

## *“Fair Use in the Digital Age”*

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Thank you so much for the honor of speaking with you today. This is my first visit to Tokyo, and I can tell you that this city is even more exciting in person than any television show I have seen on the Travel Channel.

Today, I would like to talk to you about a paper I recently co-authored with several of my colleagues at the Phoenix Center entitled *Fair Use in the Digital Age*.

It is sometimes said that copyright laws weren't created for the “Digital Age.” Certainly, the copyright industries have faced a number of profound challenges in the wake of digitization and widespread adoption of high-speed Internet services. But saying that laws written in a past quite different than today says nothing about how laws should change. Obviously, some people want copyright laws weakened to benefit and profit from their use, but others, especially the creative community, want copyright laws strengthened—or current laws better enforced—in order to address the rampant digital piracy that threatens the economic viability of the creative sectors.

To say that copyright laws “weren't created for the digital age” may not invoke disagreement, but the statement alone does not tell us which direction we should move—do we make the laws weaker or do we make them stronger?

The purpose of my paper – *Fair Use in the Digital Age* – was to look to economic theory to better understand how laws should change in response to the profound technological changes that we describe as “the digital age.” As our title implies, we consider most the effects of the “digital age” on copyright law's exceptions and limitations including, most directly, the concept of “Fair Use” (or “Fair Dealing” in some countries) which is an important component of copyright law. Fair use can facilitate the creation of new creative capital, but it can also be used to shield infringement and other abuses. Across the globe, there are parties pushing for relaxation of fair use and fair dealing and point to the “digital age” as a motivation for change. Yet, none of these parties, at least to my knowledge, support their position with a formal analysis of the problem. We fill this gap.

Economic analysis is done with mathematics, and mathematics requires very specific definitions. To begin, we must first define what we mean by “the digital age.”

First, reproducing copyrighted material is now very easy. So, cheap or free copying is one feature of the digital age. Second, copied works can be easily and cheaply disseminated. Copyrighted works, once in a digital format, can be made available to the entire world instantly by putting them on the Internet on peer-to-peer sites or YouTube.

Third, digitization has not only made it easy to acquire copies of works but also to manipulate them to create secondary works. In the digital age, the fixed costs of using and manipulating original copyrighted works are reduced significantly. Fourth, technology may also reduce the cost of creating certain types of works, particularly music and books. We can think of the digital age as reducing the fixed cost of producing certain types of new works.

So, we may characterize the “digital age” as having reducing the cost of copying, disseminating, modifying, and possibly creating copyrightable materials. The question is what do such changes say about whether copyright law should be weakened or strengthened?

Fair use is addressed in Section 107 of the U.S. Copyright Act. The statute permits “the fair use of a copyrighted work [] for purposes such as criticism, comment, news reporting, teaching, scholarship, or research, is not an infringement of copyright.” I see on occasion the claim that U.S. fair use law permits *any* type of use, but this is false. While the “such as” component of the statute permits some flexibility, the listing of examples points to particular types of uses including criticism, comment, reporting, teaching, research and a few others. Note that all these uses involve a direct and explicit reference to the original and are related to important policy concerns such as free speech, education and research. The courts have generally rejected that the “such as” qualifier means “any” use is potentially fair use.

If an infringement dispute arises, it is the court system that determines whether the disputed use falls under “fair use” or not. Not all defendants make the claim of fair use, which demonstrates that U.S. fair use law is not entirely an open-ended concept as some would have you believe. Courts consider the following four factors in assessing the fair use defense: (1) the purpose and character of the use; (2) the nature of the copyrighted work; (3) the amount and substantiality used; and (4) the effect of the use upon the potential market for or value of the copyrighted work.

A substantial body of case law exists in the U.S. that explains, albeit often inconsistently and often crudely, what these factors mean. The courts typically address each in turn in their opinions. The purpose and character of the use often goes to whether or not the use is commercial, educational, and so forth, but such decisions are rarely determinative. The nature of the copyrighted work usually addresses whether the original was commercial, whether what was used was actually copyrightable, and so forth. Again, not determinative. The amount used has an obvious interpretation, but again, it is not determinative. The copying of entire works has been permitted under fair use, and relatively small appropriations have been denied.

According to the U.S. Supreme Court it is the fourth factor—the effect on the market for the original—that is “undoubtedly the single most important element of fair use.” Empirical analysis of judicial decisions supports this view. If a defendant loses on the

fourth factor, the defendant is nearly guaranteed to lose. The second and third factors appear to matter very little, and the first factor almost always coincides with the fourth.

In modern fair use jurisprudence, the concept of “transformativeness” has become popular, in large part as a response to an article on fair use by Judge Pierre Leval in 1990 and the Supreme Court’s *Campbell v. Acuff-Rose* decision in 1994. By transformativeness, the court asks whether the secondary work alters the original “with new expression, meaning, or message.” That is, straight copies aren’t enough for fair use; the secondary user must make something new.

