

Copyright Policy and Economic Doctrines

BY ROBERT D. ATKINSON | NOVEMBER 2012

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INTRODUCTION

For many years, the debate over copyright policy in advanced industrial nations was marked by a relative lack of partisan and ideological conflict. There was a general consensus that relatively strong copyright protection spurred the development of content and was both pro-innovation and pro-consumer. But in the last decade, this has changed markedly. Today, debate over copyright policy has become more contentious, as last years' brawl over SOPA/PIPA so amply demonstrated. These disagreements don't stem just from politics, in the sense of conflicts between interests. They also reflect differences over doctrine—differences in deeply held views about the ideal form of copyright policy. Based on these doctrines, different people stress different goals and values and work under different assumptions about how information industries and copyright work.

At its core copyright policy is based in economics. And despite what many economists claim, economics is not a science; and in this case intellectual approaches to the issue of information industries and copyright differ substantially. These approaches reflect differences in economic doctrine among economists, policymakers and others. This paper postulates and describes four competing economic doctrines: conservative neoclassical, liberal neoclassical, neo-Keynesian, and innovation economics. It explains how each doctrine leads to different views of optimal copyright policy and how there is no scientifically optimal copyright policy; any policy position reflects different goals, assumptions and values. Understanding this doctrinaire source of differences over copyright policy should help policymakers understand core issues and hopefully make more informed decisions.

THE ROLE OF ECONOMIC DOCTRINES

Many economists like to portray their field as a science and themselves as the sole arbiters of economic truth. In fact, economics is more akin to philosophy, and different economists hold different economic philosophies. As noted economist Joseph Schumpeter once stated regarding ideology, "The majority of economists… are ready enough to admit its presence, but like Marx, they find it only in others and never in themselves. They do not admit that it is an inescapable curse and vitiates economics to its core."

When considering economic issues, including copyright and the functioning of information industries, it is important to realize that much of what appears to be objective theorizing and unbiased analysis is in fact deeply shaped by the doctrine of the economist. Economists' and policymakers' beliefs about what policy works best for the economy, including their beliefs about the appropriate copyright policy, are not simply independent constructs applied to new contexts; rather such beliefs constitute and are a reflection of coherent world views or doctrines. Such doctrines profoundly shape how proponents view the economy, what they consider important, and most importantly, what they believe to be correct vs. misguided public policy. These economic doctrines guide thinking and help individuals make sense of a complex, rapidly evolving economy.

It is not only Ph.D. economists working at the FTC, on Congressional committees or in think tanks that are influenced by doctrine. Virtually everyone involved in economic policy, knowingly or not, adhere to a particular economics doctrine, even if they cannot describe or name it.² Indeed, as Keynes once stated, "Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist." As Milton Mueller has argued more recently, using the term "ideology" in place of doctrine:

The term *ideology* has a negative connotation, sometimes justifiably so. It can mean a dogmatic or religious adherence to a set of precepts and predictions regardless of their pragmatic utility or correspondence to reality. While it is true that ideologies bring those risks, it is also true that any good-faith effort to understand and cope with unprecedented societal developments requires something akin to what I mean by ideology. One's ideas and analysis must strive to make sense of the world in a way that facilitates both private and collective action. People will, in fact, link their perceptions and ideas into relatively consistent, comprehensible principles that can be communicated and understood by a broader public so as to coordinate their response.³

THE FOUR COMPETING ECONOMICS DOCTRINES

In order to make sense of the vigorous debates over copyright policy, it is important to understand the doctrines underlying different positions. Since much of copyright policy is about economics, it is important to understand that different and competing economic views stem from differences among economic doctrines. Until quite recently, three economic doctrines competed for intellectual supremacy: conservative neoclassical (often called "supply-side economics"); liberal neoclassical (what used to be sometimes called "Rubinomics," referring to the policies and views of President Bill Clinton's Secretary of the Treasury Robert Rubin); and neo-Keynesian. In the last decade, however, a small but

growing share of economists began arguing that the conventional doctrines are fundamentally limited and a poor guide to understanding the 21st century innovation-based economy, and that a new economic doctrine—what is termed here "innovation economics"—is a better guide to policy.

