

# Copyright Protection for AI Production? An EU Law Perspective

ELSA Webinar, 25 February 2021

Julien Cabay

Professor Université Libre de Bruxelles (JurisLab - FabLab)

Associate Professor Université de Liège

Invited Professor KULeuven

[jcabay@ulb.ac.be](mailto:jcabay@ulb.ac.be)

# Outline

- Introduction
- Apples & Oranges
- Chicken & Egg
- EU Policy
- Future CJEU Case Law?
- Conclusion





A robot wrote this entire article. Are you scared yet, human?

*GPT-3*

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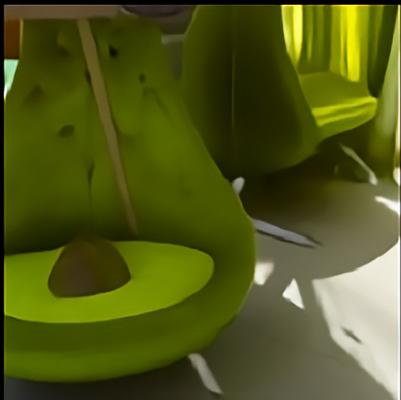
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We asked GPT-3, OpenAI's powerful new language generator, to write an essay for us from scratch. The assignment? To convince us robots come in peace

- For more about GPT-3 and how this essay was written and edited, please read our editor's note below







THE NEXT  
REMBRANDT



# I am AI

Composed by AIVA for NVIDIA

00:47



Aiva Technologies

[www.aiva.ai](http://www.aiva.ai)



