

LICENSING: A CONCEPTUAL FRAMEWORK FOR EU GUIDANCE TO THE MEMBER STATES^{*}

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Abstract

This memo intends to identify and link together a number of crucial topics concerning the licensing for the purpose of re-use of Public Sector Information under the Directive 2003/98/EC on the re-use of public sector information (the PSI Directive) and in connection with the draft Proposal for a Directive amending the Directive unveiled December 2011. The purpose of the document is threefold: *first*, to assist in the design of exercises concerning PSI licensing that might be launched in the near future, such as the preparation of a multi-level conference on the issue, aimed at bringing together stakeholders, scholars, the open data community, policy makers and the general public; *second*, to provide the conceptual terms of reference for the setting up of research projects, thematic networks or other cooperative initiatives in the area; and *third* to prepare the ground for the discussion of possible components of guidance by the Commission to the Member States in specific connection with “recommended licensing conditions and formats” as provided by Recital 18 of the draft Proposal.

1. Methodology

This memo, while building on the state of the art of the current debate, including the LAPSI contribution to it (Discussion Paper No 4),¹ intends to focus on unsettled issues and to give priority to the difficulties and complexities which arise when the licensing of PSI is looked at from different perspectives.

The methodology followed in this memo is to a large extent different from the one adopted in the parallel memo drafted on charging policy.² The inquiry there adopted a *horizontal approach*, in that it was based on the identification of separate sets of legal, economic and “other” issues and on the interaction among those components.³ Here a *vertical component* is added to the analysis, based on the idea that the very notion of “licensing” may turn out to be in need of a thorough reconceptualization when applied to PSI. In this respect, the assumption that “licensing” concerning PSI is just an expansion or extension of the notion that has been used for a long time in connection with Intellectual Property Rights (IPRs) will be subjected to scrutiny. Therefore a first, more traditional part of the document will follow the pattern of the first memo and will therefore be devoted to the identification of the relevant sets of questions and to the spelling out of their reciprocal interactions (chapter 2); a second part will be devoted to exploring whether and how the

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¹ LAPSI, 2011, 'The “licensing” of Public Sector Information', *Informatica e diritto*, 2011, pp. 129-146, <http://www.lapsi-project.eu/lapsifiles/LAPSI-Position_paper-Licensing-adv_draft.pdf>.

² LAPSI, 2012, 'Charging Policy: A Conceptual Framework for EU Guidance to the Member States', <http://www.lapsi-project.eu/lapsifiles/lapsi_charging_conceptual_framework.pdf>.

³ LAPSI, 'Charging Policy: A Conceptual Framework for EU Guidance to the Member States', quoted above at note 2, §§ 3-4.

notion of license as applied to PSI is in need of reconceptualization (chapters 3-12) and to spell out the implications this reconceptualization may have on the way we look at the traditional issues (chapters 13-14). A Conclusion will follow.

2. An Inventory of Open Legal Issues

The current list of legal issues concerning PSI licensing⁴ includes:

- a) the relationship between IPRs and licensing, including consideration of IPRs as a basis for licensing and the interplay between the goals of IPR protection and licensing;
- b) the determinants of the choice between a transactional and a non-transactional approach in allowing PSI re-use;
- c) the role of public domain dedication as an alternative to PSI licensing;
- d) standard licenses and electronic formats;
- e) the alternative between open and non-open, commercial and non-commercial licenses for PSI;
- f) the controversial role of share alike clauses in the PSI context;
- g) the complications arising when licensed PSI includes data bases and/or individual data;
- h) the question whether PSI licenses should be “coupled” or “decoupled” from obligations to be undertaken by re-users to respect data protection rules;⁵
- i) the identification of other contractual undertakings which may re-users may be required to give (e.g. in view of preserving the quality of the data);⁶
- j) the steps required to make sure that public sector bodies holding PSI (PSIHs) obtain upstream, from their employees or independent providers, title over data, data sets and documents which seamlessly fits the rights granted downstream by the same PSIHs to their re-users;
- k) openness, standardization and interoperability of the different license sets;
- l) the available alternatives in licensing terms, including national “official”, top down licenses, such as the UK Open Government License and the French License Ouverte, and bottom up licenses, such as CC and Open Data Commons Licenses;
- m) the institutional design within which licensing decisions are taken and reviewed, including the coordination between Member States Public Administrations⁷ and the inquiry on the appropriateness of one-size-fits all rules, which in this case links to the choice among the alternatives referred to in lett. l. above.

It is submitted that further insights might be gained by a closer look at several other less debated topics.

⁴ See e.g. LAPSI, 2011, 'The “licensing” of Public Sector Information', quoted above at note 1, par. 3 where references. The list presented here builds on that discussion paper.

⁵ On this specific issue see MORANDO, F. 2012, *Ad Hoc Licenses, Dominant License Models and (the Lack of) Interoperability*, slides 12, 19-21 presented at the LAPSI Budapest conference of 22-23 March 2012, <http://www.lapsi-project.eu/lapsifiles/2011_10_21-budapest-morando-legal_interoperability.pdf>.

⁶ Also feedback by re-users (in form of updates, data correction and the like) to the PSIH may be considered; the question here is whether the matter should be dealt with in a license clause or by other means (e.g. as an option which the PSIH unilaterally gives to the re-user by a feature of its website).

⁷ As required by EUROPEAN COMMISSION, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions *A Digital Agenda for Europe*, Brussels, 19.05.2010 Com (2010) 245, 15.

- a) These should include the issue of “backfiring”: the question whether licensing policies, which may be recommended in view of their re-user friendliness (e.g. in connection with the issue referred to in lett. h. above) and their anticipated positive impact on dissemination of PSI, may in fact entail costs, risks or other burdens on PSI holders and therefore have a negative impact on the decision of the same PSI holders to make PSI accessible to begin with.
- b) Also a fresh look at the relationship between IPRs and licensing in the specific field of PSI re-use might help, particularly if it extended to considering the fundamental questions. Thus, we should look much more closely than it is usually done at the issue raised by Recital 22 of the PSI Directive, which states: “*The Directive does not affect the existence or ownership of intellectual property rights of public sector bodies, nor does it limit the exercise of these rights in any way beyond the boundaries set by this Directive...Public sector bodies should, however, exercise their copyright in a way that facilitates re-use*”. How can this wish of the EU legislature be fulfilled? More specifically, it should be asked whether, taking for granted the European approach whereby PSI is IP-protected, licensing is the appropriate private ordering tool whereby the restrictive potential of IP exclusivity is from time to time corrected and fine tuned and, if and to the extent necessary, turned on its head by enabling “re-opening” in view of re-use what IP has restricted and closed to begin with.⁸

The PSI licensing issues just referred to, which we may here for the sake of convenience lump together as “standard legal issues”, do not come in a vacuum. To look at them we should adopt a multi-level approach, considering that their appreciation requires at a minimum taking into account *three other legal dimensions and a technological one*.

In a legal perspective, it should be noted first that the PSI Directive is based on the goal of fostering the emergence of EU-wide, cross-border information services; therefore the principle of *freedom to provide services* as enshrined in Artt. 56 ff. of the Treaty on the Functioning of the European Union (TFEU) is due to play a crucial role.

