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PROBLEM STATEMENT

- 1) Generative AI software applications output non-copyright registrable content.
- 2) When anyone can make any piece of content, then fakes may proliferate in the market, thereby eroding value and income streams.
- 3) When anyone can generate content "in the style of..." then what is the incentive for purchasing any creative work when you can just trigger the generation of output "in the style of..."

Generative AI content has specific problems relating to: 1) erosion of longer term middle class wealth, 2) conflicts of content ownership, 3) human authorship erosion 4) erosion and erasing of original author style.

In year 2023/24, most people get their music, apps, books, games from Apple App store, iTunes Store, Spotify, Amazon, Google Play, YouTube. Each of these services generates billions of dollars of income for a population of mostly medium and small companies, "creators", essentially middle-class. People paid by sales through these services, typically spend their money locally, enabling a local economic multiplier effect.

If in 5, 10, 20, 30 years Generative AI applications will likely be able to create nearly any content: images, music, fiction, poetry, technical books, movies "in the style of..." Elvis, Lucas, Spielberg, Swift, 1960s surf tunes, Paul Mcartney- then at some point, in some not-to-distant generation- "customers" won't pay for the original, human authored works. And iTunes, App Store, Google Play, Spotify will be a activity of the past- and so too will the annual billions of dollars generated for a thriving creative, middle-class. And in a not too far off year- all original, human-authored works copy-written today will eventually pass into the public domain, further eroding, erasing true sources of human authorship and original style.

We cannot let the future of the economic value of music, literature, cinema, television, streaming channels, become only: Who can write the most creative "Gen AI prompt" to create something "in the style of..." If that is where the Creative Economy is going, then be prepared for trillions of dollars of economic value to disappear over the next 10-30-50 years. As US citizens we cannot sit idly by and let significant economic wealth (largely) created by the middle class just evaporate because of inability to understand the problem or inability to enable some simple and effective solutions now.

SOLUTIONS

There are at least 15 specific actions, tasks and/or procedures US Copyright Office can engage in today to stop these primary problems in the beginning of the Generative AI era.

To guarantee Generative AI content and Gen AI prompt writers is NOT all we have in the future...

I propose several tasks allowing Human Authored content to co-exist with Generative Al content in the future. There are actions US Copyright Office must take now to include new features to the Copyright Registration System. For example, metadata and 'opting out' features in a copyright registration, extending a right to All rights reserved, insisting on human authors using water-marking on their images and graphics, enabling human authored and Generative Al content to be distinguished from one another.

Solutions in short form first, between pages 2 and 4, then more detailed explanations for each solution in pages 5 through 11.

1. Extend amount of time copyrights remain registered.

Purpose: In year 2023 copyright 'ownership' is for the duration lifetime plus 70 years, before work passes into public domain. Extend duration to 300 years or longer. Treating copyright IP 'ownership' similar to land ownership and other personal property. So that sole-authors can preserve their rights to their works and pass their IP works from generation to generation. Thereby preserving wealth in their family, preserving product line income over generations, preserving storylines, preserving unique characters as they were created by original author, preserves compositional structures, and therefore preserves style of work for 300 of years. (Combined with #2 and #3 defends against style abuse and plethora of Gen AI created fake products that erode economic value.)

2. Right 'Not' to have a work used in machine learning model training.

Purpose: Extends 'All rights reserved.' Allowing sole-authors to have and defend their right, NOT to have their works used in machine learning model training or any other software-based 'training' that will lead to machine learning models, model architectures and style(s) transfer or style immitation. During the copyright registration procedure, a checkbox or radio button [X].

3) Add data field to standard US Copyright publicly viewable record. Data field in copyright record contains: "Author does NOT grant usage right..."

Purpose: To inform others that this registered copyright work is NOT to be used in machine learning model training. *Author does NOT grant usage right of this work to be used in the training of machine learning models and or Generative AI software systems*. Extends and strengthens the rights of 'All rights reserved.'

4) Update circulars regarding use and of 'All rights reserved.'

Purpose: To inform sole-authors or the list of their rights and how to use All rights reserved. Publish in copyright.gov circulars, use-cases, explaining which publishing rights are 'reserved' in (All rights reserved.) and how to properly use (All rights reserved as part of copyright line.)