## ARTIFICIAL INTELLIGENCE

A program that can sense, reason, act, and adapt

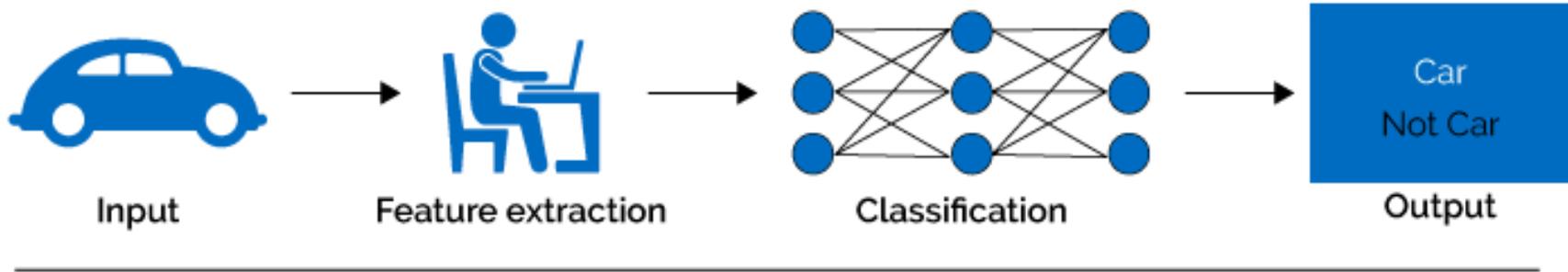
## MACHINE LEARNING

Algorithms whose performance improve as they are exposed to more data over time

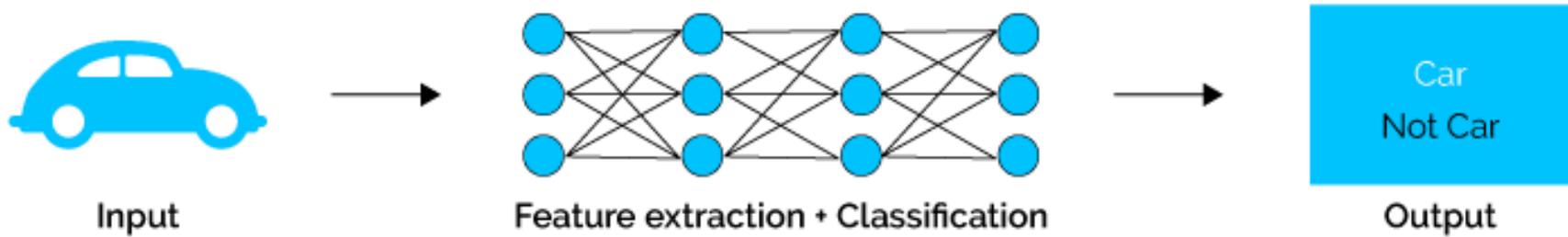
## DEEP LEARNING

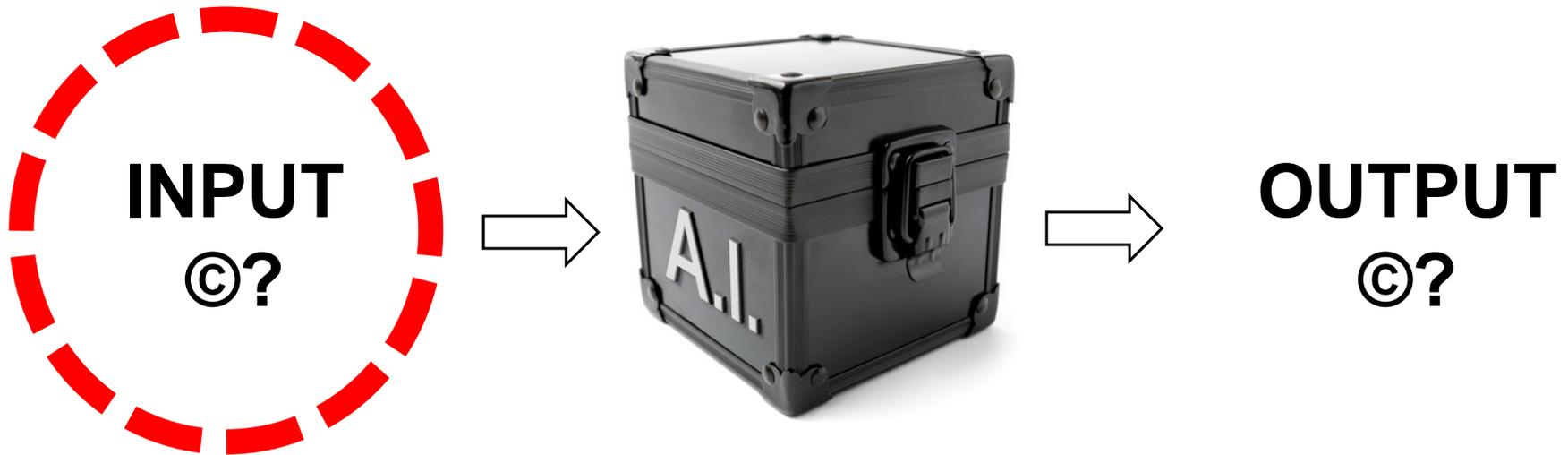
Subset of machine learning in which multilayered neural networks learn from vast amounts of data

# Machine Learning



# Deep Learning



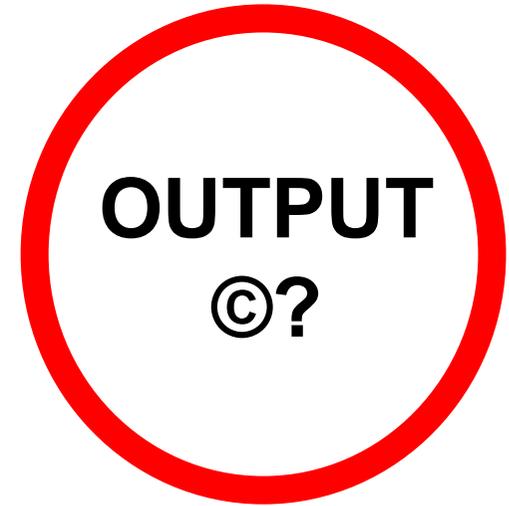
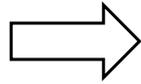