Second, it is well established that *competition law* is relevant to PSI licensing in several ways.⁹ Art. 8(1), in dealing with re-use conditions, provides that “*these conditions shall not unnecessarily restrict possibilities for re-use and shall not be used to restrict competition*”. The Directive additionally mandates that conditions for re-use should *not* be *discriminatory* (Recital 19; Art. 10). Exclusivity is in principle banned (Art. 11). It is therefore submitted that already under the original design of the Directive, the principles governing licenses for re-use of public sector information were intended to be consistent with the quest for economic efficiency as embodied in competition law principles; that these Directive’s far-reaching rules embodying competition law principles were intended to relieve re-users of the costs of enforcing competition law rules directly; that this duty of consistency can at no time be called into question, and that these principles hold even more true in connection with the currently proposed review of the rules, as compliance with Artt. 101, 102 and 106 TFEU is mandated by directly applicable primary EU law.

The above list of questions leads to the *third level: subsidiarity*. One can imagine here the starting point: what is the legal basis for EU action in this area and its limit? What is the level of sovereignty retained by Member States in the area of PSI licensing policy? What are the implications of the principle of proportionality? How does EU action interact with rules and regulations established by Member State sovereigns on the one hand and private ordering on the other, as emerging in the various bottom up efforts to establish smoothly functioning sets of licensing terms and conditions specifically intended for PSI?

This line of reasoning should move on to asking what other legal domains are relevant to PSI

⁸ See below chapters 11-15.

⁹ See LAPSI, 2011, 'The “licensing” of Public Sector Information', quoted above at note 1, par. 2.

licensing, directly or indirectly. Some replies are already pretty clear, on the basis of the foregoing.

- a) Freedom of information acts (FOIA) may interact with passive but even active release of PSI and impact on its re-use;
- b) Data protection law is evolving; and it opens up the possibility of an institutional design which may accommodate privacy concerns in ways which allow the “decoupling” of data protection rules from licensing agreements between PSIHs and re-users.¹⁰
- c) Intellectual property laws provide the foundations on which licensing, including the one by PSIHs, is based.
- d) The practical jurisprudence which goes under the name of legal process, which has contributed so much in defining the respective roles of case law and statutes, of rules produced by sovereigns and private ordering in dealing with complex legal phenomena,¹¹ might go a long way in helping us to focus on the institutional design appropriate in order to accommodate bottom up private ordering efforts with legal rules established by national and regional legislatures.

The *technological dimension of licensing* deals with formats and interoperability. If data sets are to be re-used; and they are to be re-used both by end-users and by intermediate users which incorporate them as components of further products or services in ways which cannot be anticipated *ex ante*, then the formats should be as re-use friendly as possible. Additionally, only open, machine readable formats should be selected by PSIHs, leaving it to the freedom of re-users downstream to match and interface data sets without limitations. Proprietary formats, i.e. formats which are based on software or other IP which is privately owned, are not easily interoperable and should therefore be avoided.¹² The emergence of free, open standards should be encouraged; also proprietary standards should be avoided, lest free content made available by PSIHs is appropriated *via* control of the standards in which it comes.¹³ *Semantic* interoperability through Linked Open Data extends the potential of technical interoperability by resorting to tools intended to overcome the fragmentation of data from different sources by adopting standards and tools for the identification, retrieval and the representation of such data to ensure that their meaning is not lost in the process.¹⁴ New dimensions may be opened by reference to organizational interoperability.

Several provisions of the Directive deal with issues that impact on the technical interoperability of licensed PSI data sets.

Art. 5 of the Directive indicates that the availability of PSI in electronic formats is encouraged, but not mandated. It would however seem that under the current conditions there is not much room to

¹⁰ An assessment of the recent developments is in the *Opinion of the European Data Protection Supervisor on the ‘Open Data Package’ of the European Commission* including a Proposal for a Directive amending Directive 2003/98/EC on re-use of public sector information (PSI), a Communication on Open Data and Commission Decision 2011/833/EU on the re-use of Commission documents, <http://www.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2012/12-04-18_Open_data_EN.pdf>.

¹¹ See, in areas germane to the ones discussed here, MERGES, R. P. 2000, 'One Hundred Years of Solitude. Intellectual Property Law, 1900-2000', *Cal. L. Rev.*, vol. 88, pp. 2189 ff. and MERGES, R. P. 1996 'Contracting Into Liability Rules: Intellectual Property Rights and Collective Rights Organisations', *Cal. L. Rev.*, vol. 84, pp. 1293 ff.

¹² See in this connection BOYLE, J. 2008, *The Public Domain: Enclosing the Commons of the Mind*, Yale University Press, also available at <<http://thepublicdomain.org/download>> or at <<http://yupnet.org/boyle/archives/169>>; BOYLE, J. 2003, 'The Second Enclosure Movement and the Construction of the Public Domain', *Law & Contemp. Prob.*, vol. 66, pp. 68 ff., also available at <<http://www.law.duke.edu/boylesite/>>.

¹³ These are important requirements, as technology enables the “capture” of the resource in digital form and its degradation “from a non-rivalrous, non exclusionary public good” into a privately owned good along the lines discussed by HESS, C. & OSTROM, E. 2007, 'Introduction: An Overview of the Knowledge Commons', in C. Hess & E. Ostrom (eds.), *Understanding Knowledge as a Commons. From Theory to Practice*, MIT Press, Cambridge-London, pp. 3 ff.: p. 10.

¹⁴ On the action of the European Interoperability Forum see Agenzia per l'Italia Digitale, SPC Sistema Pubblico di Connettività e Cooperazione, Commissione di coordinamento SPC, Linee Guida per l'Interoperabilità Semantica Attraverso i Linked Open Data, 30 July 2012.

make progress in this area. The current text of Art. 3 of the Directive implies that the decision as to whether to allow re-use of PSI held by PSIHs or not is currently left to Member States, which, in turn, may refer the decision to the same PSIHs. Also Recital 9 clearly indicates that “*the decision whether or not to authorize re-use will remain with the Member States or the public sector body concerned*”. In such a context, any provision mandating formats (e.g. machine readable formats, which are a prerequisite of interoperability), might backfire (*see above*, chapter 2). Member States and PSIHs belonging to them might simply decide not to allow re-use of all the PSI which does not originally come in machine readable format. As a result, the pool of data sets candidate to being merged would shrink rather than expand. Openness and interoperability of software formats is also encouraged (Recital 13); but again the corresponding choice is left in the hands of Member States and of the PSIHs falling under their jurisdiction.

Art. 9 of the Directive, concerning “practical arrangements”, takes for granted the limitations in formats of the underlying documents just referred to. It however builds provisions concerning two kinds of facilities which may contribute to interoperability. The first concerns tools “*that facilitate the search for documents available for re-use, such as asset lists, accessible preferably on line, of main documents*” (*see also* Recitals 15 and 23). The second concerns “*portal sites that are linked to decentralized assets lists*” (*see also* Recitals 15 and 23).

While Member States are under an obligation to take action in both regards, the extent of the obligation is quite limited. Asset lists may not be accessible on line; they need not to be complete, but only include “main documents”. Limitations in the availability of asset lists reflect on the effectiveness of portals. Again, no limitation as to proprietary software, formats or standards is to be found in these provisions.¹⁵

It should be noted that, once concerns about formats and interoperability are dealt with, data should be made available without worrying too much about their presentation. As Tim Berners Lee said a while ago, “raw data now!” should be the guiding principle. After all, governments are not in the business of providing admirable portals; their mission in this connection consists in giving back to taxpayers the data which they collected, generated and stored away with taxpayers’ money.¹⁶

One might have the impression that the route undertaken here may lead to some form of progress in carrying out the horizontal approach indicated in the opening chapter. It would also appear that a mass of empirical evidence has been accumulating in the last decade, starting from the replies to public consultations, to the experiences on the ground as the ones accumulated by Europeana (as far as licensing is concerned) or by Member State Governments (*see* the UK asset register), the never ending debates in specialized lists: the wealth of experiences, practices and discussion on the same is amazing. However, the approach taken thus far is neglecting one crucial issue, which is examined next.

