

# Copyright & AI-assisted Creation

---



*P. B. Hugenholtz*

Institute for Information Law  
University of Amsterdam

---

# Trends and Developments in Artificial Intelligence

## Challenges to the IPR Framework

Final report



# Main questions

---

- Is production made with the aid of (increasingly powerful) AI system a work?
  - If so, who is author of AI-assisted production?
  - Focus on EU copyright law
  - Descriptive, not normative study
-

## Der Apparat als geistiger Schöpfer

Von Rechtsanwalt Dr. Friedrich Karl **Fromm**, Berlin

Das Urheberrecht der Kulturstaaten ruhte bisher auf zwei Hauptdenksäulen, die als unzerstörbarer denn Erz galten: Schöpfer eines Werkes der Literatur, Musik und bildenden Kunst kann nur ein Mensch sein. Die Sphären der Schöpfung (Kreation, Produktion) und der Wiedergabe (Interpretation, Reproduktion) können deutlich voneinander unterschieden werden. Ist der erste Grundsatz von entscheidender Bedeutung für die Zubilligung des Urheberrechtsschutzes, so kommt dem zweiten Lehrsatz höchstes Gewicht für die differenzierende Ausgestaltung der Rechte der Schöpfer und Nachschöpfer bei. Man fühlte sich in der Vorstellung sicher und geborgen, daß das Heer der Berechtigten in zwei einander gegenüberstehende Formationen zu teilen ist: Hier Schriftsteller, Komponisten, Maler, Bildhauer, Architekten mit ihrem Troß der Bearbeiter, Übersetzer und Adapteure. Dort Schauspieler, Sänger, Musiker, Dirigenten, Sprecher, Regisseure mit ihrem Gefolge der Tonmischer, Cutter und sonstigen Techniker.

Beide wissenschaftlichen Glaubenssätze sind durch das Vordringen der Elektronik ins Wanken geraten. An die Stelle des Menschen als geistiger Schöpfer hat sich der Apparat geschoben. Zugleich sind die Grenzen zwischen Schöpfung und Wiedergabe eingestürzt und vielfach unkenntlich geworden. Es wird erforderlich sein, sich rechtzeitig dieser Umwälzung bewußt zu

# EU concept of “work”: four basic requirements

---

## **(1) Production in the “literary, scientific or artistic domain”**

- See art. 2(1) Berne Convention: non-exhaustive list of examples of ‘works’

## **(2) Human intellectual effort**

- Berne Convention and EU directives assume ‘flesh-and-blood’ author
- AG in CJEU *Painer*: “only human creations are protected”

## **(3) Originality/creativity**

- “The author’s own intellectual creation” → creative choices
- CJEU *Football Dataco*: invested “labour and skill” irrelevant
- CJEU *Cofemel*: no requirement of artistic or esthetic merit

## **(4) Expression**

- CJEU *Levola Hengelo*: creative choice(s) must be expressed with sufficient precision
-

# Can AI-assisted production qualify as a “work”?

---

(1) Production in the “literary, scientific or artistic domain”?

- YES – most AI-assisted productions stay within traditional domain of copyright

(2) Human intellectual effort?

- YES – completely autonomous AI creator does not (yet) exist, some human effort required

(3) Originality/creativity?

- **DEPENDS** – did human creator(s) make creative choices?
- **NB:** potential ”creativity” of AI system irrelevant!

(4) Expression?

- YES – if creative choices are “expressed” in the AI-assisted production.
-



## “Creative choices”

### CJEU *Painer*, Case C-145/10 (2011)

---

- a portrait photographer “can make free and creative choices in several ways and at various points in its production.
  - In the **preparation** phase, the photographer can choose the background, the subject’s pose and the lighting.
  - When **taking** a portrait photograph, he can choose the framing, the angle of view and the atmosphere created.
  - Finally, when **selecting** the snapshot, the photographer may choose from a variety of developing techniques the one he wishes to adopt or, where appropriate, use computer software.”
-

# Role of humans in AI production

---

## Three phases of creativity:

- **Conception: plan/design/specifications**
    - Choice of genre, style, technique, materials, medium, format, other specifications
    - Choice of AI system/service, training data
    - Large role for human(s)
  - **Execution: draft version**
    - Writing, painting, composing, recording, coding
    - Limited role for human(s)
  - **Redaction: finalization**
    - Rewriting, editing, correction, formatting, framing, cropping, selection (!), other “post-production”
    - Variable role for human(s)
-



THE NEXT  
REMBRANDT

LOOKS

CONTENTS

Automated

Journalism:  
Hundreds of News  
Generated Day

Journalism: No  
Human Intervention?

**Game Summary:**

The [Yorktown Patriots](#) triumphed over the visiting [Wilson Tigers](#) in a close game on Thursday, 20-14.

The game began with a scoreless first quarter.

In the second quarter, The Patriots' Paul Dalzell was the first to put points on the board with a two-yard touchdown reception off a pass from quarterback William Porter.

Wilson was behind Yorktown 7-0 heading into the second half. Wilson's Anton Reed tied the score with a two-yard touchdown run. The Patriots took the lead from Wilson with a two-yard touchdown run by Tanner Wall. The Patriots scored again on Adam Luncher's 29-yard field goal.

Yorktown maintained their lead going into the fourth quarter, 17-7. The Patriots extended their lead over the Tigers on Luncher's 27-yard field goal. Wilson cut into the Patriots' lead with a three-yard touchdown run by Amir Gerald. The game ended with Yorktown defeating Wilson, 20-14.

Yorktown's top passer was Wilson, who completed 6 of 10 passes for 91 yards and one touchdown. Yorktown's top rusher was Wall, who had seven carries for 57 yards and one touchdown. The Patriots' top receiver was Wall, who had four catches for 54 yards.

Yorktown will play Wakefield High School (1-0, 0-0) on Sept. 8. Wilson will play McKinley Technical High School (0-1, 0-0) on Sept. 8.

*This story may be updated if more information becomes available. It is powered by Heliograf, The Post's artificial intelligence system.*

Source: Washington Post

<https://www.washingtonpost.com/allmetsports/2017-fall/games/football/87055/>

The news article above is an example of automated journalism. Automated journalism or “robot journalism” is being employed not only by Washington Post but also by other major news organizations, including Associated Press (AP), USA Today, and Yahoo!

# Authorship of AI-assisted Creations

---

- (No) ‘work’ → (no) ‘authorship’
- Author of AI output is person(s) that engaged in creative choices, even if s/he did not execute work him/herself (“mastermind” rule) → user of the AI system
- AI developer will qualify as co-author of output only in (rare) case of concerted creative effort
  - Not in case of general-purpose AI
- Absence of human authorship may be circumvented by false claims of authorship/copyright ownership
  - BC, IPRED & Aw: person whose name “appear[s] on the work in the usual manner” is presumed to be author’/copyright owner and may sue for copyright infringement
  - No legal requirement to reveal creative process

# AI and Neighbouring Rights

---

## **Neighbouring (‘related’) rights under EU law:**

- Phonogram producers (recorded audio)
  - Broadcasters (transmitted signals)
  - Film producers (recorded video)
  - Press publishers (press publications)
  - Database producers (aggregated and structured data)
- 
- No human authorship/effort required; rights directly attributed to entrepreneur (usually legal person)
  - No threshold requirement, except database right: “substantial investment”
  - ➔ “Authorless” AI output protected by related rights if in audio/video/database form
-

# Conclusions

---

- EU copyright law can generally deal with AI-assisted productions, no reason for EU copyright reform
    - But harmonization of ‘authorship’ overdue
  - Many “authorless” AI productions may find some protection in related rights
-