⇒ (Statutory) Text and Data Mining (TDM) exceptions

# TDM exceptions

	EU	China	USA	Japan
TDM	Art. 3 (scientific research) and 4 (general) Dir. 2019/790	Closed list, no TDM but law under revision and possible « fair use/fair dealing »	17 USC 107 ( <i>fair use</i> , after <i>Authors Guild v. Google Inc.</i> , 804 F.3d 202 (2d Cir. 2015))	Art. 30-4 Japanese Copyright Act (exception 'not for enjoying the idea or emotions expressed in a work')
Reach	<b>Limited</b>	« Chinese courts have realised the disadvantage of limiting fair use to enumerated circumstances and brought in a <b>more flexible approach for finding fair use</b> by learning from their US counterparts » (Wang, He, p. 23)	« <b>Uses involving robotic readers are fast-tracked for fair use</b> » (Grimmelmann, p. 667) ; but doubts as to « expressive machine learning » (Sobel, pp. 66-79)	« <b>Japan as a paradise for machine learning</b> » (Ueno)

**INPUT**  
©?



⇒ **Mostly judicial interpretation**

# Judicial interpretation

Home / #IPKat / AI works / Beijing Internet Court / concept of works / copyright / human authorship / Kan He / Feilin v. Baidu: Beijing Internet Court tackles protection of AI/software-generated work and holds that copyright only vests in works by human authors

## Feilin v. Baidu: Beijing Internet Court tackles protection of AI/software-generated work and holds that copyright only vests in works by human authors

👤 Kan He Saturday, November 09, 2019 - #IPKat, AI works, Beijing Internet Court, concept of works, copyright, human authorship. Kan He

Home / #IPKat / Artificial Intelligence / copyright / Dreamwriter / Kan He / Nanshan District Court of Guangzhou Province / Tencent Beijing / Another decision on AI-generated work in China: Is it a Work of Legal Entities?

## Another decision on AI-generated work in China: Is it a Work of Legal Entities?

👤 Kan He Wednesday, January 29, 2020 - #IPKat, Artificial Intelligence, copyright, Dreamwriter, Kan He, Nanshan District Court of Guangzhou Province, Tencent Beijing

Three months ago, this Kat discussed the *Feilin v. Baidu* case ([here](#)), where the Beijing High Court addressed the copyright issues of an AI-generated work. In that case, the court held that the AI-generated work in question could not be protected under copyright law, but would/might (?) be entitled to other forms of protection.

THE IPKAT: INTELLECTUAL PROPERTY NEWS AND FUN FOR EVERYONE!