3. Do we know what we do not know?

Fact is that we keep talking about licensing, about licensing PSI, without asking the single most crucial issue:¹⁷ what are the essential features of the notion of “licensing” as it has emerged and

¹⁵ The Draft Proposal builds on the new text of Art. 3(1), according to which re-use is at least in principle mandated. Nevertheless the changes are rather cautious and include (i) reference to metadata (in Art. 5, par. 1); (ii) a suggestion that the format ensuring interoperability follows the principles adopted by the Inspire directive (Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community) (Recital 11 replacing Recital 13); (iii) redrafting of Art. 9 to extend to metadata and to promote machine readability.

¹⁶ *See* ROBINSON, D., YU, H., ZELLER, W.P. & FELTEN E.W. 2009, 'Government Data And The Invisible Hand', *Yale J.L. & Tech.*, vol. 11, pp. 160 ff., who at 161 refer to the engineering principle of separating the provision of data from the job of allowing the interaction with them.

¹⁷ This is to a large extent a self-critical assessment. The drafter of this document has also drafted a number of other documents (including LAPSI, 2011, 'The “licensing” of Public Sector Information', quoted above at note 1), without ever stopping to pause and

grown in the last couple of centuries? What kind of activities are as a rule planned and implemented on the basis of the transaction we have come to indicate as “licensing” a long time ago?¹⁸ Has licensing taken a shape which builds on IP exclusivity to enhance its power to control and to restrict the exploitation of IP in view of profit maximization? If so, may the same licensing also prove an appropriate tool to structure transactions which have as an object PSI and where licensor is a PSIH?

Once this question is asked, one may have the impression that these parallelisms and differences have not been sufficiently charted and explored yet to enable an adequate perception of the specificity of PSI licensing. Frankly, the very question of the existence of differences in the meaning of the notion of licensing as applied to IP and to PSI, respectively, would not appear to have surfaced at all, showing that this may have been a classical case not only of not knowing but also of not knowing of not knowing. May be we can try to find out whether there is any difficulty in transposing the notion of licensing from its field of origin to PSI and, if the reply is in the affirmative, where the difficulty lies; and to turn what hitherto have been unknown unknowns into known unknowns, which means becoming aware of the similarities and dissimilarities of the notion of licensing when it applies, respectively, to traditional IP and to PSI.

4. “Classical” IP Licensing

It is well known that the subject matter of “classical” licensing has been, in the last two or three centuries, trademarks, patents, copyrights and other IPR variously related to the same. By licensing, the holder of the rights, as the case might be, in the symbol, in the solution to the technical problem, in the work, rather than engaging in the manufacture of all the articles (be they bottles, brakes or books), authorized a (related or unrelated) third party to engage in the production and sale of the same. While the object of the IPR, be it a logo, an invention or a work, was one individual *ideal entity*, the – potentially infinite – *copies* which might embody it, be they Coca Cola bottles, brakes or books, did have a discrete, physical, material, tangible (“hard”) existence, locating them in the bricks-and-mortar world. This duality of IP was described in the tradition of classical IP law by contrasting the ideal (*corpus mysticum*) and the real entity (*corpus mechanicum*). Classic IP licensing concerns both: the authorization of licensor concerns the economic exploitation of the ideal entity, also of the *corpus mysticum*; the performance of the contract by licensee leads to the manufacture, sale and dissemination of tangible, “bricks-and-mortar”, entities, leading to the manufacture, sale and exploitation of *corpora mechanica*, each of them using up a given amount of physical resources to come into being.¹⁹

5. PSI Licensing

This situation is in stark contrast to the subject matter of the licensing of PSI. Also PSI may come – and normally does come, at least in European jurisdictions – as IP protected subject matter: works, content, data sets and metadata concerning them, which usually are protected under copyright, data

ask whether and to which extent the conditions of use of the notion of “licensing” applied and which modifications the tool of licensing undergoes when it comes into contact with digital assets and specifically PSI.

¹⁸ See the treatment of the notion of licensing by a practice oriented textbook as the one by PARSONS, TH. 1907, *Laws of Business*, Hartford, pp. 685 ff. (the first edition had already appeared in 1878).

¹⁹ Copyright entails several complications in this respect, as it enables rightholders to engage also in what is described as immaterial exploitation of the work [see artt. 11(1)(2), 11 bis(1) (1) and (2), 11ter(1) (2), 14(1)(2) and 14bis(1) of the Berne Convention 1886], described as “public performance” in the UK, “public display” in the US and “unkörperliche Werknutzung” in German speaking countries. However, this does not affect the analysis below in § 17: even immaterial exploitation used to require resort to physical, bricks-and-mortar embodiments, be they the ‘master’ used for broadcasting or performance of movies, the signal used in broadcasting and does not enable the creation of infinite costless copies as it happens when the protected subject matter assumes digital form.

base right or *sui generis* rights²⁰ rather than being in the public domain. Here again we may distinguish between the *corpus mysticum* and the *corpus mechanicum*. While the authorization of licensor concerns the economic exploitation of the ideal entity, also of the *corpus mysticum*, exactly as in “classical” licensing, the performance of the contract shows a marked difference to traditional licensing of trademarks, patents, copyright and other IP rights. The difference consists in the fact that the performance of the license concerning PSI brings into existence digital copies rather than of tangible, “brick-and-mortar” entities.

6. From Classic IP Licensing to Digital Licensing

A few remarks may be in place here. First, also digital copies are *corpora mechanica*, in that they are material, physical copies, even though *intangibile* ones: while we may not touch them in the same way as we touch a bottle, a brake or a book, nevertheless they consist of electric or magnetic currents, forming a predetermined sequence of bits, which has a separate, discrete existence from other sequences of bits.²¹ Second, also digital copies, intangible as they may be, can be incorporated into stable, material embodiments, be they the plastic medium of DVDs or the discrete location assigned to them in a server or in another device. Third, and more importantly for present purposes, they differ from tangible copies in that they may be multiplied in infinite numbers of perfect copies at costs which approximate zero.

While this last specific feature of digital copies is liable to have significant consequences, to which we will come back in a moment, it should be noted that digital copies which characterize PSI are by no means a novelty in the landscape of IP licensing. Indeed, the last four decades have witnessed to the emergence first and to the explosion later of digital licensing: software licensing²² has been followed by agreements providing, *inter alia*, for the making available in digital form works and content (digital publishing) or data sets (data base agreement). Now, in all the relevant regards, digital and software licensing show the same features we discussed in connection with PSI licensing, including the fact that the intangible copy based on the original program may be multiplied in infinite numbers of perfect copies at costs which approximate zero. Indeed, this is the case for the quite obvious reason that PSI and software share the characteristic of coming by in digital format. Thus we may reach an intermediate conclusion: both digital licensing and PSI licensing share a common characteristic which differentiates them both from “classical” licensing. The analysis does not end here, though.

7. The Bifurcation of Digital Licensing

Indeed, digital licensing as originally experienced and analyzed by the legal literature concerned proprietary software. In this perspective software licensing typically is a market transaction, which is entered into in the form of a market exchange whereby licensee pays a consideration to licensor in exchange for the benefits expected from the exploitation of the licensed software.

It should however be noted that this feature is in stark contrast with a further, totally different breed of digital licensing which emerged more or less at the same time, which typically does not embody a for profit market transaction. Open source software licensing was the starting point for this more or less simultaneous development. At a later stage also music, images, photographs, audiovisual

²⁰ See DERCLAYE, E. 2008, 'Does the Directive on the Re-use of Public Sector Information affect the State's database sui-generis right?', in J. Gaster, E. Schweighofer & P. Sint (eds.), *Knowledge Rights – Legal, societal and related technological aspects*, Austrian Computer Society, pp. 137 ff.

