize third parties to do so).[38]

ARIEL KATZ, who is much more confident in competitive market solutions and way more skeptical towards collective management, acknowledges the anticommons issue as one of the serious matters for collective management. In a series of two papers addressing the matter, he critically assesses the natural monopoly argument usually proclaimed for collective management of copyrights, and concludes that the efficiencies that emerge from the practice may have been overstated; further inquiry and research should be conducted to ultimately determine whether these efficiencies really outweigh the costs, especially in light of the new digital technologies[39]. KATZ addresses the polar -- and extreme -- case of a total monopoly in

enterprise; (ii) dominate relevant markets; (iii) arbitrarily increase profits; (iv) abuse of a dominant position (*see* Law 12,529/11, art. 36). Need for anticompetitive effects, even if potential is indeed required for verifying an offense according to the relevant statute; but the Brazilian antitrust practice has always resorted to an abbreviated scrutiny for hardcore cartels, under the argument that the negative effects of such practices are so hazardous and so certain to be produced that they could be assumed as verified under a rebuttable presumption.

[36] MICHAEL A. HELLER & REBECCA S. EISENBERG, "Can patents deter innovation? The anticommons in biomedical research", *cit.*, p. 700: *"Even when upstream owners see potential gains from cooperation and are motivated to devise mechanisms for reducing transaction costs, they may be deterred by other legal constrains, such as antitrust law. Patent pools have been a target of antitrust scrutiny in the past, which may explain why a few, if any, exist today. Although antitrust law may be les hostile to patent pools today than in 1975 when a consent decree dismantled the aircraft patent pool, the antitrust climate changes form one administration to the next. Even remote prospect of facing treble damages and injunction may give firms pause about entering into such agreements"*. On the antitrust litigation against the aircraft patent pool, *see U.S.* v. *Manufacturers Aircraft Assn.*, 1975 U.S. Dist. LEXIS 15333; 1976-1 Trade Cas. (CCH) ¶ 60,810 (S.D.N.Y. 1975); GEORGE BITTLINGMAYER, "Property rights, progress, and the aircraft patent agreement", *in Journal of Law and Economics*, v. 31, no. 1 (Apr., 1988), pp. 227-248.

[37] On the similarities and differences of treatment of antitrust on the matters of patent pools and copyrights collectives, *see* NANCY GALLINI, "Competition policy, patent pools and copyrights collectives, in *Review of Economic Research on Copyright Issues*, v. 8, no. 2, pp. 3-34.

[38] *See Alden-Rochelle, Inc., vs. ASCAP*, 888 F. Supp. 80 (S.D.N.Y. 1948); *M. Witmark & Sons vs. Jensen*, 843 F. Supp. 80 (D. Minn. 1948), appeal dismissed, 177 F.2d 515 (8th Cir. 1949). Equivalent efforts to mandate source licensing were also attempted in the cable TV industry, but the results were somewhat inconsistent: *see Buffalo Broadcasting Co., Inc. vs. ASCAP*, 744 F.2d 917, 928-32 (2nd Cir. 1984), where the courts decided that cable stations did not prove the anticompetitive effects of the blanket license; *Broadcast Music, Inc. vs. Hearst/ABC Viacom Entertainment Services*, 746 F. Supp 320 (S.D.N.Y. 1990) the courts stressed that if the blanket license created disincentive for copyrights holders to source-license their performing rights, it might be anticompetitive.

[39] ARIEL KATZ, "The potential demise of another natural monopoly: rethinking the collective administration of performing rights, in *Journal of Competition Law and Economics*, v. 1, no. 3, 2005, *passim* but especially pp. 534 and 590-593; ARIEL KATZ, "The potential demise of another natural monopoly: rethinking the collective

the management of copyrights as the alleged most efficient solution, and even under a very skeptical position against collective management, he accepts that the anticommons issue is in fact one that *could* lead to monopoly as the most efficient solutions, along with enforcement costs.[40]

> *"The tragedy of the anticommons framework seems to offer a potentially persuasive foundation for a justification of collective management of performing rights. However, closer examination revels that although in theory fragmented rights may lead to inefficiencies and result in underuse, on many occasions the market can overcome these problems or could have overcome them if PROs did not exist. Although it is not impossible that in some cases collective administration would be the optimal solutions, it seems that further investigation should be made in order to determine whether such cases are general phenomenon so that collective administration should be the general rule, or whether the case for collective administration exists only in some special and narrow circumstances."* (ARIEL KATZ, "The potential demise of another natural monopoly: rethinking the collective administration of performing rights *cit*., p. 569)

As far as a "lighter" version of collective management is concerned, that allows more collaborative efforts among copyrights holders but not reaches a total monopoly, KATZ clearly follows the ruling of the United States Supreme Court in *Broadcast Music, Inc., vs. Columbia Broadcasting System, Inc.* (441 U.S. 1 (1979)), termed as good law and good economics[41]: asked whether the joint setting of a blanket license from collective entities of copyright holders was equivalent to a price fixing scheme -- and therefore *per se* illicit --, the court responded negatively; since there were considerable efficiencies involved, a more thorough *rule of reason* approach was required for antitrust assessment.