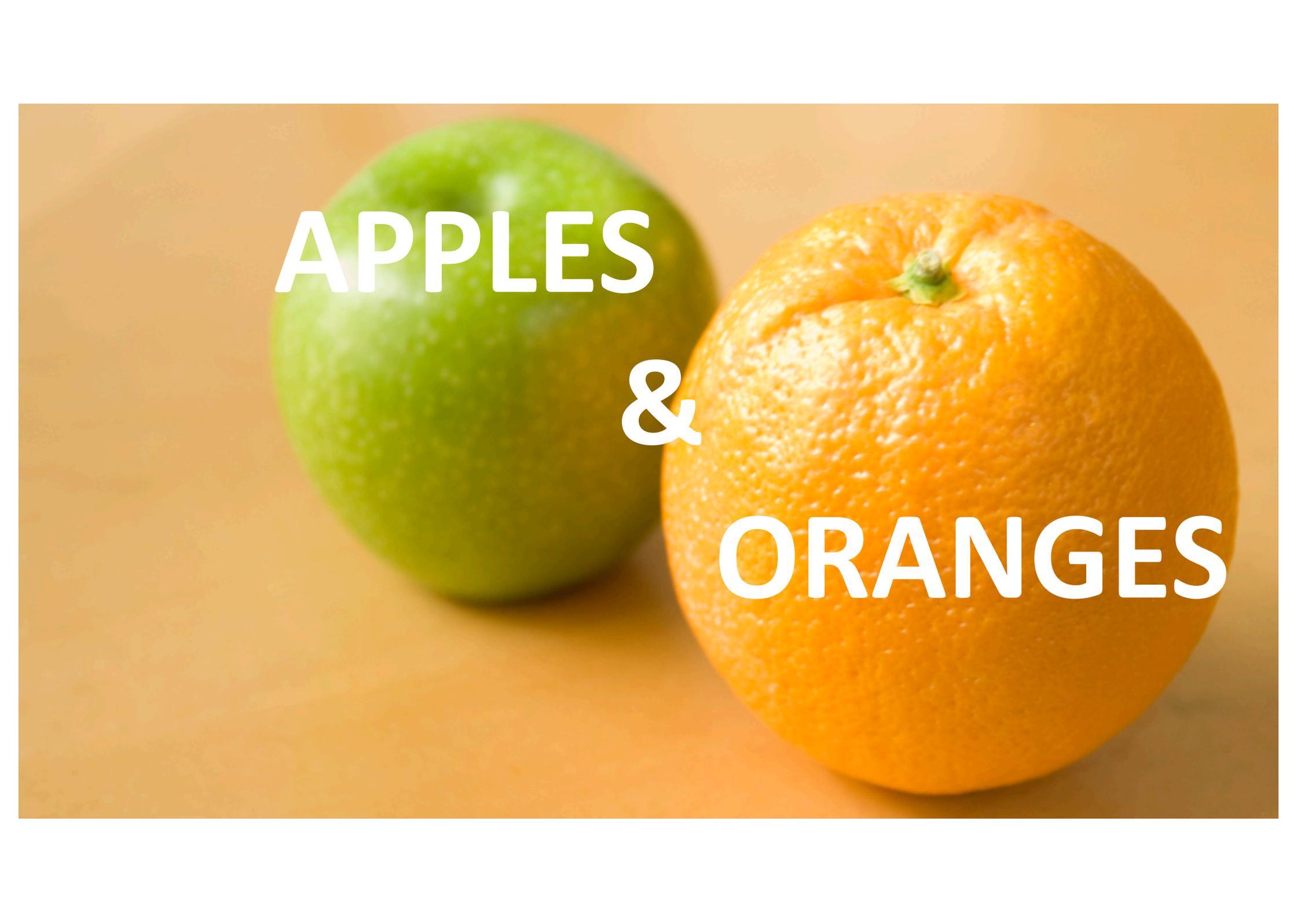


HOW MANY PAGE-VIEWS HAS THE IPKAT RECEIVED?

THE IPKAT: INTELLECTUAL PROPERTY NEWS AND FUN FOR EVERYONE!



HOW MANY PAGE-VIEWS HAS THE IPKAT RECEIVED?

A photograph of a green apple and an orange resting on a light-colored wooden surface. The apple is on the left, and the orange is on the right. The text 'APPLES & ORANGES' is overlaid in white, bold, sans-serif font. 'APPLES' is positioned over the apple, '&' is in the center between the two fruits, and 'ORANGES' is positioned over the orange.

**APPLES**

**&**

**ORANGES**

# AI/Human Production

- Similarities (qualitative)
  - *'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)
- Differences (quantitative)
  - *'**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, Lagioia, Contissa (2018), p. 12)

⇒ **Difference in scale is critical**

# AI Generated/Assisted Production

- No clear-cut dichotomy
  - *'There is a **continuum** between, at one extreme, 'computer-assisted' works, and at the other extreme, autonomously-generated works'* (McCutcheon (2013), p. 929)
- In theory, AI generated/assisted production could be subject to a different legal assessment
- In practice, concerns for AI generated production might apply equally to AI assisted production

⇒ **Difference in practice is critical**

# Next Rembrandt/Dreamwriter

- Copyright is a 'One size fits all', affording protection regardless quality, merit, aesthetic and purpose
- Conclusion as to copyright protection for AI production as a matter of principle will be equally valid for 'Masterpieces' and 'Small Changes'
- Possible relevance of copyright protection in one sector might not be in another one