To be sure, these doctrines are not straightjackets. Not everyone is firmly in one camp or the other. Moreover, an individual's economic views evolve. However, even with these limitations, approaching economic policy issues like copyright through the lens of doctrines does help explain many differences in policy positions. As such, understanding the goals and principles undergirding each doctrine will help explain divergent approaches to copyright policy.

Conservative and Liberal Neoclassical Economics

A core principle of both conservative and liberal neoclassical economists (CNCs and LNCs) is that allocative efficiency should be optimized. Allocative efficiency refers to the allocation of scarce resources in such a way that maximizes the net benefit attained through their use, and that produces the quantity and mix of goods and services that is most beneficial to society. A market economy characterized by allocative efficiency is one in which scarce goods and services are consumed on the basis of the prices consumers are willing to pay, and produced on the basis of equality between marginal costs and price. Neoclassical economists believe that economic welfare is almost always maximized if actors in competitive markets set prices that are not distorted by policy. They spend much of their professional lives defending this utopian balance, believing that any violation of allocative efficiency leads to "deadweight loss"—a loss of economic efficiency as people buy too much of a product that is priced lower than it costs to produce (due to preferential tax incentives or subsidies for example) or buy too little of a product priced higher than cost (from regulations or taxes for example) and a market clearing profit.

Of course, no economy, market based or not, is ever characterized by perfect allocative efficiency. However, neoclassicalists see the economy as a large market of goods and services tending towards an equilibrium that at least approaches allocative efficiency, one that is usually best left to itself. Equilibrium occurs when a market price is established through competition such that the amount of goods or services sought by buyers is equal to the amount of goods or services produced by sellers. The main task of economic policy as neoclassicalists see it is simply to reduce artificial barriers and impediments to market equilibrium, particularly by ensuring that prices are aligned with costs.

Further, they hold that individuals act in response to incentives to rationally maximize their own self-interest and that individuals' pursuit of their own self-interest generates the public interest. Indeed, according to Adam Smith, the individual who "intends only his own gain" will, in the course of maximizing his needs, be "led by an invisible hand to promote...the public interest." 5

Although conservative and liberal neoclassicalists agree on much, they differ in some important ways. In general, conservative neoclassicalists are less concerned with fairness, generally view markets as not prone to failure, and are less willing to assign intervening

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roles to government. Liberal neoclassicalists are generally more concerned with fairness, see market failures as more common (although not as compared to Keynesians and innovation economists), and are more willing to have the government intervene in the economy especially to promote fairer outcomes, even though they think government intervention usually harms efficiency.

These factions also differ with regard to the role of government spending and investment. Supply-siders (conservative neoclassicalists) view lower taxes as the key to growth and reduced government spending, even if taxes remain the same, as a stimulus to growth. They believe that many government expenditures, including both direct spending and tax expenditures, have a host of pernicious effects. In contrast, liberal neoclassicalists worry about government spending not because they believe it is harmful but because of its purported effects on fiscal discipline and public savings. Liberal neoclassicalists also are more willing to support public spending if it is focused on helping economically disadvantaged individuals; they usually consider decisions about such spending to involve a tradeoff between growth and fairness.

Neo-Keynesian Economics

The third major doctrine is neo-Keynesian economics. Neo-Keynesians (NKs) hold that demand for goods and services from business investment, government spending, and consumer spending drives growth. Because of their focus on aggregate demand, many neo-Keynesian economic policy prescriptions revolve around increased government spending to keep the economy at full employment.

Neo-Keynesians also place a high policy priority on an equitable distribution of wealth, which is viewed as essential to the sustainability of a market-based economy. Moreover, more equitable distributions of income and wealth lead, in the view of neo-Keynesians, to greater consumption, which in turn leads to greater economic growth. Neo-Keynesians see most economic issues as boiling down to a question of who benefits: working people and consumers or wealthy individuals and corporations. Thus, they devote less attention to issues of "growing the pie." Moreover, they see little that government can do to directly spur more growth (and conversely there is little government can do to harm growth), other than ensure high levels of aggregate demand. Therefore, regulation does not so much distort allocation efficiency, as it provides framework conditions for economic benefits flowing to most people.