²¹ See ROMANO, R. 2001, *L'opera e l'esemplare nel diritto della proprietà intellettuale*, Cedam, Padova, p. 152 and note 35 at pp. 224 ff.

²² See HEFFAN, I. V. 1997, 'Copyleft: Licensing Collaborative Works in the Digital Age', *Stanford Law Rev* vol. 49, pp. 1487 ff.

products and text have been made freely available over the net in digital format to an extent which would have been difficult to anticipate at the turn of the century. The form this dissemination has taken was once again described as “licensing”, even though also here the copies made available to licensees typically are intangible and digital, as opposed to tangible, material and analogical.

This “new” licensing tends to exhibit strikingly novel features. It may be “public”, in that the prospective licensees are not specific individuals or entities but the public at large, as it befits transaction which typically take place on line; it may be “non transactional”, where the grant of the license does not require any form of acceptance, including the “clicking” to indicate acceptance of the terms of the license itself, by the licensee; it may – but need not – be “open”, in the meaning of the notion adopted in the Open Knowledge Definition. It is difficult to find labels accurate enough to describe the two varieties of digital licensing, referred to in this chapter. It would not be entirely accurate to characterize them respectively as proprietary and non proprietary; market and non market; or closed and open. Indeed, even open source licensing is based on IP ownership; copyright protection of software forms the basis for open source licensing, so that it hardly can be described as “non-proprietary”; hybrid phenomena, where market and non market transaction coexist, are one of the most significant features both of open source licensing and of the latter, “new” licensing of digital content.²³

What I find striking, however, is the divergence in the approach taken by the two varieties of digital licensing in connection with the same fundamental issue: how to deal with the fact that licensed digital copies may be multiplied in a infinite number of perfect copies at costs which approximate zero.

In the first variety of digital licensing (“proprietary”, “market based” and “closed”), the goal has been to enlist all possible tools to ensure the strictest control over digital copies not authorized by licensor. This goal has been pursued both by legal and technological means, that is, by making sure that the notion of infringing extends to the maximum extent also to digital copies, by adopting technological measures (which may be described as DRM or TPM depending on the circumstances) to prevent unauthorized duplication, by invoking legislation banning circumvention of technological measures.

In the second variety of digital licensing, the approach has been exactly the opposite. Here licensor typically gives up one or more of the exclusive rights he is legally entitled to (“some rights reserved”, as opposed to “all rights reserved”); and in doing so authorizes, under the terms and conditions of the license, not only the initial licensee, but also all the other third parties who may at some point of the chain obtain a digital copy of the licensed content or work. Characteristically, licensor directly authorizes whoever may re-use a digital copy in accordance with license terms and conditions, rather than authorizing licensee to sublicense the copies she may have been authorized to re-use.²⁴

The point should be made that this second approach builds on the perception of two specific features of digital copies, non rivalry in consumption and production and complementarity.²⁵ The fact that one person uses a digital copy does not subtract anything from the consumption of the next user. Moreover, when we take into account that digital copies may be also used as inputs for the production of downstream goods and services, we come across a feature which is unheard of in the bricks-and-mortar world: digital copies are non rival also in production. In other words, one of the most remarkable features of digital assets is that they are amenable to joint production, that is if

²³ LESSIG, L. 2008, *Remix. Making Art and Commerce Thrive in the Hybrid Economy*, The Penguin Press, p. 177.

²⁴ See e.g. Art. 8 CCBY.

²⁵ These twin features, which are a corollary of the possibility of creating infinite, costless and perfect copies, are illustrated in their general terms in connection with digital assets by HOFMOKL, J. 2010, 'The Internet commons: towards an eclectic theoretical Framework', *International Journal of the Commons*, vol. 4, pp. 226 ff., at pp. 243 ff.

technology and law do not stand in the way. Additionally, digital assets show a strong complementary character. They may be combined, mixed or “matched” to create a new product or service; and in turn these first generation products or services may be used as derivative inputs for derivative products and services.

As a matter of fact, non rivalry and complementarity are features which apply to all digital assets. However, we have seen that this common feature is dealt with in two very different ways by the two varieties of digital licensing. While the purpose of the first kind of digital licensing is to defuse, by legal and technological means, the potential implicit in non-rivalry in production and complementarity of digital assets, by restricting and disabling non authorized re-use, the second kind of digital licensing (in its different shades of being “non-proprietary”, “non-market” and “open”) strives to harness the same potential for its own purposes. Non-rivalry in production and complementarity of digital assets are the basis on which the strategy of fostering and encouraging dissemination, particularly over digital networks, is built.

It should be kept in mind that the tool used to maximize re-use of digital assets which exhibit features of non-rivalry in production and complementarity in re-use is direct licensing by licensor to whomever happens to obtain a digital copy and re-uses it in accordance with license terms and conditions. It has been remarked earlier that licensor directly authorizes whoever may re-use a digital copy obtained through an initial licensee in accordance with license terms and conditions; as a result also the third party becomes a licensee in spite of the fact that she has no direct contractual relationship or dealing with licensor.

It should also be noted that, except in particular cases, e.g. where only the re-use of the digital asset in unchanged form is allowed,²⁶ the direct authorization extends also to any *fragment* of the digital copy which is re-used by licensee. Indeed, only entities which would not qualify under the notion of work are not encompassed by the terms and conditions of the license.²⁷

8. Interoperability

The purpose of this second variety of digital licensing is constantly at risk of being defeated, however, by the difficulties encountered in making the terms and conditions applying to the different digital inputs going into a downstream product or service interoperable. This difficulty appears to be an unavoidable consequence of direct licensing. Digital licensing of the second variety is based on chains of authorizations structured in an automated way, typically through on line networks. Third parties which happen to incorporate any number of digital inputs become licensees and are directly authorized by licensor even if they obtain the same input not from licensor but from another licensee and have no dealing with the licensor; all what is required is that they comply with the terms and conditions of the original license. In practical terms this means that any given downstream product or service incorporates a very large number of digital inputs originating from a large number of different licensors. Now, however, if two digital inputs are governed by two different sets of terms and conditions, and these do not dovetail, then their joint re-use is called into question. More specifically, re-use is non authorized, if the terms and conditions are incompatible;

²⁶ Or in data bases, where only “substantial” taking is covered by the exclusive right.

²⁷ This incorporation of the digital fragment by a first re-user, as well as by any additional re-user who is subsequently authorized by licensor or, in the alternative, obtains it from the first licensee, is a feature which is enabled by the non-rivalry (in consumption and, here) in production of digital items. One might think (as I was inclined in an early draft of this paper) that this feature depends on the fact that the digital fragment is a material, albeit intangible, copy, which is incorporated in the downstream product or service, so that authorization is required for the re-use of the material – as opposed to ideal – entity. This is not so, as the same phenomenon occurs when no physical, albeit intangible, entity is made permanently available to the licensee. Imagine that the licensee does not need to download the data to re-use them, because the data are released by means of data services or are made available in linked format. However and whenever information obtained upstream is re-used by a licensee, either the license is triggered or the re-user is liable to an infringement action.

or is authorized on the more restrictive terms and conditions, if one set is more restrictive than the other, while not incompatible with it.

