



I am sure you recognise this intense-looking guy. It's the German composer Ludwig van Beethoven.<sup>1</sup>

Now, if I ask you how many symphonies Beethoven wrote, you may say: nine. And that would be...



...not entirely correct.

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<sup>1</sup> [https://en.wikipedia.org/wiki/Ludwig\\_van\\_Beethoven](https://en.wikipedia.org/wiki/Ludwig_van_Beethoven)

He left one more symphony unfinished. The 10th.<sup>2</sup>

This is not the first musical work left unfinished and completed by somebody else. There are plenty of examples: Schubert, Mozart...<sup>3</sup>



**Another unfinished 10th...**

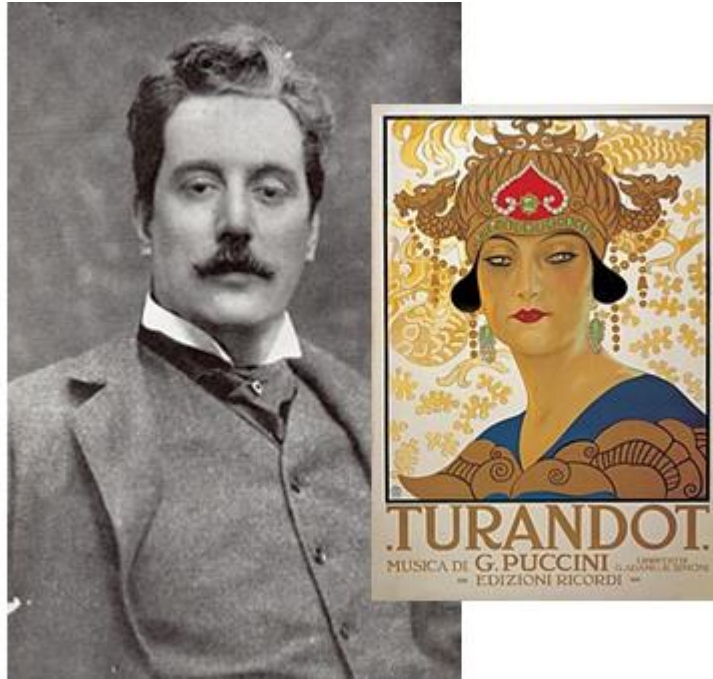


To name just two more recent examples: Gustav Mahler also worked on a 10th symphony, which was completed decades later by Deryck Cooke.

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<sup>2</sup> [https://en.wikipedia.org/wiki/Symphony\\_No.\\_10\\_\(Beethoven/Cooper\)](https://en.wikipedia.org/wiki/Symphony_No._10_(Beethoven/Cooper))

<sup>3</sup> [https://en.wikipedia.org/wiki/Requiem\\_\(Mozart\)](https://en.wikipedia.org/wiki/Requiem_(Mozart))



Giacomo Puccini left his opera Turandot unfinished, which was later completed by Franco Alfano.

In these two cases, the later additions or completions by Cooke<sup>4</sup> and Alfano<sup>5</sup> are obviously copyrighted, even if all other works by Mahler and Puccini are already in the public domain.

Why am I telling you this?

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<sup>4</sup> [https://en.wikipedia.org/wiki/Symphony\\_No.\\_10\\_\(Mahler\)](https://en.wikipedia.org/wiki/Symphony_No._10_(Mahler))

<sup>5</sup> <https://en.wikipedia.org/wiki/Turandot>



In the case of Beethoven's 10th, right now there is an international group of AI experts working on the completion of this symphony.<sup>6</sup>

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Now the question is: would the work of a composer dead in 1827, a work that will be completed by a machine in 2020, be in the public domain, as any other of Beethoven's works, or this new, computer-generated version will be copyrighted?

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<sup>6</sup> <https://www.dw.com/en/algorithm-to-complete-beethovens-unfinished-symphony/a-51577665>

<sup>7</sup> <https://www.faz.net/aktuell/feuilleton/debatten/shakespeare-sortieren-und-beethoven-vollenden-mit-ki-16525338.html>

# **Can *I, Robot* join the Sacem?**

Said otherwise: can *I, Robot* join the Sacem?

The question is not completely absurd. As we have already discussed, machines can “create” works. But can a machine be a copyright holder? Or can a person or a company be the copyright holder of a work created by a machine?

***Ex nihilo***  
**VS**  
***nihil novum sub sole***

Usually, the main point of discussion when it comes to copyright is originality. Copyright does not protect ideas but the expression thereof. This is a basic principle of both Copyright and Authors' Rights systems. In order to be protected by copyright, a work must be original and bear the mark of its author's personality.