⇒ **Difference in industries is critical**

# EU/Others Copyright Laws

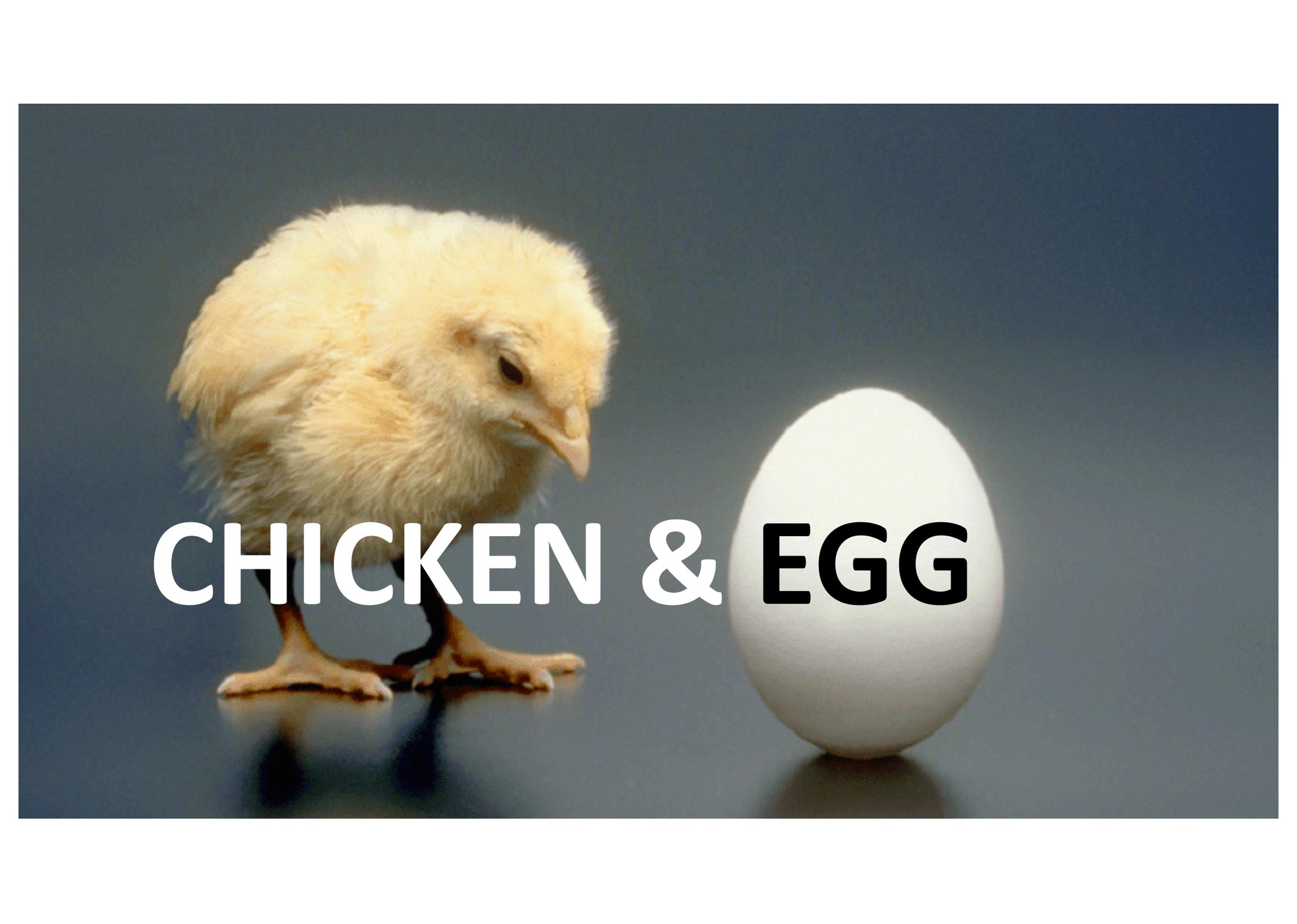
- Copyright subject-matter interconnected with other aspects (rights, exceptions, duration) to strike a balance
- Not the same balance in all Copyright Laws
  - Example: undesirable effects of copyright extension in the US might be mitigated with open system of exception (*fair use*), whilst the same is not necessarily true in the EU (closed list of exception, interpreted strictly)

⇒ **Difference in legal context is critical**

# AI/AI

- AI is an umbrella term covering many different technologies
- AI is a fast evolving technology
- Decision as to legal assessment of AI shall not be made based on the assumption of a single technology nor on the basis of current state of the art (but likely future development)

⇒ **Difference in technologies is critical**

A fluffy yellow chick is positioned on the left side of the frame, looking towards the right. To its right is a single white egg. Both are set against a dark, reflective background. The text 'CHICKEN & EGG' is overlaid in the center, with 'CHICKEN' in white and '& EGG' in black.