To the economist, transformativeness is simply product differentiation. The more differentiated goods are, the less they compete, which is the focus of the fourth factor. Linking transformation to the fourth factor, we see a fairly clear path to an economic model of fair use.

One way economists study product differentiation is by using spatial models. We choose this approach in our paper. The spatial model was first used to explain physical location of firms. Buyers had to pay transportation costs, so the further away a firm was from the customer location, the higher the price. In this paper, we interpret location as “preference space,” which is common in the economics literature. A consumer located at one point on the line has preferences for works located at or near that point in preference space, but desires less a work located far away from that point. The further away the good is from a customer’s ideal location in preference space, the “higher the price” of the good.

We locate the original work at the origin of a line segment (point 0). The further away from the origin a secondary work is, that is the closer to point 1 it gets, the more differentiated (or transformed) the secondary work is from the original and the less it competes with the original work. We model fair use as establishing a threshold value of distance between the original and the secondary work. That is, fair use sets the minimum degree of transformativeness required to satisfy factor four and thus qualify as fair use.

We label that minimum difference using the parameter  $\lambda$  (“lambda”). Any secondary work closer to the origin than  $\lambda$  is an infringement; any secondary work further from the origin than  $\lambda$  qualifies as fair use. Thus, the bigger is  $\lambda$ , the stronger is copyright protection (the stricter is fair use). The smaller is  $\lambda$ , the weaker is copyright protection (the more relaxed is fair use). Thus,  $\lambda$  determines whether fair use is “strict” or “relaxed.”

The question we ask then is: what is the optimal  $\lambda$ ?

We answer it by assuming there is a social planner that chooses  $\lambda$  so that the revenue obtained (labeled  $R$  in the model) from the sale of the original work is sufficient to pay the cost of creating it (labeled  $A$  in the model). This approach maximizes the value of

the original work to consumers, providing the creator no more than is necessary to produce the work. We may also view this work as the “marginal” work—the least profitable work society wants created.

How can the “digital age” be incorporated into our economic model? First, we know that the nearly free copying and dissemination of copyrighted works had led to widespread piracy. Say that the size of the market for a copyrighted work is  $S$ . Piracy and enforcement/monitoring costs act as a leakage on the market, shrinking the market size and sales by a factor  $\tau$  (tau). So, we may model piracy and enforcement/monitoring costs as  $(1 - \tau)S$ . When  $\tau$  gets bigger, the effective market for the original work gets smaller.

Second, digitization has eroded any disadvantage faced by copiers relative to the creator of the original work. Photocopying a book was timely and expensive. Now, however, the book can be passed around and even read electronically. We assume the owner of the original work distributes work at incremental cost  $c$ , but the secondary user faces some penalty  $\alpha$  and so faces the distribution cost of  $c + \alpha$ . In the digital age,  $\alpha$  is getting smaller and may, in fact, be negative so that copies are at an advantage relative to creators.

Third, today it is cheaper to use and modify original works to make secondary works. The works can be obtained in digital formats and easily manipulated in powerful software that is often available for free. We take this change to imply a lower fixed cost to the secondary user, which do not model directly but the effects are easily discerned.

Fourth, original works may be cheaper, in some cases, to make in the digital age. We model this directly.

Under such a constraint, how does the “digital age” affect the social planner’s choice of  $\lambda$ ? Recall that the bigger is  $\lambda$ , the stricter is fair use, since secondary works must be located far away from the original. A small  $\lambda$  means a more flexible fair use policy.

First, if the original work is very costly to make, the harder it is to meet the revenue requirements. Thus, more protection is required when the fixed costs of the original work are larger. Works that are costlier should be subject to a stricter policy on fair use, or other types of exemptions and limitations. Expensive movies, television shows, books or music, for instance, may deserve more protection than other works.

Second, it’s easier to meet the revenue requirement when the market is large. So, works that sell in larger markets require less protection.

Third, the higher the rate of leakage (e.g., piracy), the smaller is the effective market. Thus, the higher the leakage rate, the more protection a work requires and the bigger is  $\lambda$ . The key aspects of the digital age - cheap copying and distribution - have led to rampant piracy and increased the cost of enforcing rights. So, in this respect, if

copyright law does not fit the digital age, then it is because it is too weak. Copyright should be strengthened, not weakened.

Fourth, if the secondary user's distribution cost penalty is large, then the penalty provides a natural protection to the original work, so  $\lambda$  can be smaller without threatening the creation of the original work. As the cost disadvantage ( $\alpha$ ) on distribution by secondary users falls, a feature of the digital age, the more protection the original work needs. Again, the digital age points to stronger not weaker copyright protection.

Fifth, and as with the cost penalty, if the fixed costs of modifying the original work were very, very high, we could place  $\lambda$  at 0 since there will be no secondary works at all. As the opportunity cost (fixed cost) of the secondary work fall, however, it is easier to make secondary works so  $\lambda$  should be bigger. Again, a key feature of the digital age - a lower cost of manipulating original works to make secondary works - points to stronger, not weaker, copyright protection.

