Less Is More: Some Undesirable Consequences Of Affording EU Copyright Protection To Artificial Intelligence Creations
少即是多：将欧盟版权保护用于人工智能创造所带来的不良后果

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I AM AI

我是人工智能

REMBRANDT
伦勃朗

THE NEXT REMBRANDT
下一个伦勃朗

- Similarities (qualitative) 相似（定性）：

  « As humans beings recede from direct participation in the creation of many works, continued insistence on human authorship as a prerequisite to copyright threatens the protection – and, ultimately, the production- of works that are **indistinguishable in merit and value** from protected works created by human beings » (Denicola (2016), p. 269)
  "随着人类不再直接参与许多作品的创造，如果继续坚持以人类作者为著作权的先决条件，对于在**特征和价值上**与人类创作的受保护作品**别无二致**的作品，该等坚持会威胁到对上述作品的保护，最终会威胁到其产生。" （Denicola (2016)，第269页）

- Differences (quantiative) 差异（定量）：

  « **AI-generation of new creation** based on a training set **can be unleashed** with little marginal costs, and can explore any kind of combinations and variations » (Sartor, Lagioa, Contissa (2018), p. 12)
- "几乎无需边际成本，**人工智能**基于训练集便能**爆发式地产生新作品**，而且可以探索任何类型的组合与变化。" （Sartor, Lagioa, Contissa (2018)，第12页）

AUTHORS 作者 & 和 MACHINES 机器

- Author = human being 作者 = 人类
  - « (…) an author is a human being who exercises subjective judgment in composing the work and who controls its execution » (Ginsburg 2003, p. 1066)
  - "(…) 作者是在创作时施加主观判断并且控制作品实施的人。" (Ginsburg 2003，第1066页)
- Machine = not an author 机器 ≠ 作者
  - But *see* European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL))
  - 但是，请看欧洲议会2017年2月16日的决议 "就制定《机器人民事法律规则》向欧委会提出的建议"（2015/2013（INL））
    - « electronic personality » "电子人格"
    - Not followed by the Commission 欧委会并未采纳

- Copyright protection is tailored on the capabilities of a human being
- 著作权保护是根据人类的能力范围设计的
  - Natural rights justification of copyright (cf. originality) 著作权是天赋人权（参考：原创性）
    - *Contra*: inapplicable *反对*：不适用
  - Duration is function of a human life 著作权保护期是人类寿命的应变量
    - *Contra*: inapplicable *反对*：不适用
  - Moral rights are intimately linked to personality 道德权利与人格紧密相关
    - *Contra*: inapplicable *反对*：不适用
  - **Long term exclusive rights designed to cover the costs of creation 设计长期独占性权利是为收回创作成本**
    - *Contra*: « AI-generation of new creation based on a training set can be **unleashed with little marginal costs**, and can explore any kind of combinations and variations » (quantitative difference)
    - *反对*："**几乎无需边际成本**，人工智能基于训练集便能**爆发式地**生产新作品，而且可以探索任何类型的组合与变化。"（定量差异）
- **CCL: copyright protection is meant for humans and probably not fit for AI production**
- **知识共享许可协议：著作权保护是为人类设计的，很可能不适用于人工智能作品的生产**

- Hypothesis of EU copyright protection for AI production
- 欧盟人工智能作品版权保护的假设
  - Originality? 原创性？
  - Machine Learning? 机器学习？
  - International Competition? 国际竞争？

ORIGINALITY
原创性

- « Free and creative choices » "自由创造性选择"
  - Globally : converging criteria (Gervais, pp. 976-977)
  - 全球：标准趋同（Gervais，第976~977页）
  - *See* CJEU : « where the expression of those components is dictated by their technical function, the criteria of **originality is not met, since the different methods of implementing an idea are so limited that the idea and the expression become indissociable** » (*BSA*, C-393/09, § 49)
  - 见欧盟法院："组成要素的表达由其技术功能决定的，**不满足原创性标准，因为实施思想的方法数量太受限制，使得思想及其表达变得不可分离。**"（软件联盟，C-393/09, § 49）
    - = *merger doctrine US :* « **When the 'idea' and its 'expression' are (…) inseparable, copying the 'expression' will not be barred**, since protecting the 'expression' in such circumstances would confer a monopoly of the 'idea' upon the copyright owner free of the conditions and limitations imposed by the patent law » *(Herbert Rosenthal Jewelry Corp. v. Kalpakian* (9th Cir. 1971))
    - = *美国的"表达与思想融合原则"："**'思想'和'表达'（…）不可分离的，不应禁止复制'表达'**，因为在该等情形下保护'表达'会使版权所有者免受专利法规定的条件与限制的约束，从而授予其对'思想'的垄断。"（Herbert Rosenthal Jewelry Corp.诉Kalpakian案*（联邦第九巡回上诉法院，1971年））