A creation out of nothing.

A computer cannot create anything original and has no personality, wouldn't you say?

Of course, there are those who will say that this is just the romantic vision of creativity as some sort of magic fire, whereas in reality originality is an illusion and no more than a recombination of pre-existing content and ideas.

Nothing new under the sun.

If originality is just a recombination of pre-existing content, then a machine can be as original as anyone else, and therefore could be eligible for copyright protection. Except it has no personality, natural or legal.

All these questions will be certainly discussed by Giancarlo Frosio in his presentation.

I just wonder one thing: if I have a machine or a software programme that writes fantastic music or text, and I want to have

it copyrighted, I'd rather say that I did it, don't you think? Problem solved.

After all, even if we came to agree that a machine could be a copyright holder, it could never be the holder of a bank account. So, who gets the royalties?

## **IMAGE RIGHTS**

Changing topic now.

In the preceding presentation, it was discussed the intervention of AI in scriptwriting. But in the audiovisual sector, a script is only the beginning of the creative process. The story and the ideas set in a script have to be translated into images. In most cases, these stories talk about people. People played by actors.

Guess what, AI can not only write the script and play the music but it can also provide the actors. Or at least, turn any actor into the actor you always wished to have on your film. Making him or her younger, for instance.

There are very recent examples of this:





In *Gemini Man*, the character player by Will Smith has to fight against a younger clone of himself.



A similar de-aging procedure was applied to the main characters in Martin Scorsese's *The Irishman*.





In *Star Wars: Rogue One*, not only Carrie Fisher looks younger than ever,



but Peter Cushing, who died in 1994, also has his moment of post-mortem glory.<sup>8</sup>

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<sup>8</sup> <https://thevideosuite.com/how-will-smith-was-made-to-look-25-years-younger-in-gemini-man/>

Cool, isn't it? Everybody is talking about it now.

But normally, after hype comes hysteria.

## ***After hype, hysteria***

If you read the newspapers these days, you may come across such headlines:

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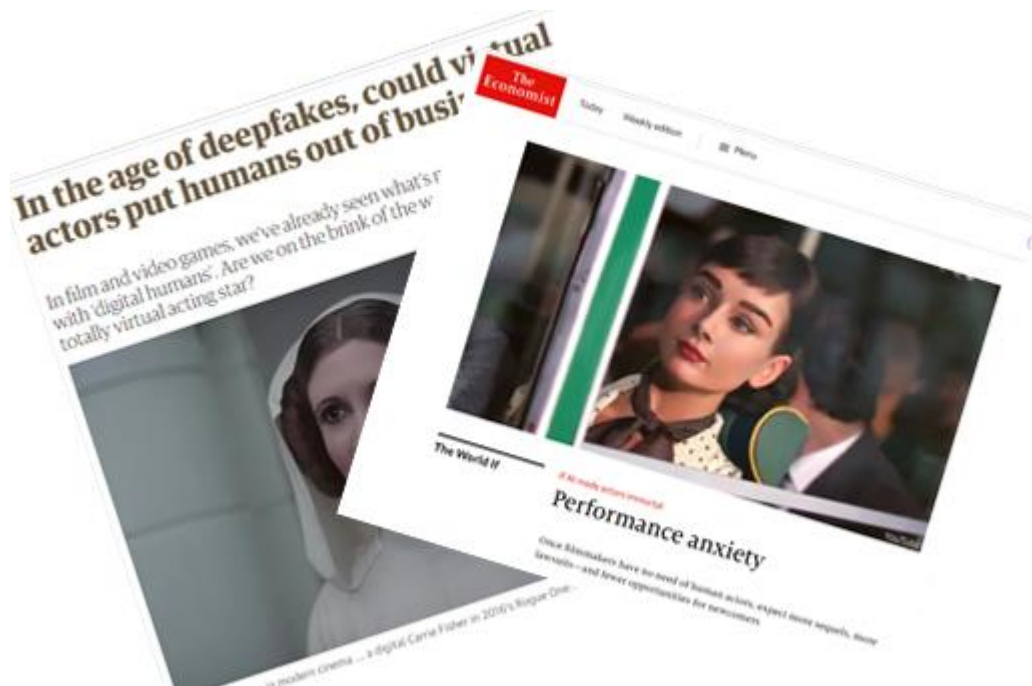
<https://www.businessinsider.fr/us/will-smiths-gemini-man-is-groundbreaking-for-hollywood-animation-2019-9>