Herein lies a difficulty which may turn out to be much greater than one may imagine at first glance. Indeed, scholars have noted that even licenses which broadly speaking would appear to be to a large extent reciprocally compatible do have clauses which do not perfectly dovetail. One good example of this phenomenon is the attribution clause, which entails slightly different requirements depending on the fact that CCBY or ODCBY applies.²⁸

This discrepancy is liable to generate difficulties when two licensed digital inputs are incorporated into a (third) downstream service or product. The provider of this downstream product or service is in fact bound to respect at the same time the requirements of both licenses applying to the two inputs she incorporates; an additional difficulty may arise, to the extent it is believed – as it probably should – that compliance with the two attribution clauses requires that the credit given identifies within the downstream service or product the components respectively attributable to the two inputs incorporated in it.

9. PSI and Interoperability

Against this background, the time has come to ask where is PSI to be placed in this context. Also PSI comes in digital copies. These are clearly non rival and amenable to joint production. Also PSI inputs show a strong complementary character, both with other PSI data sets and with user generated content and business generated data.²⁹ For sure PSI licensing does not belong to the first variety of digital licensing, “proprietary”, “market-based” and “closed”, as by legislative fiat it follows the mandate of widest possible – if not necessarily free – dissemination. It does belong to the second variety of digital licensing and it shares the latter’s troubles. Indeed also the products and services based on PSI typically use PSI data sets as inputs by combining (“matching”) them; and in turn these first-generation goods may be used as intermediate inputs for derivative products and services. Therefore, also PSI suffers from the difficulties involved in ensuring interoperability generally encountered by digital licensing of the second variety. Indeed, it may well be that the difficulty is even greater in connection with PSI licensing: it is submitted that the complementarity rate exhibited by PSI assets is higher than that shown by music, text, audiovisual works and software. In other words it would appear that statistically it may be more likely that parts or *fragments* of PSI digital assets are combined and matched to form downstream products and services than it is the case in connection with other entities (text, music, audiovisual works, software) which are the object of digital licensing of the second variety.³⁰

10. A Tentative (Structural) Comparison Between “Classical” and PSI Licensing: First Part

Are we prepared to deal with this issue on the basis of our experience in “classical” IP licensing? It is true that even there we frequently meet references to the phenomenon of “stacking”, which describes cases in which a downstream product requires authorization by two or more holders of IP.³¹ Still, there is a huge difference between the two phenomena. Unsurprisingly, a much closer

²⁸ Even though this is not specifically noted in the slides presented by MORANDO, F. 2012, *Ad Hoc Licenses, Dominant License Models and (the Lack of) Interoperability*, quoted above at note 5, the issue has been repeatedly discussed in the meetings of the LAPSI thematic network.

²⁹ The twin features, illustrated in their general terms in connection with digital assets by HOFMOKL, J. 2010, 'The Internet commons: towards an eclectic theoretical Framework', quoted above at note 25, at 243 ff., apply also to PSI as I tried to show in *Public Sector Information as Open Data. Access, Re-Use and the Third Innovation Paradigm*, in Dana Beldiman ed., forthcoming.

³⁰ See however LESSIG, L. 2008, *Remix. Making Art and Commerce Thrive in the Hybrid Economy*, quoted above at note 23, pp. 51 ff.

³¹ Initiated with a different terminology (referring to patents “on basic building blocks”) by MERGES, R. P. 1996 'Contracting Into

analogy – actually a total coincidence – is to be found in the second variety of digital licensing.

Let us therefore try to clarify the interoperability conundrum using as an example PSI licensing (the picture would not be much different if we looked at a specimen of digital licensing of the second variety). The PSIH is indicated as A; it authorizes B to re-use a discrete item of PSI it holds (PSI A) into B's downstream product or service (B d.). C may in turn incorporate (B d.) in her own downstream product or service (C d.). If she does so, she is re-using (B d.) under the terms of the license between B and C; as far as (PSI A) is concerned, however, C gets a direct authorization from A, in spite of the fact that she has no contact with A.

This last feature is clearly shown in the licensing terms when CC licenses are used. See Art. 8, of CC BY; art. 4.8 OdBL v. 1.0. It is submitted that this feature is intrinsic of the mechanism adopted for the licensing of digital intangible copies, which may “travel” from their originator, A, to a subsequent downstream user, C, through the intermediate passage point of B, without A and C ever coming into reciprocal contact.³²

Does “classical” IP licensing prepare us for this – quite extraordinary – feature? Not at all. Rather, here we witness to a quite striking discontinuity.³³

Until we fail to unravel this basic difference, we are at a loss to explain what is the meaning of “stacking” in digital and PSI licensing. In classic IP licensing, stacking means that under a given set of circumstances (e.g. partly overlapping patents) licensee must obtain multiple authorizations before she is enabled to manufacture and sell her product. Stacking works differently in digital and PSI licensing. Here C incorporates in (C d.) her own value added, on top of (B d.); but, as also a fragment of (PSI A) is incorporated in (B d.), she is authorized to include that digital input only if and to the extent she complies with both the terms of the authorization by B, with whom C has had dealings, and by A, with whom she has had no dealing at all. As a rule, the contact between A and C is instituted by digital networks; the work, the content, the fragment of the same carry with them the terms of conditions for re-use, i.e. the license, or at least reference to them; metadata take the place of dealings between A and C, even though C gets a direct license from A. In this latter perspective, “stacking” describes the phenomenon whereby the conditions for re-use of (PSI A) travel with the digital input, so that non-compliance with these latter terms by C would mean infringement of A's rights by the same C; and they are therefore added (“stacked”) over the conditions for re-use agreed between C and B, which may – or may not – dovetail with the former.

Therefore a crucial feature both of digital licensing of the second variety and of PSI licensing is the existence of this sort of “travelling clauses”, which may spell out the obligations which licensee has to comply with if her re-use is to be lawful rather than infringing. It should be noted that reference to travelling clauses or obligations in the plural is explained by another character of digital inputs, which, as indicated, not only are non-rival in production but exhibit a strong complementarity. As C may well incorporate the inputs coming from A, A1 and so on and the inputs coming from B, B1, it is likely that she is bound to simultaneous compliance with different sets of “travelling obligations”.

Should we think that this elementary situation is not intricate enough, we can complicate it as much as we like just by turning our attention to licensor. Let us assume that licensor “waives” its rights in some regard, as it may be when the licensed content incorporates data base rights. A similar occurrence has been noted where licensor A may wish to insert a viral share-alike feature in its licensed PSI, but at the same time it waives it for certain classes of derivative content. Here the

Liability Rules: Intellectual Property Rights and Collective Rights Organisations', referred to at note 11, pp. 1341 ff.

³² Incidentally, this explains why licenses cannot be characterized as agreements, but as unilateral acts (in civil law parlance) or promises (in common law parlance); on this basis an agreement may come into being, e.g. when licensee accepts to pay a consideration, but need not.

³³ Except when we take into consideration licensing of entities which may be self-replicating, as software and DNA-information, which may be considered as a bridge between “classical” and PSI licensing.

question is: does the waiver “travel” further downstream when licensee incorporates A’s in her own product or service (B d.)? In accordance with the previous analysis, the reply should be in the affirmative. Therefore we also have “travelling waivers” making the landscape of PSI licensing more varied. The landscape gets even more varied, when we think that A may wish that also B applies the same waiver, to avoid that the re-use of its initial contribution is blocked downstream, by data base rights or by the viral feature. If this wish takes the form of an obligation on part of B to adopt the same waiver, a “travelling waiver” (from licensor) is then combined with a “travelling obligation” (on licensee as a candidate to become a licensor).

