Copyright, Entertainment & New Technologies

SHYAMKRISHNA BALGANESH

Sol Goldman Professor of Law

Columbia Law School

Columbia Law School | PROGRAM ON SCIENCE, TECHNOLOGY & INTELLECTUAL PROPERTY LAW

Constitutional Basis

Article I, §8, Cl. 8

"To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."

⟹ Restricted to *Copyright* and *Patent*.

Copyright Basics

1. Requirements for Protection
    - Originality & Fixation
    - Subject Matter
    - Idea/Expression
2. Exclusive Rights & Infringement
    - Reproduction
    - Derivative Work
    - Distribution
    - Public Performance
3. Fair Use & First Sale

Copyright Protection: Requirements

17 U.S.C. § 102:

(a) Copyright protection subsists, in accordance with this title, in **original** works of authorship **fixed** in any tangible medium of **expression**, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.

(b) In no case does copyright protection for an original work of authorship extend to any **idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated**, or embodied in such work.

Copyrightable Expression

- Idea/Expression Dichotomy:
  - Protection extends only to the expression of an idea and not the idea itself.
  - "Idea" includes processes, procedures, methods of operation, system, etc.
  - Rooted in *Baker v. Selden* and now §102(b).
  - Landmark: Lotus v. Borland, 49 F. 3d 807 (1st Cir. 1995).
- Merger Doctrine:
  - If an idea can be expressed only in one or a very few number of ways, the expression of the idea is denied protection --- deemed *merged* with the idea.
  - Landmark: Morrissey v. Procter & Gamble, 379 F. 2d 675 (1st Cir. 1967).
- Fact/Expression Dichotomy
  - Facts cannot be protected; only their expression can.
  - Facts are similar to ideas; meant to communicate a truth.

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.

Originality

- Two requirements:
  1. Expression must ***originate*** in the claimant/author.
  2. It must exhibit a ***modicum of creativity***.
- Does not need to be ~~novel~~, ~~innovative~~, or ~~unique~~.
- Landmark: Feist Pubs. v. Rural Tel. Service Co., 499 U.S. 340 (1991).
- Low threshold; almost always met.
- Exceptions:
  1. Copying
  2. Pure representations of reality



Fixation

- Defined in 17 U.S.C. §101:

  A work is "fixed" in a tangible medium of expression when its embodiment in a copy or phonorecord, by or under the **authority of the author**, is **sufficiently permanent or stable** to permit it to be perceived, reproduced, or otherwise communicated for a period of **more than transitory duration**.

- Low threshold: need not be permanent.

Derivative Works

- Requirements:
  1. Based on one or more pre-existing works;
  2. Such work must be recast, transformed, or adapted.
- Examples:
  - Motion pictures based on a novel.
  - Translations.
  - Abridgement.
- Rules:
  1. Lack of authorization can result in a denial of protection.
  2. Needs to satisfy originality (“distinguishable variation”), which limits the scope of protection.

Joint Works

- Works of multiple authorship, or co-authorship.
- Requirements:
  1. Each contributor must contribute protectable **expression** (be an author).
  2. Their contributions must be merged as **interdependent** or **inseparable** parts of a whole.
  3. The parties' actions must reveal a mutual **intention** to be joint authors.
- Cannot be contractually determined; it is to be determined by courts ex post.
- Consequences:
  1. Each coauthor obtains a **proportional** share of ownership in the work.
  2. Each coauthor has the **right to use or authorize** the use of the work.
  3. Each coauthor (as coowner) is obligated to **account** to the other(s) for profits.

Work Made for Hire

- Two categories:
  1. Work made during the course of **employment**.
     - Employee based on common law agency rules.
  2. Work specially **commissioned** as a work made for hire:
     - Needs to fall within an enumerated category (only 8).
     - Contract needs to be in writing.
     - Contract needs to mention “work made for hire.”
- Law treats the owner as the first author. Only contractual allowance.

Duration & Registration

- Duration:
  - Not indefinite.
  - Life of the author + 70 years.
  - If anonymous, pseudonymous, or WMH = 120 years from creation.
- Registration:
  - Not required for protection; protection is automatic.
  - Registration confers additional benefits.
    - Statutory damages.
    - Attorney's fees.