- 5) "NO Generative Al application used to create this work...".
 - Purpose: Standard sole-author declaration (upon registration of new work) that no Generative AI application was used to create the work being registered. Publish in <u>copyright.gov</u> circulars how authors can include a formal 'human-authored' declaration in the notes to Copyright Office portion of their copyright registration.
- 6) Add checkbox, declaring, "No Generative AI used to create..."

 Purpose: To tell copyright registration analyst that work being registered is a completely human-authored work. [X] I, (author name), declare NO Generative AI application was used to create sole-authored work being registered.
- 7) Update and publish in a Circular procedures for engaging with CCB.

 Purpose: To stop fakes flooding a market space and how to engage with CCB (Copyright Claims Board), how to write a complaint, request cease and desist order and legally sue for economic compensation from infringer(s), rights violators engaging in activities leading to other works/content that extremely looks, sounds, reads the same or extremely similar like a human authored work.
- 8) Add categories to Title 17, 'IP Registers, IP Owners, IP Rights Owners and IP Holders Must Be Human.'.

Purpose: To keep IP ownership under the control of humans. Extend Title 17 specifically declaring Generative AI applications, Generative AI entities, Robots and smart appliances cannot 'register' intellectual property, cannot 'hold' intellectual property (as in holding company), 'cannot be corporate entities declaring intellectual property stewardship, control and or ownership.

9) Champion in all industries and enable declaration by US Law that Generative Al Applications, Al Expert Systems, Al Networked Expert Systems and Robots cannot own intellectual property, cannot own bank accounts, cannot register and own corporations, nor be corporate officers, nor corporate leaders and not corporate board members.

Purpose: To keep ALL IP ownership (not just copyrights) under the control of humans.

10) Publish simple 'Registration Rule' on copyright.gov, in copyright Circulars, and video trainings, 'Not human Authored, not registrable'.

Purpose: Consistency with US Constitution, Article 1 Section 8 and 21st century US legal case rulings whereby a copyright registration's components must be human authored to be registrable.

11) Publish use-cases for each of the 1/3, 1/2, 3/4 Generative AI 'mixture registrations' containing some human authorship and some Generative AI Output.

Purpose: To show sole authors, by approved, published use-case example 'Which category does my registration conform to?'

12) Create and publish new circular on copyright.gov for Computer Science Professions, Computer Science University Instructors and Students

Purpose: Circular explains what the 'Opt Out' data field means on a copyright registration. Circular explains the scope of copyright designation and 'All rights reserved. Explains that CCB exists and that makers of machine learning models can be sued if they use copy written content that is designated in the copyright registration as 'Opt Out' from ML training. This work NOT approved for use in machine learning model training.

13) Create, approve and promote a labeling, "NON GEN AI"

Purpose: Distinguishes how product was made. Attempt to preserve value chain for human authors, musicians, creators, IP authors and IP owners. To retain IP work value, demonstrating that work was not auto-generated. Similar to Non-GMO consumer labeling. Informs consumers about contents. Or a label such as: "NO Gen Al used in the creation of this product." Thereby communicating that a human created the work. Infers a person will likely be paid for their creative work.

14) Upgrade Title 17 (If necessary).

Purpose: Draft legislation and put to Congress to vote on updating Title 17 to contain any of the 14 ideas if they fall outside the current mission, legally capable tasks and or Constitutional authority of US Copyright Office. Copyright Office team to work with team of Representatives to draft updated Legislation at the US Federal level.

15) Anticipate Future Al, Copyright Problems 5, 25, 50 Years Ahead.

Purpose: US Copyright team to own as part of their quarterly deliverables research of the AI and Generative AI space, enabling US Copyright Office as a organization to understand where AI and Generative AI is going. Activity to create leadership on Generative AI topic from within and US Copyright Office not just reacting to events that have already happened.

This ends the short explanations of each of the 15 solutions. The rest of the document contains detailed explanations of each of the 15 solution topics with some examples and use cases.

1) Extend amount of time copyrights remain registered before passing into public domain.

If a family can pass down a piece of land property through generations, then why not extend the amount of time a sole-authored work can be owned by a individual and passed on through generations in a family? A individual and family should be able to maintain their heritage of creative works for centuries. Your great grandfather or grandmother writes a groundbreaking work on a topic. Your family should be able to still own the rights to that work instead of having the work automatically pass into the public domain. The intent is to preserve original authorship and preserve origins of style. To reduce the onslaught of Generative AI content that is likely to dilute author source and dilute human-authored style through so many derivatives of "make for me, in the style of..."