Does classic IP licensing prepare us to any of this? Not at all. Digital and PSI licensing is based on chains of authorizations, structured in an automated way in such a manner as to enable that licensor directly authorizes re-user even without having a direct dealing with her. Chains of authorizations are not unknown to classic IP licensing; but there they take the starkly different route of sublicenses, whereby licensor A enables B not only to exploit directly the IP but also to authorize C (and possibly C1, C2 etc.) to exploit. Thus the question here is not one of “travelling” – and potentially mutually incompatible – obligations; but of derivative compliance.³⁴ B must make sure that she binds C (and, if applicable, C1, C2 etc.) to the same obligations as she has undertaken towards A; should C fail to comply, both C and B would be infringing A’s IP rights (and B might have recourse against C to be held harmless of the ensuing loss). Sublicensing is a one-way route; PSI licensing in downstream products is a maze of criss-crossing avenues. This is explained by the fact that sublicensor sublicenses the same IP as licensor licenses to sublicensor; whereas PSI licensing concerns multiple digital inputs, which are multiplied as they are re-used and carry with them the travelling clauses and obligations which concern each of them.

11. A Tentative (Functional) Comparison Between “Classical” and PSI Licensing: Second Part

Hitherto we tried to figure out in which way PSI licensing differs from classic IP licensing from one specific angle: the presence – or, respectively, the absence – of digital character of the licensed subject matter. The next step consisted in highlighting in which other way PSI licensing differs from all other IP licensing, including digital and software licensing of the first variety (chapters 4-7); in doing so we explored the implications this difference has on the one crucial feature of digital licensing of the second variety, including PSI licensing, which we may miss out by neglecting the specificity of PSI licensing.

In doing so, we noted a further difference between digital licensing of the second variety, including PSI licensing, on the one side and all other kinds of IP licensing, on the other side, which consists in the fact that classic IP licensing concerns are market transactions, whereas PSI licensing (exactly as FLOSS) may entail, and normally do entail, non-market transactions.

This is an important distinguishing feature. Classic licensing builds on exclusivity and on the monopoly potential of the IPR which is from time to time its subject matter; licensor aims to maximize her returns by minutely and tightly controlling the ways in which the licensed entity is exploited. Licensing uses the leverage given by IP protection to maximize profits. Digital licensing of the first variety does the same, with a vengeance (*see* chapter 7): as digital goods are prone to escape licensor’s control, the effort to restrict by means of contract, law and technology is redoubled here.

Digital licensing of the second variety goes, as shown (in chapter 7), the opposite route: the

³⁴ As noted earlier, a similar situation may occur when licensing concerns derivative patents, whereby C, in order to obtain a license from B, needs to obtain authorization both by B and from A, whose upstream patent is included in B’s derivative patent. This is a rare occurrence, though.

potential implied in non rivalry and complementarity of digital goods is harnessed to maximize dissemination over the networks; IP exclusivity is used as a tool to open rather than to restrict. While it might appear that this second approach is revolutionary, it turns out that it makes good sense even from a strictly economic viewpoint. Indeed, it has been convincingly shown that economic decisions are made and resources are allocated not only on the basis of market-based exchanges and firm-based hierarchies, but also on the basis of sharing or peer production.³⁵ The case has also persuasively made that this latter mode of production is likely to gain traction in network-driven digital environments, where it takes the form of distributed cooperation.³⁶

Now the time has come to go a bit further and ask in which way PSI licensing exhibits specific features which distinguish it from the other forms of digital licensing of the second variety we briefly mentioned. A few notes can be jotted down in this connection:

- a) PSI licensing shares with all other kind of licensing the feature whereby it is based on ownership of IP; while IP licensing may be used as a tool to restrict exploitation of IP for profit maximizing purposes, as it happens in classic licensing and in digital licensing of the first variety, it may also be used to open IP, to encourage and steer re-use (*see* chapter 7), as it happens in digital licensing of the second variety. However, PSI licensing exhibits a specificity in this connection: the IP on which licensing is based is publicly owned, i.e. it belongs to entities which have obtained it through taxpayers' money; it would appear therefore that it stands to reason that profit maximization through the combination of IP exclusivity and the restrictive features of licensing should not be the sole aim of PSI licensing, not only on the basis of the reasons underlying the second variety of licensing (chapter 11), but for reasons of its own, that is derived from the ownership regime of PSI.
- b) What is the precise mix between lucrative and welfare enhancement goals of PSIHs engaging in PSI licensing is a matter for Member States to decide, in ways which must however be compatible with the underlying EU normative framework (including charging policy, which does not allow pure profit maximization; *see* Art. 6 of the Directive).
- c) The decision concerning the mix between lucrative and non-lucrative goals in turn impacts on the features of PSI licensing, that is on the question whether PSI licensing is conceived as a tool to restrict or as a tool to “re-open” the restrictive features of IP.
- d) In making the choice, several factors should be taken into account (over and beyond the quite obvious point that the choice in favour of IP exclusivity entails the taking into account also at the licensing level of the usual functions of IP as an incentive to investment and dissemination):
 - i. the feasibility of licensing models that combine welfare gains with economic profitability as shown by the experience of digital licensing of the second variety;
 - ii. the (enhanced)³⁷ non rivalry and complementarity of PSI inputs;
 - iii. the relevance of the parties to PSI transactions. In this specific connection, we should consider that, as a rule, in IP licensing, the parties are either firms (licensor and licensee) or consumers (as licensees). In PSI licensing, the original licensor is by definition a PSIH; moreover in PSI licensing an important role may be played – and is indeed being played – by *communities*. Indeed, when public, non transactional, open licensing of PSI

³⁵ *See* BENKLER, Y. 2004, 'Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production', *Yale L.J.*, vol. 114, pp. 272 ff.; pp. 277 ff. and BENKLER, Y. 2002, 'Coase's Penguin, or, Linux and *The Nature of the Firm*', in *Yale L.J.*, vol. 112, pp. 369 ff., where additional references.

³⁶ *See* BENKLER, Y. 2006, *The Wealth of Networks. How Social Production Transforms Markets and Freedom*, Yale University Press, also available at <<http://www.benkler.org/wonchapters.html>>.

³⁷ *See* chapter 9.

applies, online networks enable cooperation by dispersed members of a community to work on data sets, matching them, refining them, tagging them and so on.³⁸

- e) An argument may also be derived from the perception that IP ownership by PSIHS is a second best solution, in terms of welfare maximization, as compared to the public domain regime prevailing elsewhere and notably in the U.S. If one shares this point, the reasons to favour shaping PSI licensing in a way which opens rather than restricting re-use would be greatly reinforced.

While these features are PSI specific, they link back to the specificity which PSI licensing shares with the other forms of digital licensing of the second variety.

First, let us look at the question of *incentives*. Incentives are crucial for firm-to-firm IP licensing: down payments by licensee and minimum guaranteed royalties may be required as proof of willingness to invest in the exploitation of the licensed IP. Exclusivity may be granted; but may be lost if a certain level of sales or market penetration is not reached. Advertising expenditure levels may be contractually mandated. On the contrary, members of a community contributing to the enrichment of licensed PSI may be contributing “small grains” of their time and attention; if this is so, then the question of incentives may become trivial,³⁹ and indeed motivation to contribute tends to be cooperative rather than exchange-based and economic.

Second, the creation of PSI-based products and services may contribute social and public value, rather than market value. Therefore their value may be measured not only in dollar benefits to the parties to the transaction, but also in externalities, that is value to third parties which are not privy to the license. In classic IP licensing, as well as in digital licensing of the first variety, this feature is at best incidental.