- Comp. *merger doctrine* US, no copyright protection when :
- 对比美国的"*融合原则*"，下列情况不受版权保护：
  - From the situation where only one way to express an idea 表达思想的方式只有一种
    - *(Herbert Rosenthal Jewelro Corp. v. Kalpakian* (9th Cir. 1971))
    - *(Herbert Rosenthal Jewelro Corp.诉Kalpakian案*（联邦第九巡回上诉法院，1971年)
  - **Limited number of ways to express an idea 表达思想的方法数量有限**
    - « When the uncopyrightable subject matter is very narrow, so that 'the topic necessarily requires', **if not only one form of expression, at best only a limited number**, to permit copyrighting would mean that a party or parties, by copyrighting a mere handful of forms, **could exhaust all possibilities of future use of the substance**. In such circumstances it does not seem accurate to say that any particular form of expression comes from the subject matter. However, it is necessary to say that the **subject matter would be appropriated by permitting the copyrighting of its expression**. We cannot recognize copyright as a game of chess in which the **public can be checkmated** »
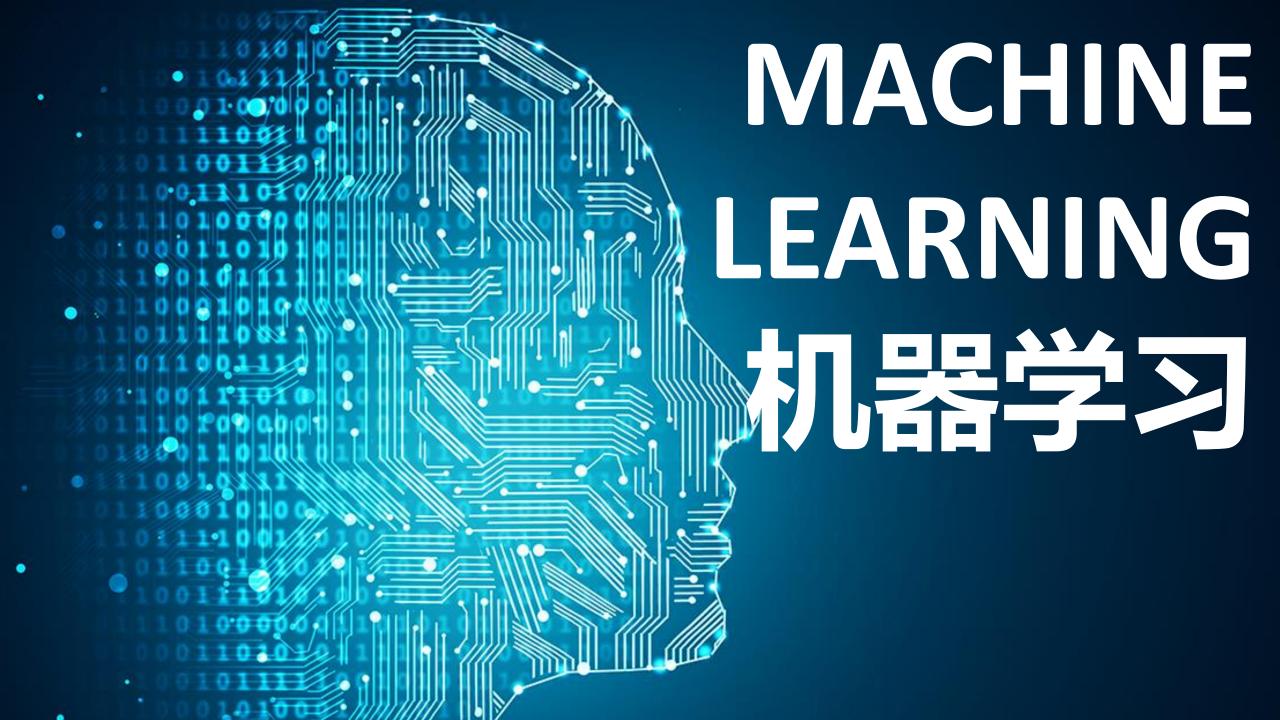   (*Morrissey v. Procter & Gamble Co.* (1st Cir. 1967))
    - 当未受版权保护的客体非常狭义，从而使得 '要允许对该客体授予版权，**就有必要将表达形式限制在一定数量内，甚至限制于一种表达形式**，' 亦即一方或者多方通过获取仅仅少数表达形式的版权，**就能穷尽未来实质使用的所有可能性**。在这种情况下，声称某种特定表达形式来自该客体似乎不准确。然而有必要指出，**通过允许对其表达形式授予版权，就能造成对该客体的占用**。如果把版权比作象棋游戏，我们不认为规则中可以允许**社会公众被［版权权利人］'将杀'**。(*莫里斯诉宝洁案（联邦第1巡回上诉法院，1967年）*)