**CHICKEN & EGG**

# Protection/Incentive

- Traditional Copyright justification (personality, labour, utilitarianism) inapplicable to AI
- Proposals based on incentive theory
  - Investing in AI
    - // *sui generis* right maker of a database (Cruquenaire *e.a.*, p. 233)
    - // Section 9(3) CDPA (UK) (Guadamuz, p. 19)
      - *'In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken'*
      - 50 years (sect. 12(7)) ; no right to be identified as author (sect. 79(2)(c)) ; no right to object to derogatory treatment of work (sect. 81(2))
  - Disseminating AI production
    - // Article 4 Directive 2006/116 (Duration) (Ramalho, p. 22)
      - *'Any person who, after the expiry of copyright protection, for the first time lawfully publishes or lawfully communicates to the public a previously unpublished work, shall benefit from a protection equivalent to the economic rights of the author. The term of protection of such rights shall be 25 years from the time when the work was first lawfully published or lawfully communicated to the public.'*

# Protection/Incentive

⇒ **Logically, actual need for incentive should be addressed first**

⇒ Yet to be substantiated, see Ginsburg 2018, p. 134

⇒ **Then, analysis whether the issue whether IP protection is the right incentive**

⇒ Contractual protection already available, compare CJEU, *Ryanair* (C-30/14)

A photograph of the European Union flag, featuring twelve yellow stars in a circle on a blue field, waving on a silver flagpole. The background is a blurred, modern glass and steel building with a blue sky. The text "EU POLICY" is overlaid in white, bold, sans-serif font on the right side of the image.

# EU POLICY

## EU Policy (Parliament)

*‘The resolution calls on the Commission to come forward with a balanced approach to intellectual property rights when applied to hardware and software standards and codes that protect innovation and at the same time foster innovation. Moreover, **the elaboration of criteria for "own intellectual creation" for copyrightable works produced by computers or robots is demanded.**’*

Explanatory Statement annexed to the *Motion for a European Parliament Resolution with recommendations to the Commission on Civil Law Rules on Robotics*, 27.1.2017, 2015/2103(INL)

## EU Policy (Parliament)

*'Takes the view that technical creations generated by AI technology must be protected under the IPR legal framework in order to encourage investment in this form of creation and improve legal certainty for citizens, businesses and, since they are among the main users of AI technologies for the time being, inventors; considers that works autonomously produced by artificial agents and robots might not be eligible for copyright protection, in order to observe the principle of originality, which is linked to a natural person, and since the concept of 'intellectual creation' addresses the author's personality; calls on the Commission to support a horizontal, evidence-based and technologically neutral approach to common, uniform copyright provisions applicable to AI-generated works in the Union, if it is considered that such works could be eligible for copyright protection'*

# EU Policy (Commission)

***‘(...) Reflection will be needed on interactions between AI and intellectual property rights, from the perspective of both intellectual property offices and users, with a view to fostering innovation and legal certainty in a balanced way. (...)’***

EU Commission Communication, *Artificial Intelligence for Europe*, Brussels, 25.4.2018, COM(2018) 237

***‘ ... ’***

EU Commission White Paper, *On Artificial Intelligence – A European Approach to Excellence and Trust*, Brussels, 19.2.2020, COM(2020) 65 final; Communication *A European strategy for data*, Brussels, 19.2.2020, COM(2020) 66 final; Communication *Shaping Europe’s digital future*, Brussels, 19.2.2020, COM(2020) 67 final

# EU Policy (Commission)

*'(...) In addition, the digital revolution requires **reflection on how and what is to be protected. AI technologies are creating new works and inventions.** In some cases, for instance in the cultural sector, the use of inventive machines may become the norm. These developments raise the **question of what protection should be given to products created with the help of AI technologies (...)** the need to **distinguish between inventions and creations generated with the help of AI technologies and the ones solely created by AI technologies.** Whilst inventions and creations autonomously created by AI technologies are still mostly a matter for the future, the Commission takes the view that AI systems should not be treated as authors or inventors. (...) The study also shows that current EU IP framework and the European Patent Convention appear broadly suitable to address the challenges raised by AI-assisted inventions and creations. However, harmonisation gaps and room for improvement remain. These should be addressed in order for European excellence to blossom in AI. (...)'*