Third, in a time in which the cost of technological resources has dramatically decreased, it has turned out that distributed modes of production may at times turn out to have distinctive *competitive advantages* over markets and hierarchies in dealing with information; and that the net enables forms of cooperation based on modularity of tasks, communication and community building which in several instances have consistently outperformed even the very best businesses.⁴⁰

Fourth, PSI-incorporating data sets created and maintained on the basis of peer production may, in the absence of restrictive terms of licenses mandating non-commercial re-use at any point of the chain of authorizations, be transformed into value-added products or services, commanding a price on the market. In this regard, PSI licensing may contribute to emergence of a *hybrid model*, where market and non-market modes of production seamlessly coexist.

Fifth, the defining feature of PSI re-use, its *ex ante unpredictability*, stays in stark contrast with one of the defining features of classic IP licensing and digital licensing of the first variety, which strive to reach completeness of contract terms, by precisely defining the geographical areas, the fields of use, the quantities as well as the minute details (including procurement and quality levels of raw materials to be obtained by licensees; or number of licensed stations in LANs) which may be required to make sure that profit maximization is obtained.

12. The Research Question

To the extent one is persuaded that the results of the comparison between “classical” IP licensing and digital licensing of the first variety on the one side and digital licensing of the second variety

³⁸ For examples see my *Public Sector Information as Open Data*, quoted above at note 29, § 3.

³⁹ BENKLER, Y. 2002, 'Coase's Penguin, or, Linux and *The Nature of the Firm*', quoted above at note 35, p. 376.

⁴⁰ See BENKLER, Y. 2011, *The Penguin and the Leviathan. The Triumph of Cooperation Over Self-Interest*, Crown Business, New York, pp. 169 ff.

and specifically of PSI licensing on the other side have some merit, we may proceed to rephrase the original question: to which extent the optimal design of the rules concerning the former may be relevant for PSI licensing? or, in other words, what are the components of the design which should be adapted and changed to take into account the differences between the two?

13. The Design of the Rules Concerning Classic IP Licensing

The design of classic IP licensing has three components: (i) the establishment of the IPRs which are the subject matter of licensing; (ii) contract law rules for the licensing; and (iii) conflict of laws rules which select the applicable law when licensing has a link to more than one legal system.

- i. This first component was established at different times, ranging from the Eighteenth century to present days depending on the different jurisdictions. The twin pillars of the Paris Convention (1883) and of the Berne Convention (1886) formed the basis for international licensing concerning the subject matter dealt with in the two Conventions (basically: trademarks, designs, patents and copyright) by enabling non-national rightholders to obtain access to the protection of their symbols, inventions and creations throughout the States parties to the conventions. In areas where this has not yet been accomplished, as is in the case of geographical indications, international licensing still is disabled.
- ii. It has been up to the legal systems of the different jurisdictions to set up rules governing the relationship between licensor and licensee for the different IPRs. Generally resort has been made to reference to general contract law rules; a modicum of default rules apply, in areas such as the warranties owed by licensor to licensee and on the impact of finding of invalidity on the continued validity of the transaction and on the repayment of royalties previously paid by licensee, but the number and importance of default rules has been very limited. There are a few mandatory provisions, though, on two possible grounds. First, one of the parties may be seen as weaker, as typically is the case with the licensor/creator of copyright protected works. Second, licensing agreements may have an impact on third parties. A typical example of the latter situation is dealt with by the antitrust scrutiny of the possible anticompetitive impact of licensing, e.g. in connection with no-attack clauses, reciprocal licensing, exclusivity and territorial restrictions. In the EU freedom of movement rules (Artt. 28 ff. TFEU) may impact on parallel imports and therefore typically on behaviour by purchasers of IP incorporating goods rather than on behaviour of the parties to licensing.
- iii. In the light of the limited interest of the various jurisdictions involved in shaping the specifics of the transaction, the principle of freedom to choose the applicable law prevails, with the sole exception of mandatory provisions which may at times override the choice of law made by the parties.

14. What Design Should Be Adopted For PSI Licensing?

If we follow the same blueprint in trying to figure out what is the optimal design of rules concerning PSI licensing, then the following remarks seem to be in place.

In connection with item (i), no special rules are required to establish IP protection for PSI; they are already in place.⁴¹ The holder of PSI, however, normally is a public sector body, here designated as PSIH. It stands to reason that, as the PSI was created and organized by means of taxpayers' money, a certain amount of regulation is provided for by legislatures in matters such the existence and the

⁴¹ Conversely, in legal systems which deliberately decided to rule out IP protection for federal government generated data re-use is not made conditional on the acceptance of licensing conditions: for references see my *Public Sector Information as Open Data*, quoted above at note 29, § 4.

extent of the obligation to license and the price of licensing. Both aspects are dealt with in the current Directive and in the proposal under discussion: *see* Artt. 3 and 6. However, for the reasons indicated in chapter 7, the option to shape licensing as a tool to engage in a certain amount of “re-opening” whatever restriction is implicit in IP protection should be given a certain amount of weight. This approach would appear to be in line with Recital 22 of the Directive, which, as previously noted, states: “*The Directive does not affect the existence or ownership of intellectual property rights of public sector bodies, nor does it limit the exercise of these rights in any way beyond the boundaries set by this Directive...Public sector bodies should, however, exercise their copyright in a way that facilitates re-use*”.

The question which specially concerns us here is about the legal rules concerning the relationship between licensor and licensee, or, in other words, the PSIH and the re-user. It would appear that PSI licensing does not require special rules concerning the balance between the interests and the obligations of licensor and licensee. We have seen that this aspect has drawn only a modicum of attention from sovereigns even in “classical” IP licensing; one would expect that this is even more so in connection with PSI licensing, considering that here the priority would seem not to be the balance between the respective rights and obligations⁴² as the adoption of mechanisms appropriate in view of fostering the potential for cooperation between the different parties involved (*see* above, chapter 7).

Of course, there may be a certain difficulty in trying to imagine which legal rules may foster the desired cooperation between parties involved in the re-use of PSI. However, a few points may be made at this stage.

First, the rules should take into due account the character of the licensed entity, which is non rival both in consumption and in production and shows a marked attitude to complementarity (*see* above, chapter 9). Therefore, rules favouring standardization and interoperability of licensing terms should be adopted, in view of the objective of maximizing the possibility of the matching of data sets and the creation of downstream products and services based on the aggregation of various PSI components. At least in specific sectors and areas, more decisive progress than the one presently contemplated (*see* above chapter 2) might also be sought in connection with the technological dimension (formats, interoperability, asset lists).

Second, the decision whether to adopt top down national licenses should undergo stringent scrutiny. The rationale for adopting national rules, rooted in the specifics of a given legal system, links back to the fact that the relevant PSI was created and organized by a given PSIH, which is based in a specific jurisdiction, so that it would at first blush appear that it stands to reason that the PSIH acquires rights and undertakes obligations on the basis of its own legal system also when dissemination of PSI is concerned. However, this argument does not stand to scrutiny when one considers that even national sovereigns have an interest in fostering cooperation in the exploitation of a non rival resource showing a high degree of complementarity, without regard to the fact that the candidate digital input is foreign or national; and one keeps in mind that national licenses do not mix easily.⁴³ Moreover, in the EU perspective the positive obligation of Member States to contribute to the creation of the internal market would play an important role. In any event the fact that a given data set has a given national “entry point”, e.g. data collected by a British PSIH, should not unduly influence the rules by which it is governed at some later stage of its – in all likelihood

⁴² This does not mean that general purpose legislation providing protection to consumers would not be relevant; the point is that such legislation, which is mandatory, would apply without need of specific adaptation to the relationship between licensor and those licensees that are members of the general public.