<http://golem13.fr/the-irishman-martin-scorsese-evoque-de-aging-rajeunit-acteurs/>

<https://www.tomsguide.fr/star-wars-9-carrie-fisher-leia-jamais-digitalisee-jj-abrams/>

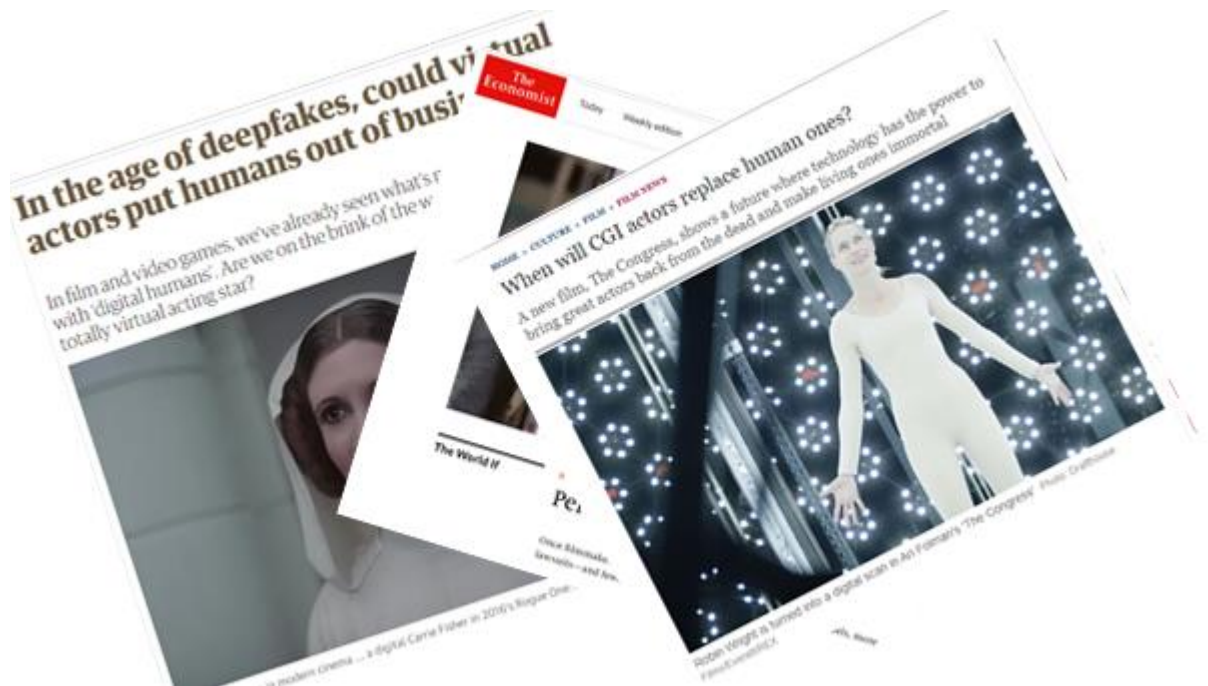


The Guardian: "In the age of deepfakes, could virtual actors put humans out of business?", with snapshot of a de-aged Carrie Fisher in *Star Wars: Rogue One*.<sup>9</sup>



<sup>9</sup> <https://www.theguardian.com/film/2019/jul/03/in-the-age-of-deepfakes-could-virtual-actors-put-humans-out-of-business>

The Economist: “If AI made actors immortal - Performance anxiety”, with a photo of lovely Audrey Hepburn.<sup>10</sup>



There is even a film, mentioned by The Telegraph in its article “When will CGI actors replace human ones?”,<sup>11</sup> called *The Congress*, which shows a future where technology has the power to bring great actors back from the dead and make living ones immortal.

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<sup>10</sup> <https://www.economist.com/the-world-if/2018/07/05/performance-anxiety>

<sup>11</sup> <https://www.telegraph.co.uk/culture/film/film-news/11034343/When-will-CGI-actors-replace-human-ones.html>



Indeed, imagine e.g. a gangster film with a digital Marlon Brando but without his notorious backstage behaviour. Which director would not want that?

For this, you just need the relevant hardware and software... and a ghost actor.<sup>12</sup> That is, an actor whose face is replaced by that of the more famous one.

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<sup>12</sup> <https://www.technologyreview.com/s/612241/how-acting-as-carrie-fishers-puppet-made-a-career-for-rogue-ones-princess-leia/>





Cheaper and probably much better behaved.