Innovation Economics

In the last decade, a new economic doctrine has emerged through the work of a wide range of scholars. Unlike the three prevailing economics doctrines, innovation economics (IE) postulates that innovation (the development and adoption of new products, processes, and business models) drives growth. While referred to by a variety of terms, (e.g., structuralist-evolutionary, neo-Schumpeterian, evolutionary economics) the term used here is innovation economics. IEs make an explicit effort to understand and model those forces and factors conducive to innovative activity. They see innovative advances as resulting from intentional activities by economic actors, including government. Thus, such advances are not exogenous to the process of exchange in price-mediated markets, as NC's hold. If there

is a "bible" for innovation economics it is perhaps Joseph Schumpeter's classic 1942 book *Capitalism, Socialism and Democracy*, in which he explains:

The essential point to grasp is that in dealing with capitalism we are dealing with an evolutionary process ... the fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers' goods, the new methods of production or transportation, the new markets, the new forms of industrial organization that capitalist enterprise creates.⁸

Today, innovation economists find their home mostly in academia, sometimes in economic departments that are willing to buck conventional thinking, but often in schools of management, public policy and city and regional planning.⁹

IE holds that the major economic policy priority is long-term growth and that the major drivers of growth are productive efficiency (the ability of organizations to reorganize production in ways that maximize outputs with minimal inputs, including labor inputs) and adaptive efficiency (the ability of economies and institutions to change over time to respond to successive new situations, in part through technological innovation). If the focus in neoclassical economics is the study of how societies use scarce resources to produce valuable commodities and distribute them among different people, the focus in innovation economics is the study of how societies create new forms of production, products, and business models to expand wealth and quality of life.

In contrast to neoclassical economics, which focuses on getting the price signals right to maximize the efficient allocation of scarce resources, innovation economics focuses on spurring economic actors—from the individual, to the organization or firm, and to broader levels, such as industries, cities, and even entire nations—to take actions to be more productive and innovative. From the standpoint of innovation economists, if policies to encourage innovation "distort" price signals and result in some minor "deadweight" loss to the economy, so be it, because these losses to allocative efficiency are almost always minor compared to the significant gains from increased productive and adaptive efficiency. ¹⁰

Innovation economics also holds that although there is equilibrium in some markets at some times, in a growing share of markets in the knowledge-based economy, equilibrium is a fleeting moment. Markets are constantly roiled by entrepreneurial entry, disruptive technologies, political and social upheavals, changes in trade patterns, and more, never settling down into equilibrium. The lack of equilibrium is especially common to industries characterized by higher levels of change and innovation, including information industries. Moreover, innovation economists believe that market disequilibrium is responsible not for economic inefficiency but for growth and progress.

Innovation economics also holds that individuals and firms are not rational maximizers. Rationality has generally been understood to involve consistency across decision-making based on measurable calculations. Risk can be managed through rational decision-making. Innovative activity, particularly if it involves a high degree of novelty, typically involves uncertainty, where outcomes and their associated probabilities are unknown, not risk, where outcomes are known with a calculable probability. As a result of such uncertainty,

innovative efforts will meet with many failures, as well as some great successes. When the economy is characterized by uncertainty, price signals alone are not the best guide to decision-making.

COPYRIGHT AND ECONOMIC DOCTRINES

Information industries, defined broadly to include motion picture and sound recording, publishing, broadcasting, Internet, and software, are a growing component of advanced economies. And because copyright shapes information industries, at heart copyright is an economic policy issue. Thus the economic doctrines held by advocates and policymakers play an important role in shaping positions and analysis toward copyright. Indeed, a core component of economics is the price-mediated exchange of products and services in marketplaces. The four doctrines offer significantly different perspectives on how digital "products" should be treated with respect to exchange. Both at the scholarly and popular levels the debate has been framed by two basic groups: maximalists and minimalists, with the former seeking to expand copyright protection and the latter seeking to weaken it. Under this framing, CNCs are maximalists and LNCs and NKs are minimalists, although for different reasons. IEs could best be described as "moderates."