Some circumstances played a key role in the assessment by the US Supreme Court, such as the fact that (*i*) the collective management organizations held *non-exclusive rights* (meaning that copyright holders could license its rights directly, and contest the market power of the organization); (*ii*) copyright holders could create new collective management organizations, and (*iii*) consent decrees issued in prior antitrust litigations compelled the issuance of alternative *per-program* and *per-segment* licenses as truly and genuine alternatives to the overall blanket license[42]. This means that one should pay especial attention to details, and there is no quick answer: a deep inquiry must be conducted in order to

administration of performing rights, in *Journal of Competition Law and Economics*, v. 2, no. 2, 2005, *passim* but especially pp. 245-247 and 282-284.

[40] ARIEL KATZ, "The potential demise of another natural monopoly: rethinking the collective administration of performing rights *cit*., p. 591: *"I have nevertheless identified two elements that may support a theory of natural monopoly. One is enforcement* [of copyrights], *which is considerably less costly when done collectively and the other is the potential tragedy of the anticommons that might, in specific circumstances be avoided by PRO* [Performing Rights Organizations]. *In both cases, only further empirical analysis can determine whether the cost savings are really so significant that monopoly is more desirable than competition and whether the solutions such as source-licensing could be applied"*.

[41] ARIEL KATZ, "The potential demise of another natural monopoly: rethinking the collective administration of performing rights *cit*., pp. 578-579, 581.

[42] ARIEL KATZ, "The potential demise of another natural monopoly: rethinking the collective administration of performing rights *cit*., p. 591: *"I have nevertheless identified two elements that may support a theory of natural monopoly. One is enforcement* [of copyrights], *which is considerably less costly when done collectively and the other is the potential tragedy of the anticommons that might, in specific circumstances be avoided by PRO* [Performing Rights Organizations]. *In both cases, only further empirical analysis can determine whether the cost savings are really so significant that monopoly is more desirable than competition and whether the solutions such as source-licensing could be applied"*.

understand the actual efficiencies emerging from cooperation among competitors, and only afterwards a final ruling on the legality of the practice can be taken, after all positive effects are accounted for and the negative effects are offset.

One final chapter to complete the discussion lies in distinguishing the market effects under the cases of *complementary* and *substitute* copyrights: welfare effects associated to collective management depends critically on the nature of the rights in question, with price-coordination and monopolistic pricing resulting in an improvement in terms of social and private welfare only when copyrights are perfect complements, but resulting in losses when copyrights are perfect substitutes[43]. PARISI & DEPOORTERE show that strategic pricing by independent sellers does not consider the negative effects each one impose to the other, an interaction that leads to quite opposite results depending on the nature of the goods: if they are complementary, both producer and consumer surplus are increased by price coordination or monopoly pricing; if they are substitute goods, only producer surplus is increased by price coordination or monopoly pricing.[44]

This means that collective and cooperative managements of copyrights are in fact ambiguous: if the copyrights are in a relationship of complementarity, the competitive Nash equilibrium would generate an anticommons pricing problem, making society and the copyrights holders worse off: equilibrium pricing will be the outcome of a prisoner's dilemma that individual holders of complementary copyrights face when acting independently, and which results in both private and social inefficiencies; however, if copyrights are substitutes, then cooperation will be optimal only from the standpoint of copyrights holders: the prisoner's dilemma that individual holders of substitute copyrights face acting independently is detrimental to their profits but is socially more efficient.[45] That is why non-exclusivity of the collective management entities and the possibility of competing source licensing is important; such prospects of competition would have no impact in the case of complements since copyrights holders have no interest or incentive to deviate (they cannot demand more than their share in the joint license and would not demand less); however, competition from direct licenses or source licenses could drive prices down, for copyrights holders may have incentives to unilaterally deviate and undercut license prices to gain more fees.[46]

Naturally, the extreme cases of strict complementarity and strict substitutability are endpoints of a continuum of the several and more realistic less-than-perfect complements.[47]

[43] *See* FRANCESCO PARISI & BEN DEPOORTER, "The market for intellectual property: the case of complementary oligopoly" in *The Economics of Copyrights*, WENDY GORDON & RICHARD WATT (coords.), Edward Elgar, Cheltenham, 2003, pp. 162-175.