On top of that, AI makes it substantially easier to create digital extras.<sup>13</sup>

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<sup>13</sup> [http://www.massivesoftware.com/ben\\_hur.html](http://www.massivesoftware.com/ben_hur.html)

As you can imagine, these developments, both technological and artistic, raise personality rights issues. These legal issues are regulated by law and then settled by contract. But a contract can be unfair to the party with less bargaining power. Like an unknown actor. Or a dead person.

According to SAG-AFTRA, an American actors' union, the current status of US law is antiquated considering new technologies.<sup>14</sup>

It must be true, because a bill is being considered by the New York state assembly, which would restrict the creation of “digital replicas” of individuals without their permission.<sup>15</sup>

Interestingly, it seems that Hollywood is not too happy about this piece of legislation. According to Disney, “if adopted, this legislation would interfere with the right and ability of companies like ours to tell stories about real people and events. The public has an interest in those stories, and the First Amendment protects those who tell them.”<sup>16</sup> The MPAA said that the “hastily-drafted provision in the Bill would result in unintended, harmful consequences and is likely unconstitutional.”

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<sup>14</sup> <https://www.sagaftra.org/get-involved/government-affairs-public-policy/digital-image-rights-right-publicity>

<sup>15</sup> [https://nyassembly.gov/leg/?default\\_fld=&leg\\_video=&bn=A08155&term=2017&Summary=Y&Text=Y](https://nyassembly.gov/leg/?default_fld=&leg_video=&bn=A08155&term=2017&Summary=Y&Text=Y)

<sup>16</sup> [https://www.theregister.co.uk/2018/06/12/new\\_york\\_state\\_is\\_trying\\_to\\_ban\\_deepfakes\\_and\\_hollywood\\_isnt\\_happy/](https://www.theregister.co.uk/2018/06/12/new_york_state_is_trying_to_ban_deepfakes_and_hollywood_isnt_happy/)



There is also a darker side of this issue. Deepfakes. Which can be used in different, harming ways.

First of all, commercial misappropriation. Deepfakes can be used for fake endorsements of products. Imagine:



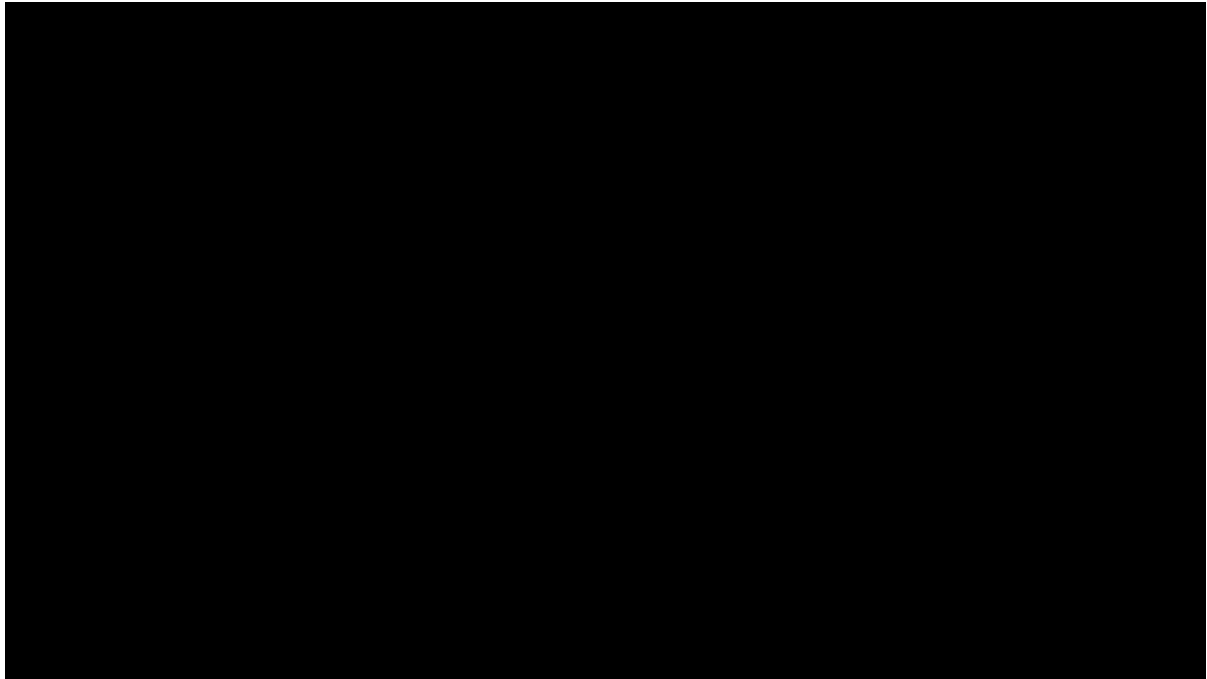
“Hi, my name is George Clooney, and I drink (another brand of coffee) at home. What else?”