⁴³ For references in demonstrating this – quite self-explanatory – point *see* my *Public Sector Information as Open Data*, quoted above at note 29, § 3. The point should also be added that interoperability requires that automatically reprocessable metadata are built in licenses, including their semantic representation in accordance with the Linked Data approach, which is a task which probably would be hardly manageable by the legislators of 29 Member States and is best undertaken by private ordering having a global dimension.

quite roundabout – life cycle, any more than any given car first put into circulation in the UK should be governed by British law even when it travels abroad.

This reasoning might be resisted if it was proved that in “classical” IP licensing national sovereigns have shown a strong interest in shaping the reciprocal relation of licensor and licensee, except that this is not the case: with a few exceptions,⁴⁴ legislatures have seen it fit to adopt a hands-off attitude, leaving it to the parties to deal with each other; to the point that even choice of applicable law is as a rule left to the choice of the parties to a license.

Third, we should go a step further and ask ourselves whether it would be appropriate for national legislatures – and the EU providing a framework for them – to take positive steps towards fostering and promoting cooperation between the parties involved in the re-use of PSI. The case may be made that PSI licensing provides an opportunity for the EU and its Member States to assist the emergence of a *lex communitaria*, where the adjective refers to re-users communities rather than to the EU Community, which might be seen as a present day parallel to the emergence of the *lex mercatoria* which came to prevail in the later Middle Ages when municipalities and cross-border trade flourished. The components of this body of law may be gleaned, considering that legal systems should favour processes of *delocalization*, whereby the relationship should to the extent possible be governed by rules which are not nationally rooted but rely on the practices and perceptions of the community to which re-users belong. It should be underlined that this idea does not link back to ideas of independence of the cyberspace from ancient regulators, which obtained some popularity a few decades ago⁴⁵ but has in the meantime proved simplistic and inappropriate in view of the multiple interactions between virtual and brick-and-mortar worlds. Rather the idea should link to successful experiments in self-regulation, where some experiences of homogeneous communities like advertising and stock exchanges come to mind, and to the experience of the speedy and well received dispute resolution mechanism concerning domain names⁴⁶ would appear to provide a valuable template and starting point.

The point here is not that sovereigns should keep their hands off; rather, that they should intervene by fostering the creation and the deployment of rules which are conducive to the cooperation between members of a community in order to optimize the benefits obtained by products and services which show a high rate of positive externalities. This new role may be played in the designing of an appropriate dispute resolution mechanism, to begin with;⁴⁷ and might extend to the creation of “black” or (better) “gray lists”, indicating which license clauses may hinder or restrict interoperability.

Other components might well prove advisable and possibly important. It is a common experience that making disparate sets of licenses work seamlessly is not an easy task; legal practice as we know it today does not have either the know-how or the cost structure to be of much help; so that it is possible to imagine that State funded bodies, possibly at the local level, provide the required assistance, also by creating FAQs and publishing a growing body of questions asked and replies provided.⁴⁸

This approach entails a few corollaries and requires a few qualifications. States still have several overriding interests which may emerge in connection with the workings of PSI licenses.

⁴⁴ See above, chapter 14.

⁴⁵ As proposed by JOHNSON, D. R. & POST, D. 1996, 'Law and Borders: The Rise of Law in Cyberspace', *Stanford L. Rev.*, vol. 48, pp. 1367 ff.; see also TEUBNER, G. 1997, “Global Bukovina”: Legal Pluralism in the World Society', in G. Teubner (ed.), *Global Law Without a State*, Dartmouth Publishing Co., Aldershot, Brookfield, U.S.A., Singapore, Sidney, pp. 16 ff.

⁴⁶ On the UDPR see ABBOTT, F. M., COTTIER, T. & GURRY, F. 2007, *International Intellectual Property in an Integrated World Economy*, Wolters Kluwer, Austin, Boston, pp. 394 ff.

⁴⁷ The Commission Decisions 2011/833/EU of 12 December 2011 on the re-use of Commission information, in *OJ* 14 December 2011, *L* 330/39, falls short of the “wish list” contained in this document on most accounts.

⁴⁸ The Piedmont region has been active in this connection for several years: see <<http://selili.polito.it/>>.

Competition law should be one; nothing here suggests that PSI should be immunized from competition law; on the contrary, the fact that the PSI directive contains a mini-body of antitrust (*see* above chapter 2) and that EU and national competition rules applies is to be seen with relief, to avoid that market power undermines the workings of online communities. Data protection law would be another important example. Here the suggestion is that, as data protection rules are mandatory, they are by definition to be complied with by all the parties having the required link to the EU privacy, so that there is no need that the corresponding obligations are “contractualized” by being duplicated by some license provision; to come back to an issue left open above (in chapter 2), licenses should be “decoupled” from undertakings from re-users of PSI to respect data protection rules.⁴⁹

Would PSIHs have reasons to object to the application of the *lex communitaria* as briefly sketched above? This is a possibility, as PSIHs might feel more comfortable with the application of national licenses. In turn, national political elites might lose interest in pushing forward the process, in that the public relations effect of releasing PSI under rules which do not carry a “national brand” might be deemed lessened. Both these aspects should be taken into account, under the heading of “backfiring” (chapter 2 above).

Also private players may have reasons to object to the application of the *lex communitaria*. Imagine a business offering for a price a value added and PSI-incorporating product or service. It does stand to reason that this provider might wish that the relationship with customers is predetermined, by reference to a given set of terms and conditions and by the choice of an applicable law, ideally that of the place of business of the provider itself. This is a difficult case. On the one side one might stress the fact that the emergence of hybrid models, on which we earlier insisted, entails that businesses should be allowed to opt in the law they select and opt out of *lex communitaria* and all the appurtenant trappings (including the dispute resolution mechanism). On the other side, we cannot forget that even PSI incorporated into a value added product and service is subject to the “travelling clauses” which we discussed earlier; so that a later choice of law by the last entity in the chain of authorizations is not liable to rescind the effect of the terms and conditions of the prior licenses travelling along with the last one. What one can say at this stage is that a lot of patience and creativity is required to unravel that part of the puzzle.

15. Conclusion

This exercise may be criticized in several ways. It may be seen as overly academic; worse, it may be argued that it does not deliver what is promised. More specifically, any component of guidance from the Commission to the Member States is missing. This would probably be fair criticism. However, it should also be considered that in the last few years we have been talking about “licensing” without controlling the conditions of use of the term; and that, as a result, the tower of Babel of mutually incompatible licensing terms and conditions has been increasing, rather than decreasing. Fact is that the cure cannot be decided, until the exact terms of the disease have been identified. Here it is submitted that what has been lacking all along is an analysis which deals with the special characteristic of licensing, when the authorization concerns PSI and when the licensing is a component of a cooperative, rather than market-based, exchange. This has contributed to making the quest for interoperability and the search for the design of the institutions capable of maximizing welfare deriving from PSI re-use two missions impossible to accomplish. In this perspective, it would appear that stepping back and looking at the missing pieces of the jigsaw puzzle is the best option.

⁴⁹ This is also the recommendation by MORANDO, F. 2012, *Ad Hoc Licenses, Dominant License Models and (the Lack of) Interoperability*, quoted above at note 5. In this regard the approach taken by the Commission Decisions 2011/833/EU of 12 December 2011 on the re-use of Commission information, quoted above at note 48, Art. 6, is to be approved.

This is even more so, if one considers that the EU is confronted with the chance to establish what role the same EU and its Member States may play, in conformity with the principle of subsidiarity, to contribute to the initial emergence of rules which are appropriate for digital network driven, cooperative exchanges, which, is submitted, may still form the most advanced and productive part of the digital agenda taking shape. When this broader task is accomplished, also the more minute and mundane task of drafting guidance will follow.