Exclusive Rights under Copyright

- 6 enumerated rights.
- Can be further subdivided in licensing.
- Enumerated rights:
  1. Reproduction Right (§ 106(1))
  2. Derivative Works Right (§ 106(2))
  3. Distribution Right (§ 106(3))
  4. Public Performance Right (§ 106(4))
  5. Public Display Right (§ 106())
  6. Digital Audio Transmission Right (§ 106(6))

Reproduction Right

- Exclusive right to reproduce (i.e., copy) the work. So what is "copying"?
- Copying has two elements:
  1. Actual Copying
  2. Substantial Similarity
- Actual copying = *did the defendant actually take (appropriate)* ***protected expression*** *from the plaintiff's protected work?*
- Proving actual copying:
  1. Access (reasonable access to the work)
  2. Probative Similarity
     - Analytical dissection --- *breaking the work down into its parts*.
     - Expert testimony --- *of public domain elements and expression common to genre*.

Reproduction Right (…contd.)

- Substantial Similarity
  - Was the copying of protected expression "substantial enough" to be wrongful and therefore actionable?
- Judge/jury division (First Circuit):
  1. Actual copying
     - Question of fact; can be decided on summary judgment.
     - Expert testimony and dissection permitted.
  2. Substantial Similarity
     - Jury question
     - Ordinary observer.
     - Summary judgment discouraged unless "no reasonable juror" could find substantial similarity.

Derivative Works Right

- Connected to the definition of a “derivative work”.
  - Plaintiff has to show that the defendant created a derivative work; not just another work based on the protected work.
- Often accompanied by a reproduction right claim.

Distribution Right and First Sale

Parasitic on a reproduction

- Exclusive right "to distribute **copies** … of the copyrighted work to the **public** by **sale or other transfer of ownership**, or by **rental, lease, or lending**."
- Expansive and would prima facie restrict owners of lawfully acquired copies (e.g., books) from re-selling it.
- First sale doctrine: Exempts the owner of a lawfully made and acquired copy to re-sell it without copyright liability.
- Originally created in 1908, codified today in §109.

First Sale under §109(a)

"Notwithstanding the provisions of section 106(3), the owner of a particular copy or phonorecord ***lawfully made*** *under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord."* **(109(a))**

The controversy…?

"Importation into the United States, without the authority of the owner of copyright under this title, of copies or phonorecords of a work that have been acquired outside the United States ***is an infringement of the exclusive right to distribute copies or phonorecords under section 106****, actionable under section 501."* **(602(a)(1))**

Grey Market Importation

- Can—and to what extent—does the importation right cover first sale?
  - Can an importer take advantage of the first sale doctrine?

    Yes. *Quality King, Inc. v. L'Anza Res. Int'l*, 523 U.S. 135 (1998).
  - What if the product was made outside the U.S., but by the copyright owner? Can an importer of this product use the first sale doctrine?

    Yes. *Kirtsaeng v. John Wiley*, 568 U.S. 519 (2013).

    "Lawfully made" does not mean made in the U.S.

Public Performance Right

- Exclusive right to **perform** the work **publicly**.
- What does it mean to "perform" a work?

  To "perform" a work means to recite, render, play, dance, or act it, either **directly** or **by means of any device or process** or, in the case of a motion picture or other audiovisual work, **to show its images in any sequence** or to make the sounds accompanying it audible.

- What does "publicly" mean?

  To perform or display a work "publicly" means—

  (1) to perform or display it at a **place** open to the public or at any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered; or

  (2) to **transmit** or otherwise communicate a performance or display of the work to a place specified by clause (1) or to the public, **by means of any device or process**, whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times.

Aereo

of CATV. Does it infringe?

urt decides *Fortnightly*; Answer: **No**.

urt decides *Teleprompter;* Answer: **No**.

t changes Supreme Court decision.

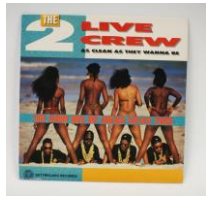
- Makes cable television a public performance.
- But subjects it to limited liability.

- 2014: SCOTUS decision in *Aereo*

Fair Use

- Exception to *all* exclusive rights; actions treated as “non-infringing.”
- Codified in the current Act, into four factors:
  1. the **purpose and character** of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
  2. the **nature** of the copyrighted work;
  3. the **amount and substantiality** of the portion used in relation to the copyrighted work as a whole; and
  4. the effect of the use upon the **potential market** for or value of the copyrighted work.

Transformative Use



- Campbell v. Acuff-Rose, 501 U.S. 569 (1994).
- Core question: is the defendant's use "transformative"?
  - Does it merely **supersede** the work, or does it add **new meaning, expression, or purpose**?
- Purpose: Transformative or not.
- Nature of the Work: Not very helpful.
- Amount and Substantiality: Inflected by purpose.
- Market harm: Burden on the defendant.