[44] *See* FRANCESCO PARISI & BEN DEPOORTER, "The market for intellectual property: the case of complementary oligopoly" *cit.*, pp. 162-167 and 173. The original result was first demonstrated by COURNOT (*see* ANTOINE COURNOT, *Reaserches into the mathematical principles of the theory of wealth*, Macmillan, 1927), yet PARISI & DEPOORTER show that overall price and overall deadweight loss are increasing in the number of independent players selling the complementary products (*idem ibidem*, pp. 166-167). On another paper in the subject, DEPOORTER & PARISI defend that deadweight losses from concurrent protection of copyrights increase monotonically with the number of independent sellers (*see* BEN DEPOORTER & FRANCESCO PARISI, "Fair use and copyright protection: a price theory explanation" in *International Review of Law and Economics*, v. 21, no. 4, pp. 453-473, May 2002).

[45] *See* FRANCESCO PARISI & BEN DEPOORTER, "The market for intellectual property: the case of complementary oligopoly" *cit.*, pp. 168-169, and 170-171.

[46] *See* FRANCESCO PARISI & BEN DEPOORTER, "The market for intellectual property: the case of complementary oligopoly" *cit.*, p. 171.

[47] *See* FRANCESCO PARISI & BEN DEPOORTER, "The market for intellectual property: the case of complementary oligopoly" *cit.*, pp. 167.

And as far as copyrights are concerned, complementarities could emerge in several and perhaps unknown forms: even if several artists compete with each other to some extent, their music and performances may well be regarded as complements by radio stations, TV channel and nightclubs, which normally require diversity both *within* and *across* genres and performances[48]. This is why complementarities are much more prominently required in patent pools for their acceptance, while it is fairly accepted that somehow substitute copyrighted works are comprised in licit copyrights collectives[49]. The normally elevated numbers of copyrights holders and the multitude of licenses demanded by several users may also create a particularly dense *copyright thicket*, which justify transaction costs savings in collective contracting for copyrights (when compared to the costs of direct licensing) that may not be verified in patent pools[50].

Another very interesting example of efficiency gains in collectives of copyrights was discussed by NANCY GALLINI: the collective organization may be a *commitment device* when consumers must incur in set-up or switching costs and may be worried of future opportunistic behavior after the sunk investment is done; the open source (OS) initiative is an interesting application, and OS organizations can be understood as copyright collectives since they need their copyrights protected in order to enforce their open source General Public Licenses.[51] By contributing software essential to the OS project may be a commitment strategy in order to assure consumers and suppliers of complements (applications) will not be held up by the proprietary holder of the licensed right after the irreversible investment is made[52].

The case for sole supply of the blanket license by the collective organization is definitely not clear in terms of social welfare: by tying all the licenses into a single product, the collective management entity may be able to shield its market power against competition from individual licenses and sustain a monopoly price that may not be socially desirable; and even if bundling have efficiencies for the complementary goods, such justifications cannot be used to exclude the availability of other types of licenses *in addition* to the blanket license[53].

Of course, some level of competition could create positive welfare effects. Working under the framework of significant economies of scale and of scope in enforcement and management of copyrights, BESEN, KIRBY & SALOP show that allowing a closed monopolist collective organization (*i.e.*, an entity which can limit the access of copyright holders to it) would result in restricted output, since the optimum production of copyrighted works would be beyond the point that maximizes revenues per member of the organization[54]. In a not so unexpected result, existence of several competing closed collective organizations would improve the situation: license fees are pressured towards the costs of creating the protected work plus the administration costs of the entity, and productions could also tend a more