For example, when Winnie the Pooh passes into public domain the character of Pooh Bear is open to dilution. No one wants to see Winnie the Pooh in the public domain as a horror movie. The very essence of Winnie the Pooh character is about childhood wonder, exploration and friendship- and that style- character style needs to be preserved.

The amount of time a copyright is owned by a sole author is currently lifetime plus seventy years. The time period needs to be extended to 300 years or even perpetuity. Such an extension will help preserve the originality of a work, keeping the work's contents, characters, design elements from being diluted over time. Sole author's and their families derive income, wealth from authorship, creative products and making product lines. Families have food in their refrigerators for their children because they own the sole author rights to a song, a screenplay, a book human authored works. Extension of copyright time for a work registered and owned by a sole author rights holder preserves middle-class income and reduces dilution of human authored style.

Imagine a day, in the not to distant future, where a 20 something person asks his/her friend, "But did you ever read the original Winnie the Pooh?" And a friend answers no, I've only read Gen Al derivatives, where Winnie the Pooh is (list of character traits and situations antithetical to the author's intent of Winnie the Pooh's character.)

2) Right 'Not' to have a work used in machine learning model training.

ADD to e-co, Copyright registration system, a check box in the copyright registration process workflow. Example:

[X] I, (author's name) <u>do NOT grant rights to have my sole authored work</u> (copyright title), (copyright registration number) <u>used in the training of machine learning models</u>. By opting out, I further fortify and extend the features of this registration's 'All rights reserved.', 'All publishing rights reserved.' claims. Contents of work NOT approved by author for machine learning training, nor any activity of machine learning model

development. If copy written content found to be part of ML training dataset for a machine learning model, legal recourse through CCB should be allowed.

3) Add data field to standard US Copyright publicly viewable record. Data field in copyright record contains: "Author does NOT grant usage right..."

Once copyright registration is approved, a data field will appear on the publicly searchable copyright record: Author does NOT grant usage right of this work to be used in the training of machine learning models and or Generative AI software systems.

Extends and strengthens the rights of 'All rights reserved.' Extends and strengthens the rights of 'All rights reserved.'

4) Update circulars regarding use and of 'All rights reserved.' 'All rights reserved. All publishing rights reserved.' as part of the formal ©Copyright (Author name), (date). All rights reserved. All publishing rights reserved. Make one new right, the *right to NOT have one's copy-written work used in training a machine learning model.*

5) "NO Generative AI application used to create this work...".

Create standard, formally worded declaration that sole-authors can place in the Notes to Copyright Office portion of registration. Example: NO portion of (sole author name) sole authored work, (Title of work), (registration number) was created in whole or in part by Generative AI software or other Generative AI systems. Work being submitted is a completely human authored work.

6) Add checkbox, declaring, "No Generative AI used to create..."
Within the copyright registration system workflow, add:
[X] NO portion of (sole author name) sole authored work, (Title of work), (registration number) was created in whole or in part by Generative AI software or Generative AI system(s). Work being submitted is a completely human-authored work.

7) Update and publish in a Circular procedures for engaging with CCB.

Rights extension about creating same item, even though not actually duplicating. Protects against fakes in the market space. If a copyright holder's work is generated, but not duplicated, then there needs to be CCB (copyright Claims Board) economic complaint capability. Or if Gen AI outputted content appears in part the same as registered content. Applicable for published and unpublished works. Although, LLMs work on token models or other models to generate output, if a Gen AI application outputs one actual sentence or paragraph that is the same as a registered authored work, then allow sole-authors to submit complaint to CCB (Copyright Claims Board) for economic damages payments from infringer to sole-author. (Especially if author selected in registration to "opt out" of having his/her works ever used in ML model training.)

8) Add categories to Title 17, 'IP Registers, IP Owners, IP Rights Owners and IP Holders Must Be Human.'.

Helps ensure, that Gen AI software applications, networked groups of expert AI software applications are not "holding", "owning" and or illicitly copyright registering non-human authored works. Such activities potentially dilute or enable cornering of a market on a specific type of work or style of work through the rest of the 21st Century. For example, a popular graphic novel author's style, character types are re-created 'in the style of...' being published in the 1000s of titles by a competing publishing house- thereby cornering the market on those character types and likely story lines, while simultaneously eroding or destroying the original author's credit for original style authorship and ultimately his/her source of income. Therefore, if such a activity occurs there has to be a accountable human who engaged in the activity- to which complaint, economic remediation, Justice can be addressed and served.