Andy Warhol Foundation v. Goldsmith (SCOTUS)

Andy Warhol Foundation v. Goldsmith

- Decision limited to the first fair use factor and the question of whether it was “transformative”.
- Majority – no.
- Key elements
  - Mere claim of “new meaning or message” not enough.
  - Some justification for the use is necessary.
  - Comparison of the specific use at issue (commercial licensing for both).
  - Protection of the derivative works right, which would otherwise lose meaning.

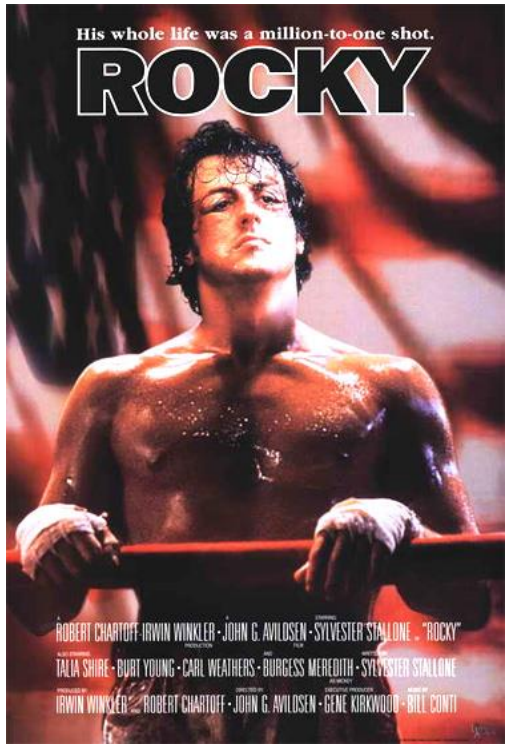
Special Issues Relating to Motion Pictures

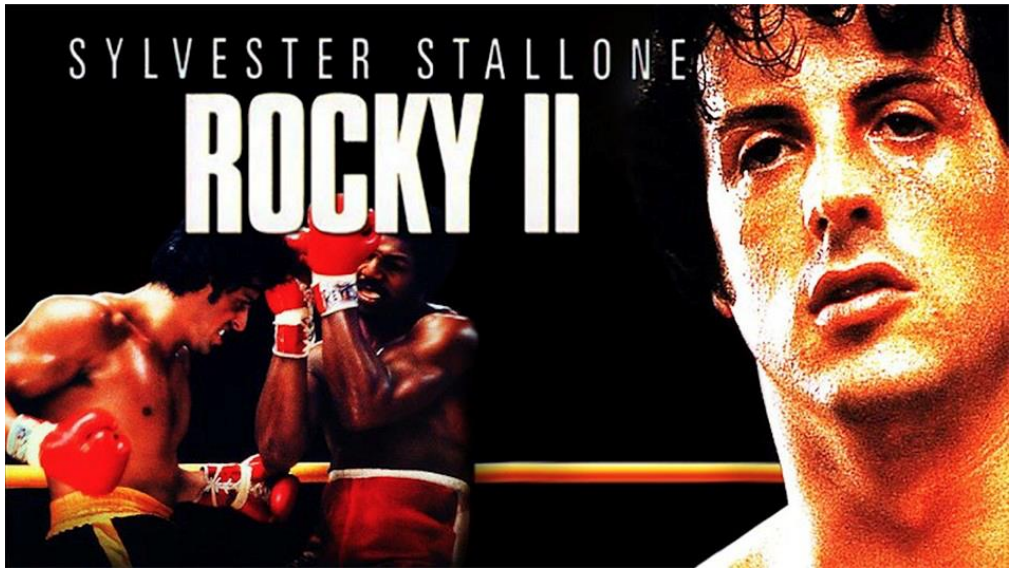
“Audiovisual works” are works that consist of a series of related images which are intrinsically intended to be shown by the use of machines, or devices such as projectors, viewers, or electronic equipment, together with accompanying sounds, if any, regardless of the nature of the material objects, such as films or tapes, in which the works are embodied.

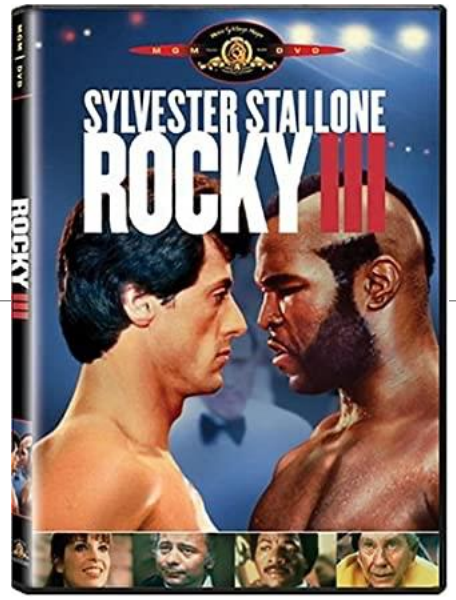
A “derivative work” is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted.