[48] *See* NANCY GALLINI, "Competition policy, patent pools and copyrights collectives, *cit.*, pp. 12-13.
[49] *See* NANCY GALLINI, "Competition policy, patent pools and copyrights collectives, *cit.*, pp. 11-13, 16 and 28.
[50] *See* NANCY GALLINI, "Competition policy, patent pools and copyrights collectives, *cit.*, p. 12.
[51] *See* NANCY GALLINI, "Competition policy, patent pools and copyrights collectives, cit., p. 25, footnote 34; *See* also FRANCOIS LEVEQUE & YANN MÉNIÈRE, "Copyright versus patents: the open source software legal battle" in *Review of Economic Research on Copyright Issues*, v. 4, no. 1, pp. 21-46, 2007, who argue that *"intellectual property law is at the heart of open source model since licenses that organize the innovation and business relationships between developers, distributors and end-users are based on copyright law."* (*idem ibidem*, p. 45)
[52] *See* NANCY GALLINI, "Competition policy, patent pools and copyrights collectives, *cit.*, p. 25-27.
[53] *See* FRANCESCO PARISI & BEN DEPOORTER, "The market for intellectual property: the case of complementary oligopoly" *cit.*, pp. 172-173.
[54] STANLEY M. BESEN, SHEILA N. KIRBY & STEVEN C. SALOP, "An economic analysis of copyright collectives" in *Virginia Law Review*, v. 78, no. 1, (Feb., 1992), pp. 393-394.

efficient level; government regulation could still be required, BESEN, KIRBY & SALOP claim, because there may be barriers to entry, economies of scale and sunk costs that would keep supra-competitive profits[55]. They also posit that existence of individually negotiated licenses (*i.e.*, not allowing exclusivity for the collective organization) also has equivalent results: the individual licenses cannot affect the efficiency benefits stemming from the blanket license, but would allow users to retain some part of its surplus, and output restrictions would also be less significant, with production tending to a level closer to efficient production[56].[57]

An interesting set of policy question can now be discussed: what would be the best private pricing decision, and how to address the adverse effects of the best rational pricing decision of a monopolist collective organization. What is interesting to stress upfront is that *information goods* have vey large fixed *costs of production*, but rather small -- if any -- *costs of reproduction*; it takes a lot of investment and effort to produce the original work, but each subsequent copy can be produced under very negligible costs (*e.g.*, in the music industry, to compose and record the original song may consume a lot of money and effort, but once the master is ready, to burn additional CD or create digital files will entice almost no cost at all). In that context, cost-based pricing makes little sense, and value-based pricing makes much more sense from the economic rationality of the supplier[58]. Such value-based pricing would, most likely, entice some kind of price discrimination in order to collect the differential willingness to pay (*i.e.*, perception of value) from different group of consumers.

In an interesting paper, WALTER OI shows that a single-price tariff is not the best rational choice for a monopolist, who would rather set a discriminatory two-part tariff composed of a lump sum tax, equivalent to the consumer surplus -- and different across the different kinds of consumers --, and a variable price per unity sold, equivalent to the marginal cost of production and equivalent to all customers[59]. When this is not feasible, perhaps due to antitrust concerns, a rational monopolist could then resort to a second best alternative: a non-discriminatory two-part tariff, which poses the additional difficulty in determining the optimal number of consumers to be serve, but also yields more profits than a single-price tariff; in this second best solution, it may happen that profits are maximized by forcing small consumers out of the market, by setting a uniform lump sum tax that is above their willingness to pay (but more than compensate the foregone profits), and charging a variable price per unit sold above the marginal cost, but smaller than the monopoly price (however, customers would spend a larger portion of their budgets than in single price monopoly, since they would have to pay the lump sum tax for the privilege to purchase)[60]. Aside redistribution effects -- which

[55] *See* STANLEY M. BESEN, SHEILA N. KIRBY & STEVEN C. SALOP, "An economic analysis of copyright collectives" *cit.*, 403-404.
[56] *See* STANLEY M. BESEN, SHEILA N. KIRBY & STEVEN C. SALOP, "An economic analysis of copyright collectives" *cit.*, 407-410.
[57] For some critical remarks on the paper of BESEN, KIRBY & SALOP, *see*: PAUL GOLDSTEIN, "Commentary on 'An Economic Analysis of Copyright Collectives'", in *Virginia Law Review*, v. 78, no. 1, (Feb., 1992), pp. 413-415; WILLIAM R. JOHNSON, "Commentary on 'An Economic Analysis of Copyright Collectives'", in *Virginia Law Review*, v. 78, no. 1, (Feb., 1992), pp. 417-419.
[58] *See* HAL VARIAN, "Versioning Information Goods" *Digital Information and Intellectual Property*, Harvard University, January 23-25, 1997, p. 1.
[59] *See* WALTER Y. OI, "A Disneyland dilemma: two-part tariffs for a Mickey Mouse Monopoly" in *The Quarterly Journal of Economics*, v. 85, no. 1 (Feb. 1971), pp. 78, 80-81. This situation leads to Pareto optimality and an efficient outcome, but does not solve the problems of distributional effects: *"there is nothing in economic theory that allows us unambiguously to compare one Pareto optimum to another"* (*idem ibidem*, p. 81).
[60] *See* WALTER Y. OI, "A Disneyland dilemma: two-part tariffs for a Mickey Mouse Monopoly" *cit.*, 84, 86-87.

are blatant --, the discriminatory two-part tariff would be the profit maximizing decision that yields the highest efficiency (Pareto optimality), followed by the uniform two-part tariff as the intermediary situation, and then followed by the ordinary single price monopoly that entices the greatest efficiency loss.