# EU Policy (CJEU)

- *SAS Institute, C-406/10*
  - *'(...) to accept that the functionality of a computer program can be protected by copyright would amount to making it possible to monopolise ideas, to the **detriment of technological progress and industrial development**'*
- *Levola, C-310/17*
  - *'(...) the need to ensure that there is no element of subjectivity — given that it is **detrimental to legal certainty** — in the process of identifying the protected subject matter means that the latter must be capable of being expressed in a precise and objective manner'*
- *GS Media, C-160/15*
  - *'(...) it follows from recitals 3 and 31 of Directive 2001/29 that the harmonisation effected by it is to maintain, in particular in the electronic environment, a **fair balance between**, on one hand, the **interests of copyright holders** and related rights in protecting their intellectual property rights, safeguarded by Article 17(2) of the Charter of Fundamental Rights of the European Union ('the Charter') and, on the other, the protection of the **interests and fundamental rights of users** of protected objects, in particular their freedom of expression and of information, safeguarded by Article 11 of the Charter, and of the general interest'*

# CASE LAW



COUR DE JUSTICE  
DE L'UNION  
EUROPÉENNE

# The Starting Point

*‘Member States shall provide for the exclusive right to authorise or prohibit direct or indirect, temporary or permanent reproduction by any means and in any form, in whole or in part: (a) for **authors**, of their **works (...)**’*

(Article 2 InfoSoc Directive)

# Future CJEU Case Law?

- ‘Author’?

- No case law
- No express reference to the laws of the Member States
  - Autonomous and uniform interpretation?
- Possible inspiration CJEU
  - Article 1(1) Directive 2006/116 (Duration)
    - ‘The rights of an author of a literary or artistic work within the meaning of Article 2 of the Berne Convention shall run for the life of the author and for 70 years after his death, irrespective of the date when the work is lawfully made available to the public’*
  - Article 2(1) Directive 2009/24 (Software); Article 4(1) Directive 96/9 (Database)
    - *‘The author of a computer program/database shall be the natural person or group of natural persons who has created the program/base or, where the legislation of the Member State permits, the legal person designated as the rightholder by that legislation’*
  - CJEU Case law on originality
    - *Painer (C-145/10) : ‘(...) reflects the personality of its author (...)’*

⇒ **CJEU is likely to define the ‘Author’ as the natural person who created the work**

# Future CJEU Case Law?

## • ‘Work’?

- Autonomous and uniform interpretation (*Levola*, C-310/17)
- ‘Copyrighted Work’?
  - Two cumulative conditions (*infra*):
    - ‘author’s own intellectual creation’ (originality)
    - ‘expression’
  - Determination is left to the national courts
- ‘Copyrightable Work’?
  - Any production that meet the two conditions above? Probably not:
    - *Football Association Premier League* (C-403/08 and C-429/08):
      - ‘(...) sporting events cannot be regarded as intellectual creations classifiable as works (...) Accordingly, those events cannot be protected under copyright’
    - *Levola* (C-310/17):
      - ‘(...) Directive 2001/29 must be interpreted as precluding (i) the taste of a food product from being protected by copyright under that directive and (ii) national legislation from being interpreted in such a way that it grants copyright protection to such a taste’
  - Determination was not left to the national courts

⇒ **CJEU is likely to consider the ‘Work’ as excluding AI generated production**

# Future CJEU Case Law?

- ‘Originality’? (I)
  - ‘Free and creative choices’ (EU) compared to ‘Merger Doctrine’ (US)
    - CJEU, *BSA*, C-393/09
      - *(...) 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’*
    - *Herbert Rosenthal Jewelry Corp. v. Kalpakian* (9th Cir. 1971)
      - *‘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’*

# Future CJEU Case Law?

- ‘Originality’? (II)

- From the situation where only **one way** to express an idea to the situation where **limited number of ways** to express an idea

- CJEU, *Brompton*, C-833/18

- ‘(...) that cannot be the case where the realisation of a subject matter has been dictated by technical considerations, rules or other constraints which have left **no room for creative freedom or room so limited** that the idea and its expression become indissociable.’