9) Champion in all industries and enable declaration by US Law that Generative Al Applications, Al Expert Systems, Al Networked Expert Systems and Robots cannot own intellectual property, cannot own bank accounts, cannot register and own corporations, nor be corporate officers, nor corporate leaders and not corporate board members.

Beyond the scope of this document, but point being no one wants Gen AI systems creating and owning patents, generating income, cornering markets with derivative products and potentially having economic resources even if their manufacturers claim such systems have moral and ethical understanding. Which they won't because such systems are not human.

10) Publish simple 'Registration Rule' on copyright.gov, in copyright Circulars, and video trainings, 'Not human Authored, not registrable'.

Easy to remember registration rule, 'Not human authored, not registrable.'

11) Publish use-cases for each of the 1/3, 1/2, 3/4 Generative AI 'mixture registrations' containing some human authorship and some Generative AI Output.

A copyright.gov web page with list of Use Case Categories.

Which category does your registration conform to?

Link takes user to explanation of viability of registration and procedures for Limitation of Claim in registration.

TEXT

- 11.1) Completely human authored
- 11.2) Half authored by human, half authored by Gen Al output

11.3) ...

TEXT AND GRAPHICS

- 11.4) Completely human authored
- 11.5) Graphic Novel containing human authored text, Gen Al graphics

11.6) Text human authored, (n) of graphics Gen AI, some graphics completely human drawn

11.7) MUSIC

12) Create and publish new circular on copyright.gov for Computer Science Professions, Computer Science University Instructors and Students

To address behaviors at the heart of the problem. Circular will explain:

12.1 Registration ML Model Training 'Opt Out'

sole authorship, copyright registration OPT OUT of machine learning registration and what rights "opting out" declaring their content is not available for ML training. Explanation of the new rights of registered copyright holders.

12.2 Extending Features of "All rights reserved."

What 'All rights reserved.' encompasses and how the new "All rights reserved" CONTAINS opting out of having one's sole-authored work NOT used in a ML training activity.

12.3 How Computer Science Professionals Can Get Sued

What economic remediation a copyright holder has now through CCB (Copyright Claims Board) or Federally against a Computer Science professional who trains his/her model on a copy-written work registered with [X]I, (author's name) do NOT grant rights to have my sole-authored work (copyright title), (copyright registration number) used in the training of machine learning models or training or Generative AI Systems.

12.4 How Computer Science Professionals Can Create And Register Their Own Datasets For Their Own ML Models

How Computer Science professionals can create their own datasets by writing, photographing, making music and they also can register their original human authored content. They can use their content to train their own ML models. Owning their own, human authored, original dataset means they will have established a clear line of authorship from source materials, to trained ML model, to published model.

Intent is to stop the plethora of lazy Computer Science professionals who treat content as free to use in their machine learning model training. Computer Science professionals need to make their own original datasets and then they can participate in copyright registering their own datasets. By doing so- they may have a greater understanding of the amount of time and money required to create content and what it means to participate in creative ownership. At the very least, creating their own datasets by actually writing, using their own camera to photograph 100000 objects, etc, should enable a clearer line of authorship computer science professionals can use to demonstrate clear authorship of their own machine learning models. Hopefully, leading Computer Scientists to greater consciousness of the erosion and dilution capabilities of Generative AI output. Hopefully, leading them to be advocates for the strengthening of

existing US Copyright. And if that is not enough, then when a Computer Science professional goes to sell his/her startup, having their own verifiable already copyright registered dataset- will demonstrate a clear line of authorship of their machine learning models.

13) Create, approve and promote a labeling, "NON GEN AI"

Think equivalent to 'Non-GMO') allowing customers to know what they are buying. Numerous food products contain Non GMO (Non Genetically Modified Organism) informing customers that a product does NOT contain genetically modified organism and is nearer to "natural" than other GMO products. I propose a labeling or inclusion in watermarking for books, music, texts, diagrams, devices, software, images, videoscommunicating that a product is all human authored, copy written content with the label: (Non Gen AI). Such labeling, explicitly as a product label AND within product metadata, file metadata and watermarking. Helps to distinguish between human authored content and non copyright, unownable Gen AI content.

14) Upgrade Title 17 (If necessary).

Upgrade Title 17 to contain laws and rules supporting the suggestions, features, workflows, registration procedures, copyright record web display and All Rights Reserved. Upgrading Title 17 will solidify defense of human, sole-authorship thereby protecting against erosion of human authored works, potentially reducing erosion of middle-class income, potentially reducing erosion of human authored style for the rest of the 21st Century.