A real example of this, fake media sites are allegedly featuring made-up commentary about health products by Sandra Bullock and Ellen DeGeneres. There is a lawsuit ongoing, of course<sup>17</sup>.

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<sup>17</sup> <https://www.hollywoodreporter.com/thr-esq/sandra-bullock-ellen-degeneres-team-up-lawsuit-fake-endorsements-1252832>  
<https://www.theguardian.com/film/2019/nov/06/sandra-bullock-ellen-degeneres-lawsuit-fake>  
<https://www.sagaftra.org/sag-aftra-statement-sandra-bullock-ellen-degeneres-lawsuit-stop-fake-online-endorsements>



There is the other issue: identity abuse. Mostly in porn films. No images here, sorry, I leave it to your imagination.<sup>18</sup>

I am sure that current legislation prevents this type of deepfakes already, at least in Europe, but nevertheless, just for information, in California they are currently discussing legislation that would ban using digital technology to make it appear that a person is nude or engaged in sexual activity without getting their permission.<sup>19</sup>

## **ALGORITHMS AND CULTURAL DIVERSITY**

Now, I would like to tell you a personal story.

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<sup>18</sup> Deepfakes - real consequences: <https://www.youtube.com/watch?v=dMF2i3A9Lzw>

<sup>19</sup> [https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=201920200SB564](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB564)





Sometime ago I watched on a VoD service a spy series called Homeland. Guess what this VoD service recommended me to watch next? This.



I really do not see the link.

It is not a joke. This really happened to me, I even made a screenshot. Look.



I guess that is one of the main issues with algorithms today: transparency.

If, as they say, an algorithm is like a cooking recipe, the algorithms used by certain companies must be like the Coca-Cola formula, the best kept secret recipe in the world.<sup>20</sup>

The truth is that many people think that algorithms are rather like Chinese food: as long as they like what they are eating, they don't really care about the recipe, and in most cases, they actually prefer not to know the ingredients.

Coming back to Homeland and Peppa Pig, I could very well say, "ok, I do not care about recommendations." But a film producer

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<sup>20</sup> [https://en.wikipedia.org/wiki/Coca-Cola\\_formula](https://en.wikipedia.org/wiki/Coca-Cola_formula)

might think differently. He or she could say: “Actually, I have a film that corresponds to what you want to watch next, and your VoD service didn’t recommend it to you. Why? It’s discriminatory.”

If I understood well, recommendation algorithms work first and foremost with the data I provide, that is, my viewing history. That is, if I do not express interest in a type of content, it won’t be recommended to me.<sup>21</sup> Leaving me in my own filter bubble.

I still do not understand the thing with Peppa Pig, though...

Anyway, as you know, we Europeans value cultural diversity. So much actually that we even regulate it.

## **EU's Audiovisual Media Services Directive**

### **Article 13**

*1. Member States shall ensure that media service providers of on-demand audiovisual media services under their jurisdiction **secure at least a 30 % share of European works in their catalogues and ensure prominence of those works.***

The revised AVMSD requires that VoD services in the European Union must secure at least a 30 % share of European works in their catalogues and ensure prominence of those works.

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<sup>21</sup><https://www.disko-agency.com/thoughts/actualite-reseaux-sociaux/netflix-serial-killer-producer/>  
<https://www.marieclaire.com/culture/a18817/netflix-algorithms-black-movies/>

Surprisingly, I must say, it does not say a word about algorithms regarding cultural diversity. Not even in the recitals of the Directive. So, we will have to wait until the Member States transpose the Directive to know how the member states handle this issue, and whether any of them imposes diversity obligations on algorithms.

Time to finish this presentation. By the way, did I tell you that I love quotes?

***L'imaginaire,  
c'est ce qui tend à devenir réel***  
***André Breton***

Excuse my French, in English this means *The imaginary is what tends to become real.*

Indeed, some of the problems that I have briefly discussed may not be real yet, but they may become real sooner than we expect. So it might be a good idea to keep an eye on them.

Thank you.