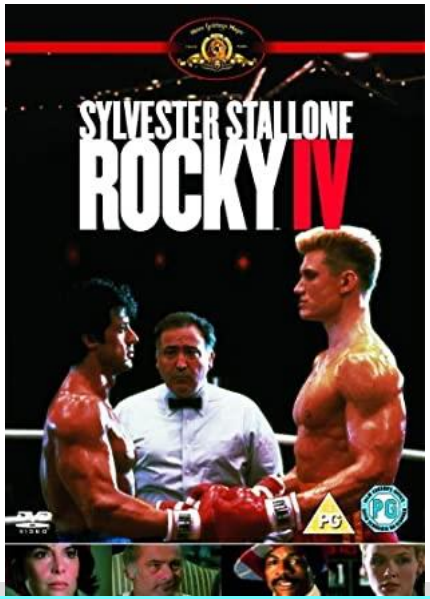
103(a): The subject matter of copyright as specified by section 102 includes compilations and derivative works, but protection for a work employing preexisting material in which copyright subsists does not extend to any part of the work in which such material has been used unlawfully.

Anderson v. Stallone









Music and Copyright: Special Issues

- Originality
  - Common notes/harmonies – not to be confused with novelty.
  - Protection can be thick or thin – determines the standard for comparison.
- Infringement
  - Actual copying commonly relies on circumstantial evidence.
  - Common features need to be excluded – expert testimony essential.
  - Expert testimony cannot be used at the second stage: wrongful copying.

Griffin v. Sheeran

- Infringement claim by heirs of co-writer to *Let's Get it On* (Marvin Gaye) against Ed Sheeran in his production of *Thinking Out Loud*.
- Understanding the basis of the lawsuit: similarity.
- Crucial to unpack the similarity:
  1. Part of the genre/category that everyone builds on.
  2. Basis of proof (circumstantial) of copying.
  3. Wrong – actionable.
- Judge unwilling/unable to say "no copying" based on similarity. Relied on a battle of experts. Jury was to decide all three elements, but base its judgment on 3.
- Fortunately, got it right. Relied on expert testimony to find no on 2. More importantly, relied on Sheeran's testimony.

The Puzzle of Computer Software

- In 1976, Congress decides to make it protectible subject matter but as a literary work. All types of computer software become eligible.
- Requires adaptation of all of copyright's core doctrines:
  - Idea/expression dichotomy
  - Infringement analysis
  - Fair use

Software and the Idea/Expression Distinction

§102(b): In no case does copyright protection for an original work of authorship extend to any **idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated**, or embodied in such work.

- Literally – software becomes ineligible?
- Adopt a more pragmatic approach, allowing for both literal and non-literal elements of a computer software to become eligible for protection—Structure, Sequence, and Organization (SSO).
- The case that changes things is *Computer Associates v. Altai*.

Computer Assocs. v. Altai

Computer Assocs. v. Altai

Method of creating computer code:

1. Ultimate Function – of the program.
2. Decomposition into subroutines.
3. Arranging subroutines using flowcharts.
4. Parameter list for module interaction.
5. Structure – function of the program
6. Macros
7. Coding – Source + Binary

Non-literal elements obtain protection as well. Why?

Computer Assocs. v. Altai

Applying the idea/expression dichotomy?

- §102(b) and legislative history.
- Hard to police.
- Idea/functionality conflation.

Comparing "necessary incidents" in *Baker*

- Functional elements necessary incidental equivalent.

Whelan -- unitary conception of the idea.

Three step test: A-F-C.

Computer Associates v. Altai

3 step formula.

Step 1: Abstraction

Step 2: Filtration

- Elements dictated efficiency. Why?
- External factor constraints.

Step 3: Comparison

- Golden nugget.
- Note: non-literal copying only.

Overall view of the court.

Policy versus Principle in the copyright infringement analysis.

Google v. Oracle

APIs – Application Program Interfaces

- Short off-the-shelf packages of computer code.
- Programmers could take APIs and incorporate them into their own code.

APIs have two parts:

1. Declaring code – like the title/header (e.g., *math.integer.system*).
2. Implementing code – instructions for the machine to do something.