- Comp. EU Trademark and Design law, no protection when:
- 比较欧盟商标和外观设计法，下列情况不受保护：
  - Only one way to obtain a technical result 获取技术成果的方式只有一种
    - Art. 7(1)(e)(ii) regulation 2017/1001 (Trademark) 欧盟2017/1001号条例（商标）第7(1)(e)(ii)条
    - Art. 8(1) regulation 6/2002 (Design) 欧盟6/2002号条例第8(1)条
  - **Limited number of ways to obtain a technical result 获取技术成果的方式数量有限**
    - « Multiplicity of forms » approach rejected by the CJEU 欧盟法院拒绝的"形式多样性"原则
      - *Lego*, C-48/09 P, §§ 53-60 ; *Philips*, C-299/99, §§ 81-83 (Trademark)
      - 乐高案，C-48/09 P, §§ 53-60; 飞利浦案， C-299/99, §§ 81-83 （商标）
      - *DOCERAM*, C-395/16, § 30 (Design):
      - 杜塞拉姆案，C-395/16, § 30 （外观设计）：
        « (…) **if the existence of alternative** designs fulfilling the same function as that of the product concerned **was sufficient in itself to exclude the application of Article 8(1)** of Regulation No 6/2002, **a single economic operator would be able to obtain several registrations** as a Community design of different possible forms of a product incorporating features of appearance of that product which are exclusively dictated by its technical function. That would **enable such an operator to benefit**, with regard to such a product, **from exclusive protection** which is, in practice, equivalent to that offered by a patent, but without being subject to the conditions applicable for obtaining the latter, **which would prevent competitors** offering a product incorporating certain functional features or limit the possible technical solutions, thereby depriving Article 8(1) of its full effectiveness. »
      - （…）如果仅仅**存在**所涉产品外观设计的功能相同的**替代性外观设计**，即**足以排除第6/2002号条例第8(1)条的适用性**，那么**某一经济活动的经营者就能够**针对某一产品的不同可能形式**注册多个共同体外观设计**，只需这些形式体现由该产品的技术功能所独占性要求的外观特征。如此，针对该产品，**上述经营者**实际上能从等效于专利的**独占性保护**中**获利**，却无需满足获取专利所需的条件。**这会阻止竞争对手**提供体现包含特定功能特征的产品，或者限制可能的技术解决方案，从而使第8(1)条丧失充分有效性。

- *Rationale*: avoiding all expressions/forms necessary to express an idea/obtain a technical result to be appropriated

- *理由*：需避免【表达某一想法／获取某一技术标的】所必需的任何【表达／形式】被占用

- But, « AI-generation of new creation based on a training set can be **unleashed** with little marginal costs, and **can explore any kind of combinations and variations** »

- 但是，"几乎无需边际成本，人工智能基于训练集便能爆发式地生产新作品，而且可以**探索任何类型的组合与变化**"

- **CCL: if AI can envisage all possible expressions/forms, affording copyright protection to AI production would reach the consequences that « free choice » rationale seek to avoid**

- **知识共享许可协议：如果人工智能可以设想出所有可能的表达／形式，那么向人工智能作品提供版权保护，会导致'自由选择'原则所力图避免的结局**

MACHINE
LEARNING
机器学习

- « Artistic works become **inputs** for a data-mill » (Sartor *e.a.*, p. 3)

- "艺术作品成为了数据磨坊的**进料**" (Sartor等，第3页)

- Machine Learning = reproduction？机器学习 = 复制?
  - Comp. CJUE, *Infopaq*, C-5/08, §51 对比欧盟法院Infopaq案C-5/08, §51
    - « (…) **an act occurring during a data capture process, which consists of storing an extract of a protected work** comprising 11 words and printing out that extract, **is such as to come within the concept of reproduction** in part within the meaning of Article 2 of Directive 2001/29, if the elements thus reproduced are the expression of the intellectual creation of their author; it is for the national court to make this determination »
    - （...）**数据捕获过程中发生的行为，如果涉及存储**并打印由11个单词组成的、**受保护作品的提取信息**，则**应被包含于**2001/29号指令第2条定义的**复制概念中**；以这种方式所复制的要素是否是构成其作者智力创造的表达，则由国家法院决定。