- ‘**Even though there remains a possibility of choice** as to the shape of a subject matter, it **cannot be concluded** that the subject matter is necessarily covered by the concept of ‘**work**’ within the meaning of Directive 2001/29 (...)’

- Compare with US Copyright

- *Morrissey v. Procter & Gamble Co.* (1st Cir. 1967)

- Compare with EU IP

- *Lego*, C-48/09 P; *Philips*, C-299/99 (Trademark)

- *DOCERAM*, C-395/16 (Design)

# Future CJEU Case Law?

- ‘Originality’? (III)

- **Balancing rationale:** avoiding all expressions/forms necessary to express an idea/obtain a technical result to be appropriated (IP vs free competition)
  - See in particular CJEU, *DOCERAM*, C-395/16, § 30
- **Fit for AI?:** ‘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’

⇒ The CJEU is likely to exclude ‘Originality’ where the AI production is the outcome of a process that could possibly exhaust all expression of an idea

# Future CJEU Case Law?

- ‘Fair Balance’?

- New paradigm in Copyright Law

- *Promusicae*, C-275/06

- ‘(...) need to reconcile the requirements of the protection of different fundamental rights (...); **‘fair balance’**’

- *GS Media*, C-160/15

- ‘(...) it follows from recitals 3 and 31 of **Directive 2001/29** that the **harmonisation effected by it is to maintain, in particular in the electronic environment, a *fair balance*** (...)’

- *Spiegel Online*, C-516/17; *Funke Medien*, C-469/17; *Pelham*, C-476/17

- ‘**The mechanisms allowing those different rights and interests to be balanced are contained in Directive 2001/29 itself** (...)’

- Overall balance of Copyright protection (subject matter, rights, exceptions, duration) is originally tailored on the capabilities of a human being

**=> CJEU could possibly find no ‘Fair Balance’ between the interests of IP holders and users in different instances if AI generated/assisted were to be protected**

# CONCLUSION



**KEEP CALM**

**AND LEAVE  
AI WORKS IN  
THE PUBLIC DOMAIN**

# Conclusion

- Legal arguments
  - Possible definition of ‘Author’ and ‘Work’ strongly advocate against copyright protection for AI-generated production
  - Not decisive as to copyright protection for AI-assisted production
- Policy arguments
  - Could fit in the ‘Originality’ or ‘Fair Balance’ analysis
  - Legal analysis of some policy arguments put forward by the Commission strongly advocate against copyright protection for AI generated/assisted production
    - See further details:
      - ❑ In English: J. Cabay, “Less Is More: Some Undesirable Consequences Of Affording EU Copyright Protection To Artificial Intelligence Creations”, Presentation on 4th EU-China IP Academic Forum, University of Alicante, 22 October 2019 (<https://difusion.ulb.ac.be/vufind/Record/ULB-DIPOT:oai:dipot.ulb.ac.be:2013/294756/Holdings>)
      - ❑ In French: J. CABAY, “Droit d’auteur et intelligence artificielle : comparaison n’est pas raison”, *Entertainment & Law*, 2019, pp. 307-325 (<https://difusion.ulb.ac.be/vufind/Record/ULB-DIPOT:oai:dipot.ulb.ac.be:2013/297966/Holdings>)

# Conclusion

*‘(...) a view to **fostering innovation and legal certainty in a balanced way. (...)’***

EU Commission Communication, *Artificial Intelligence for Europe*,  
Brussels, 25.4.2018, COM(2018) 237

**‘(...) define the way forward to ensure that the EU as a whole can **compete globally (...)’****

EU Commission Communication, *Artificial Intelligence for Europe*,  
Brussels, 25.4.2018, COM(2018) 237

- **Since AI production might serve as inputs for machine learning, affording copyright protection might run against its development in the EU (because infringing or not subject to licences)**
- **If IA production is protected in EU, China/USA/Japan are under no obligation to recognize such protection and even so, wider TDM exceptions available in those countries to support machine learning**

# Quoted references

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- D. Gervais, “The Machine as Author”, *105 Iowa Law Review* 2053 (2020)



Thank you for your attention !

Questions?

[jcabay@ulb.ac.be](mailto:jcabay@ulb.ac.be)

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<https://euipo.europa.eu/knowledge/enrol/index.php?id=4035>