In the context of copyrights licensing, it is easy to see that a blanket license based only on the turnover of the licensee would be the gross approximation of the highest efficiency discriminatory two-part tariff: under negligible reproduction costs, and if one considers that the total utility derived by an entrepreneurial licensee is somehow based in the profits earned in its business activities, the optimal price could be proxied as a percentage of the total turnover, irrespective of the number of reproductions on the collective repertoire. Even though highly redistributive, this allows for broader dispersion of the protected works, which are reproduced under marginal price closest to the actual marginal costs; this would then tend to increase output, even though consumers would retain almost nothing of their surplus.

How to address the important issue of protecting consumer surplus? Regulatory oversight (either via specialized regulatory body or via *ad hoc* intervention by the antitrust agency on pricing decisions) does not seem the best solution. This would not only keep pricing decisions farther from the efficient level, but would also create a new instance of the anticommons problems, which would aggravate the problem: by inserting a public authority and granting it full supervisory powers on the fees to be negotiated for licensing is equivalent to including a new veto player in the transaction, and one with a somewhat very different objective function.

Perhaps the best policy towards copyrights licensing (collective or otherwise) would be to review and conduct a deep policy discussion on the underpinnings of the problem: does the *length* of copyright protection make sense? Does it properly balance the dynamic efficiencies of incentives to create new intellectual goods and the associated inefficiencies (restriction to access once the work is already created) and the occasional unintended redistributive effects? Said in a different way: if the copyright holder will be allowed to pursue the optimal private profit maximizing pricing decision, what is the *proper* term for protection to be granted by the law (*i.e.*, the term that allows the copyrights holder to recoup all his investments, but which will not endure protection longer than that)?

If antitrust intervention is to be adopted in the matter of collective management of copyrights, the most successful measure seams to be *mandatory unbundling of licenses* as true and genuine alternatives to the overall blanket license, and not to regulating prices in a case by case basis. Naturally, other forms of *exclusionary behavior* (*e.g.*, exclusivity clauses, raising rivals costs, and the like) would be definitely subject to full antitrust scrutiny, as in any other business activities.

5. Conclusions

There is one really main conclusion: serious ambiguities exist concerning the welfare effects of collective management and other kinds of cooperative behavior among holders of copyrights. Such difficulties cannot be resolved in the vacuum and will require deep inquiry,

either on a case-by-case antitrust scrutiny under the rule of reason, or on further empirical research on the proper trade-offs involved in collective contracting and cooperation.[61]

Severe fragmentation of copyrights in the hands of several holders, who can individually hold up the regular licensing of the whole protected work creates a serious anticommons setting where joint contracting or cooperative behavior could have non-negligible positive economic effects. Antitrust assessment of such practices should be careful and unbiased, and should be conducted under a full rule of reason approach. Regulatory oversight, always remembered as a possible alternative solution, may not be as costless as expected: inserting a public authority and granting it full supervisory powers on the fees to be negotiated for licensing means to include a new veto player in the transaction, and one with a somewhat very different objective function, which would create a new instance of such anticommons problem.

Since marginal costs of reproduction are negligible after the protected work has been created, setting a single lump-sum price for the whole catalog under a blanket license, based on the expected surplus of each customer, would be the expected to be an efficient pricing, although with redistributive issues. However, there seems to be no reasonable justification not to provide additional (partial or somehow limited) licenses other than the sole blanket license; therefore, mandatory unbundling of such additional licenses as true and genuine alternatives seems a much more sensible approach than regulating prices in a case by case basis.

If exploratory pricing for copyrights licenses (collective or otherwise) is the policy issue, perhaps the best attitude would be to address the underpinnings of the problem directly, and respond the following two questions: Does the length of copyright protection make sense? If the copyright holder will be allowed to pursue the optimal private profit maximizing pricing decision, what term for protection allows him solely to recoup his investments? These are mainly empirical questions claiming for a deeper inquiry.

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[61] An overall conclusion that much empirical research is still needed in copyrights is provided by IVAN P. L. PNG, "Copyright: a plea for empirical research" in *Review of Economic Research on Copyright Issues*, 2006, v. 3, no. 2, pp. 3-13.

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