- Machine learning = infringement？机器学习=侵权?
  - *See* art. 4(3) directive 2019/790 (TDM) 见2019/790号指令第4(3)条（文本和数据挖掘）
    - **Can be limited** : « (…) apply on **condition that the use** of works and other subject matter referred to in that paragraph **has not been expressly reserved** by their rightholders in an appropriate manner, such as machine-readable means in the case of content made publicly available online »
    - **可能被限制**：(...) **应有条件适用**，即权利人**没有以适当方式明确保留**对上述**作品**或其他内容**的使用**，例如针对网上公开提供的内容采取机器可读的方式［进行使用］。

- Machine learning = licences when no exception？机器学习=无例外即许可?
  - *See* ECJ, *Magill*, C-241/91 P and C-242/91 P; *IMS Health*, C-418/01 见欧盟法院，Magill案，C-241/91 P和C-242/91 P; *IMS Health*案，C-418/01
    - **Refusal to grant a licence for IP** by an undertaking in a dominant a position is **not abusive, unless**: (1) it prevents the emergence of a new product for which there is a potential consumer demand, (2) it is unjustified, (3) it excludes any competition on a secondary market
    - 处于支配地位的企业**拒绝授予知识产权许可不属于欺凌**，除非这种行为（1）阻止有潜在消费需求的新产品出现，（2）无正当理由，（3）阻止了二级市场上的任何竞争。

- Like artistic works, AI production might « become inputs for a data-mill »

- 与艺术作品类似，人工智能作品可能也会"变成数据磨坊的进料"

- **CCL: since AI production might serve as inputs for machine learning, affording copyright protection might run encounter its development in the EU (because infringing or not subject to licences)**

- **知识共享许可协议：因为人工智能作品可能作为机器学习的输入资料，所以是否授予版权保护的决定，或会影响其在欧盟的发展进程（因为涉及侵权问题，或免于许可负担）**

INTERNATIONAL COMPETITION 国际竞争

- Competitive International Landscape 国际竞争格局
  - « (…) define the way forward to ensure that the EU as a whole can **compete globally** (…) » (Communication EU Commission, « Artificial Intelligence for Europe » (COM(2018) 237 final, p. 4)
  - （…）确定前进方向，保障欧盟整体在**全球**的**竞争力**（…）（欧委会通信：欧洲的人工智能，(2018) 237 号通信最终稿，第4页））

- Copyright protection outside of the EU 欧盟境外的版权保护
  - National treatment Berne Convention, art. 5(1) : « **Authors shall enjoy**, in respect of **works for which they are protected under this Convention**, in countries of the Union **other than the country of origin**, the rights which their respective laws do now or may hereafter grant to their nationals, as well as the rights specially granted by this Convention »
  - 《伯尔尼公约》第5(1)条国民待遇原则：**根据本公约得到保护作品的作者**，在**除作品起源国**的本联盟各成员国，就其作品享受各该国法律现今给予或今后将给与其国民的权利，以及本公约特别赋予的权利。
    - « (…) because lack of human authorship would disqualify such outputs from Berne subject matter under Art. 2, **other Berne members incur no obligation to protect purely coputer-generated works even if their countries of origin choose to cover them by copyright** (…) » (Ginsburg 2018, p. 134-135)
    - （…）因为如若缺少人类作者身份，不满足《伯尔尼公约》第2条项下的客体要求，所以**其他《伯尔尼公约》成员没有义务保护纯计算机生成的作品，即使作品起源国选择对这些作品提供版权保护**（…）（Ginsburg 2018，第 134～135页）
    - => copyright protection to AI production limited to country of origin
    - =>人工智能作品的版权保护仅限于起源国

- TDM exceptions outside of the EU 欧盟境外的 "文本和数据挖掘例外规定"