15) Anticipate Future Al, Copyright Problems 5, 25, 50 Years Ahead.

In some decade, not too far from year 2023, Generative AI applications will essentially be able to make nearly any content "in the style of..." AND essentially for low cost or no cost to a consumer. And potentially be able to re-create almost exactly a song or movie without actually copying the song, book or movie. Herein lies one problem activity of potential income erosion. If one person can fill a market full of fakes, then the original creator's product value will be eroded and customer needs already fulfilled.

- 15.1 To preserve middle-class "creator" wealth, help make a data distinction in copyright registrations, distinguishing between completely human authored and not completely human authored. So that the public can easily see in a copyright registration record if the registered work contains any Generative AI or is completely Human Authored. Furthermore, extend that metadata through data services, data architectures to various search engines and API search abilities. So consumers can search for only music created by human composers, human musicians.
- 15.2 Enable authors ability to "opt-out" of having their content used in ANY AND ALL machine learning model training process. Item 2 in this list.

15.3 Enable copyright holders avenues to easily enforce their rights to NOT have their works used in the machine learning model training, creation process. Ability to sue ML model makers if they use a copy written book, song, article, etc.

15.4 Extend the time period of copyright ownership by sole-authors.

15.5 Legally force ML model makers like Anthropic, OpenAI, Google, Amazon, Microsoft to publish which copy written content they used in the training of their AI models.

15.6 Have US Copyright Office partner with Anthropic, OpenAI, Google, Amazon, Microsoft and other Gen AI leaders to formalize how every piece of content that comes out of a Generative AI application will contain a watermark distinguishing that piece of content from a human-authored piece of content.

CONCLUSION

The US Copyright Office needs to engage in the previously listed 15 tasks today to preserve the strength of copyright and middle class wealth in USA.

By not making changes- we run the risk of three large societal Generative AI problems coming true. And (yet) these problems are not inevitable features of our future, unless we do nothing now. The three larger scale Generative AI problems:

- Erosion of longer term <u>middle class wealth</u> through the next decades tidal wave of Generative AI content. A increasing probability of evaporation of trillions of dollars from streams of income for human authored content.
- 2) <u>Erosion and erasing of original author style</u> through a tidal wave of Generative Al content. With no metadata attached and consumers not knowing the content's source of authorship.
- 3) <u>Inability to distinguish</u> between human authored and Generative AI authored worksleading to a <u>polluted marketplace of fake content</u>. Requiring a necessity of NON Gen AI labeling and watermarking metadata.

Please contact your Congressional representative, <u>www.congress.gov</u>
US Copyright Office and leading Generative AI companies in support of any of these 15 proposed changes to US Copyright registration procedures and Title 17.

For More Information

- 1. US Copyright Office AI website. https://www.copyright.gov/ai
- US Copyright Contact form. https://www.copyright.gov/help under category choose
 Other. Either include the link to this pdf or choose from the list of 15 items you feel
 most agreeable with to inform US Copyright Office of your position.
- 3. 100 leading people and their organizations pertaining to AI. https://time.com/ collection/time100-ai/
- 4. DeepMind, watermarking Generative AI images: https://www.deepmind.com/blog/identifying-ai-generated-images-with-synthid
- 5. US Congressional Representative in your state. https://www.congress.gov
- 6. Stop Fakes. https://www.stopfakes.gov

Author Background

Erik W. Gottlieb has years of full-time employment and contractor work experiences with several small, medium and Fortune 50 US corporations in varying job roles. He is a University graduate. He *does not* work as a legal adviser and is NOT a trained, nor approved Intellectual Property lawyer. This paper is not meant to be actual legal advice. He is somewhat qualified to discuss some copyright topics and copyright registration procedures as pertains to sole-authorship by way of his 23 years of personal experience successfully registering over 100 copyrights of his own human authored works. (All registered without the help of a lawyer.) Additionally, he has over 45 years experience with his personal technology projects including: technical designs, electronic designs, source code (including ML libraries and custom trained ML models.) He has designed and created his own custom datasets for ML training purposes including digital photography, image datasets, text documents, drawings, sounds and music.

About This Document

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https://www.erikgottlieb.com/pdf/15-changes-us-copyright-office-can-do-today-to-preserve-middle-class-wealth-human-authorship-and-original-author-styles.pdf