Sun's Java library had hundreds of APIs for use.

Google copied the *declaring code* only from 37 APIs in the library.

- No implementing code copied.
- Copied the 37 APIs declaring codes and their organization.

Google v. Oracle: The Majority

Punts entirely on §102(b) and finds fair use 6-2.

Fair use: common law doctrine, codified in §107 but with the understanding that its common law development would continue.

Justice Breyer takes each of the 4 elements and gives it a new twist for computer programs:

1. Nature of the work: *Declaring code is different from other programs and works.*
2. Purpose & Character of the Use: *Transformative because it was driven by "interoperability". Does not supplant the original; adds something new*.
3. Amount & Substantiality: *Negligible in light of what was not taken*.
4. Market Effect: *Not just harm; but also consumer benefit*.

Generative AI

- Understanding how AI works – in simple terms; and how it can be used.
- Copyright issues are on two sides of the equation:
  - Copyrightability: AI-assisted/AI-generated works and their eligibility.
  - Infringement: AI models that use copyrighted content raise potential liability questions.
- Terminology: Generative AI models are commonly referred to as LLMs (Large Language Models) or for image models as Diffusion Models.

Copyrightability of AI-Assisted Creations

- Copyright has always had a “human authorship” requirement.
- Copyright Office guidance on registrability:

  > “[T]he Office will not register works produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author. The crucial question is “whether the ‘work’ is basically one of human authorship, with the computer [or other device] merely being an assisting instrument, or whether the traditional elements of authorship in the work (literary, artistic, or musical expression or elements of selection, arrangement, etc.) were actually conceived and executed not by man but by a machine.”

- *Thaler v. Perlmutter* – extreme example.
- Answer not self-evident: “assist” is the crucial question going into the future.

Is AI model training an infringement?

- Probably the most important question confronting AI models today.
- Why? The entire structure of their working is predicated on a vision of copyright that allows them to do what they are doing.
- Answer not clear – Congress, U.S. Copyright Office, and courts are all considering options, as are academic institutions.
- Big challenge: (1) understanding the technology, and (2) appreciating the differences among different models.

LLMs/Foundation Models (e.g., ChatGPT)

ML models that are trained on large amounts of data.

- Data analysis for predictive purposes in a sequence.
- Content (data) tokenized into “tokens” for the machine to keep track.
- Creation of patterns of repetition based on predictive role of tokens.
- Multiple stages of cleaning of the data, de-duplication, etc.

Most of the time a local copy of the training data is made.

The model *ingests* the data and *learns* from it, to be able to produce outputs that may/may not be similar to the training data.

Type of Data Used

Where is the data sourced from?

- Routine reliance on “publicly available”.
- Much of it is copyright protected, even if publicly accessible.
- Wrongly equate public accessibility with public domain.

If the data is entirely public domain.

- No copyright issues directly implicated in the training.
- Unless ancillary access-related laws are implicated (e.g., encryption).

Most successful ML models use publicly available copyright-protected data in significant part (e.g., Stability AI, GPT-4).

Some rely on repositories with elaborate ToS (e.g., CoPilot/GitHub).

Authors Guild v. Google, Inc. (2015)

Infringement lawsuit against Google for its famed Google Books project.

- Scanning of thousands of books.
- *Search* functionality to locate words; display through the *snippet* function.
- Local (private) copy of entire books.

Defendant relied on the fair use doctrine.

- Primary reliance: transformative use (*Campbell*).

Judge Pierre Leval runs the analysis through the four fair use factors, and concludes that it was a fair use.

Authors Guild v. Google, Inc. … contd.

Factor 1:

- Copying for search was a transformative purpose.
- Copying was to make available *information about the books* not the books themselves.
- Purpose very different from the original reading purpose of the books.
- Snippet view similarly designed to tell searcher *where* a term appears.
- Commerciality does not outweigh transformativeness.

Factor 2: Mildly favors fair use since it does not perform a substitutive function.

Factor 3: Amount and substantiality justified by the transformative purposes.

Factor 4: No real substitutive market harm that cuts against fair use.

ML Training and *Authors Guild*

Many mistakenly presume that it *easily* applies.

Crucial differences that a court will note:

1. Non-expressive use?
   - *About* the work vs. *the* work itself (enjoyment v. non-enjoyment); when does that breakdown.
   - Enjoyment cannot be purely based on the identity of the actor.
   - Why isn't ingestion (tokenization) more like *translation*?
2. Commerciality?
   - Court assumes it is secondary; but *Warhol* changes that.
3. Market Effect
   - Potentially significant; cannot be wished away.