In all, the key features of the digital age point to stronger, not weaker, copyright protection. Fair use, as an exception to copyright, should not, in the current environment, be made more flexible or weaker, it should be make stricter and stronger.

An alternative interpretation of these results is this: if the policy desire is to make exceptions and limitations more flexible, then something must be done to counter the effects of the digital age. For instance, policy must reduce leakages by addressing the piracy problem, making the enforcement of rights more effective and cheaper, and protecting the market for creative works in other ways.

It's worth spending a moment discussing what this model says about adjudicating fair use cases. What is interesting about this model is that it is not only a model of fair use, but also a model of infringement. The same analysis would be done whether assessing fair use or infringement, it's just that fair use may have a smaller  $\lambda$ , allowing secondary works to be closer to the original work. Looking at the problem this way points to some clarifications on how we think about fair use.

Judge Leval describes the adjudication of fair use cases as involving "two essential and intimately intertwined questions": (1) is the secondary work transformative? and (2) does it compete too much with the original? I believe this pattern of inquiry has led to some recent judicial errors, especially in the area of appropriation art. The relevant first question is not simply whether the secondary work is transformative—but rather whether it is transformative in the right "direction." But that, I mean to ask the question is *the secondary work something that falls under fair use?* Is the secondary work a comment or criticism of the original? Is the secondary work news or scholarship? This is the threshold question. If the answer is no, then the fair use deliberation ends and the case becomes one of basic infringement. In recent cases, the courts have made clear, for instance, that the secondary work cannot be transformative in the "direction" of a

derivative work, which is protected by copyright. That is, the secondary work cannot simply be a language translation of the original. Such translations do not fall under fair use. As the courts have said, some works do “not involve the kind of transformative purpose that favors a fair use finding.”

So, I propose an alternative to Leval’s setup. First, the question is: does the secondary work transform the original in a way covered by fair use? Second, is the transformation sufficient that the secondary work does not compete too much with the original? This is how the economic analysis tells us to set up the judicial review. It is a logical approach that should reduce confusion and what I believe to be judicial errors.

Also, I think the courts have been too narrow in addressing the second factor, which appears historically to be a secondary consideration at best. When adjudicating fair use, the judges should consider many factors including the cost of creating the original work ( $A$ ), the size of the market for the original work ( $S$ ), the rate of leakages including piracy ( $\tau$ ), and the technology of distribution ( $\alpha$ ). Doing so makes the legal analysis more economic in nature, more rational, and more important to the determination.

Finally, in some countries there’s a debate about moving from fair dealing to fair use, or expanding the items listed under fair dealing. For the most part, fair dealing covers explicit uses and does not include a “such as” list that opens the door to poor judicial decision-making. In work that does not appear in the paper but is forthcoming, we evaluate the problem by studying a case where there are multiple  $\lambda$ s covering different types of uses (e.g., parody, derivative works, and commercial entertainment). It turns out that all the  $\lambda$ s are related. Moving some uses from infringement to fair use, that is moving works facing a high  $\lambda$  to a lower  $\lambda$ , the revenue constraint is no longer satisfied. Thus, some of the  $\lambda$ s must increase to satisfy the constraint. In other words, as fair dealing (or fair use) is expanded, there must be some offset in another portion of copyright law that makes the law stronger in those dimensions.

Briefly, I want to comment on two “empirical” studies on fair use. The first is a study published by the Lisbon Council in 2015, written by Benjamin Gibert. In all my years, I have never seen such an incompetent empirical analysis, and I have detailed a number of very serious problems with the work. But even ignoring numerous fatal errors, what is the analysis telling us? The author performs hundreds of statistical tests of which very, very few are statistically significant. So few, in fact, that the number of rejections is entirely consistent with what we would expect if there was no relationship at all. So, what we learn, putting aside the fatal defects, is that more flexible copyright regimes do not have a statistically significant effect on economic outcomes.

Second, another study by Mr. Gibert (with coauthor Roya Ghafele) looks for economic changes after Singapore’s switch from fair dealing to fair use. The study is also severely defective and produces meaningless results, even by the authors’ own admission. But even under the best light the study does not support a more flexible fair use policy. Again, ignoring a large number of fatal defects, which I have detailed in my review of

the study, we might ask what does the paper's empirical model demonstrate? It demonstrates that the switch from fair dealing to fair use has led to an increase in the economic value of technologies used to copy and distribute copyrighted content while at the same time leading to a sizeable decline in the economic value of the copyright industries. The switch, therefore, appears to have increased piracy and hurt the creative sector. Fair use and fair dealing should have the opposite effect. Notably, a few years after its fair dealing reform, the Singapore government felt it necessary to amend its laws to address rampant piracy.

There is no evidence, of which I am aware, that shows expanded fair dealing or switching to fair use has positive economic impacts. All the evidence points to the contrary.

Thank you for your time and attention.

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