	EU 欧盟	China 中国	USA 美国	Japan 日本
TDM 文本和数据挖掘	Art. 3 (scientific research) and 4 (general) Dir. 2017/790 2017/790号指令第3条（科学研究）和第4条（一般要求）	Closed list, no TDM but law under revision and possible « fair use/fair dealing » 封闭式清单，目前无文本和数据挖掘法规，但正在进行立法修订，可能会规定"合理使用／公平处理"	17 USC 107 (*fair use*, after *Authors Guild v. Google Inc.*, 804 F.3d 202 (2d Cir. 2015) 《美国法典》第17篇第107条（美国作家协会诉谷歌案，804 F.3d 202（联邦第二巡回上诉法院，2015年）之后，加入"合理使用"）	Art. 30-4 Japanese Copyright Act (exception 'not for enjoying the idea or emotions expressed in a work) 《日本版权法》第30条第4款（"不为欣赏作品中表达的思想或情感"例外规则）
Reach 相关规定涵盖范围	**Limited 有限涵盖**	« Chinese courts have realised the disadvantage of limiting fair use to enumerated circumstances and brought in a **more flexible approach for finding fair** use by learning from their US counterparts » (Wang, He, p. 23) "中国法院已经认识到将合理使用限于所枚举的情况存在缺陷，已通过向美国法院学习，引入**更灵活的方法，对合理使用加以确认**"（Wang, He，第23页）	« **Uses involving robotic readers are fast-tracked for fair use** » (Grimmelmann, p. 667) ; but doubts as to « expressive machine learning » (Sobel, pp. 66-79) **"为将机读使用确认为合理使用开辟快速通道"**（Grimmelmann，第667页）；但是对"表达性机器学习"仍存在疑点，（Sobel，第66～79页）	« **Japan as a paradise for machine learning** » (Ueno) **日本是机器学习的天堂**（Ueno）

- EU vs. China/USA/Japan 欧盟与中、美、日对比
  - Berne Convention: If IA production protected in EU, not necessarily in China/USA/Japan
  - 《伯尔尼公约》：某项人工智能作品在欧盟受到保护，不意味着必然将在中、美、日也受到保护
  - TDM exceptions: Copyrighted AI production might be widely used for machine learning in some countries (China?, USA, Japan), not in others (China?, EU)
  - 文本和数据挖掘例外规定：受版权保护的人工智能作品也许会在某些地区（中国？或美国、日本）广泛用于机器学习，而在另一些地区则未必（中国？或欧盟）
  - => if IA production is protected in EU, not necessarily in China/USA/Japan and even so, exception available
  - => 某项人工智能作品在欧盟受到保护，不意味着必然将在中美日也受到保护；就算受到保护，也仍有例外规定
- **CCL: copyright protection for AI production in EU not necessarily likely to provide with a competitive advantage when confronted to China/USA/Japan, to the contrary**
- **知识共享许可协议：当面对中、美、日的竞争时，欧盟如为人工智能创造提供版权保护，未必会给其带来优势，倒有可能适得其反**

CONCLUSION
结论

KEEP CALM

AND LEAVE
AI WORKS IN
THE PUBLIC DOMAIN

- AI production « as such » should remain in the public domain

- 人工智能作品"就其现状而言"应该留存于公有领域

- AI production « implemented » in a human creation might be protected

- 人类创造过程中"实施"的人工智能创作或可受到保护

  - In theory, yes : « It is only through the choice, sequence and combination of those [AI productions] that the [human] author may express his creativity in an original manner and achieve a result which is an intellectual creation (comp. CJEU, *Infopaq*, C-5/08, § 45)

  - 理论上,"是":只有通过对这些[人工智能作品]进行选择、排序和组合,[人类]作者才可能原创性地表达自己的创造力,实现智力创造成果(比较欧盟法院Infopaq案,C-5/08 § 45)

  - In practice, most of the concerns for AI production "as such" remain and legal uncertainty since the distinction computer-assisted works/computer generated works is more of a *continuum* rather than a dichotomy (McCutcheon, p. 929)

  - 实际上,对人工智能作品"现状"的顾虑,大多依然着眼于法律不确定性,因为计算机辅助作品/计算机生成作品位于连续光谱之上,并非泾渭分明(McCutcheon,第929页)

- CJEU, 12 september 2019, *Cofemel*, C-683/17, §§ 37-38
- 欧盟法院，2019年9月12日，Cofemel案，C-683/17, §§ 37-38
  - « In this respect, it should be noted at the outset that, under **Article 17 (2) of the Charter** of Fundamental Rights of the European Union, intellectual property shall be protected.
  - "就此方面而言，需首先指出，依据《**欧盟基本权利宪章》第17(2)条**，知识产权应受保护。"
It follows from the wording of this provision that objects constituting intellectual property enjoy protection under Union law. However, **it does not follow that such objects or categories of objects must all benefit from identical protection**. »
  - "由第17(2)条可得，构成知识财产的标的受欧盟法律保护。然而，**不能从第17(2)条得出该标的或该类标的必须获得同等保护的结论。**"
- **CCL: AI production is (quantitatively) different from Human production and if IP protection is evidenced as necessary, then less protection than copyright might prove better to avoid undesirable consequences**

- **知识共享许可协议：量化地说，人工智能作品不同于人类作品；如果有证据表明需要对人工智能作品提供知识产权保护，提供相对更少的版权保护或许能产生更多获益，避免不良后果。**

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Less is More 少即是多

Thank you for your attention !

"感谢您的关注！"

[译注：感谢聆听！]

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