These fundamentally and deeply held positions don't stem only or even principally from different methods of analysis or data sources. While many NC economists state that economic analysis can identify the optimal policy with respect to copyright (even if according to them copyright is inherently a "second best" solution), the reality is that as in so many other policy areas, the best economics can do is provide information on tradeoffs. All four doctrines see a tradeoff between current allocative inefficiency created by copyright and long-run incentives for content production. No copyright protection would maximize allocation efficiency: since the marginal cost of information goods is zero the optimal price is free. But no copyright protection would mean vastly reduced incentives to produce additional content. But as IE economist Richard Lipsey notes, "There is nothing in neoclassical welfare economics... to tell us the optimum position on this tradeoff."11 Moreover, the empirical findings that might inform the correct position vis-à-vis copyright policy (e.g., length of term, definition of violations, extent of penalties, degree of secondary use allowed, etc.) are virtually impossible to generate, not just because of data limitations but also because there are no natural experiments to be conducted. As a result, deciding how to make these tradeoffs ultimately involves judgments that are significantly influenced by economic doctrine, thus often magnifying the differences on policy.

Conservative Neoclassicalists

The conservative neoclassical position, also known as the law and economics position, is that copyright is a legal and institutional arrangement that encourages the generation and dissemination of creative works by rewarding the creator with limited property rights on their creations. Without a grant of exclusive rights, the argument goes, creators will have too little incentive to produce creative works. ¹² The reason is that the creative works have high fixed costs and low marginal costs of production. As a result, subsequent copies cost far less to produce. ¹³ And in the digital era the cost of subsequent copies is close to zero.

This school is strongly influenced by the work of Ronald Coase, who argued that if property rights are fully established, then private negotiations, rather than state intervention, can address allocation issues, as long as transaction costs are not too high. Thus, although copyright is a form of state intervention, and thereby inherently suspect for CNCs, its very purpose is to enable markets to operate without other intervention.

Both CNCs and LNCs see a tradeoff between the benefits and costs of copyright, but the former are more willing to assume that the benefits (in terms of inducing future production of content) outweigh the costs (monopoly pricing and search costs for obtaining permission to use copyrighted works). In this sense, CNCs minimize the notion of "fair use," arguing that economic welfare is maximized when content owners have almost exclusive control over content. If owners want to allow use without compensation, that is their choice. The lower the costs of administering copyright become (e.g., digital technologies to facilitate search), the stronger the protection should be in this view. ¹⁴

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While most conservatives accept the role of the state to grant copyright status, there is one strain of conservative neoclassical economics that actually favors limited or even no copyright enforcement. With their overarching focus on freedom, some libertarians argue that copyright, as the grant of monopoly by government, impinges on the freedom of individuals. 15 Because for these libertarians, liberty trumps property rights, individuals should be free to use digital content in ways they want and content holders, not others such as digital intermediaries or governments, should be responsible for policing its use. For example, libertarian economists Boldrin and Levine argue that unhindered competition is the best economic system and since copyright hinders this, it should be abolished. 16 They would go so far as to require that all content, including blueprints and designs, must be made public and allowed to be copied and that "we set as a goal complete elimination of intellectual property?¹⁷ A recent blog post by a staffer for the Republican Study Committee reflects this view as well, arguing that, "Copyright violates nearly every tenet of laissez faire capitalism. Under the current system of copyright, producers of content are entitled to a guaranteed, government instituted, government subsidized content-monopoly." ¹⁸ In his framing, copyright hinders the freedom of 16 year old Americans to remix songs others wrote and recorded and sell their compendium collections to others. Likewise, libertarian law professor Tom Bell writes, "Apologists note that copyright encourages expression, but promoting welfare does not equate to protecting freedom." 19 This is akin to libertarian patron saint Friedrich Hayek's comment, "personally, I should much prefer to have to put up with some such inefficiency than have organized monopoly control my ways of life." ²⁰ In other words, libertarians are willing to sacrifice prosperity and innovation for freedom.

Liberal Neoclassicalists

Like libertarian neoclassicalists, liberal neoclassicalists are likely to be copyright minimalists. For them copyright is also a form of monopoly. But they are not concerned about its impact on freedom, but on allocation efficiency. According to their framing, monopoly pricing from copyright (pricing above marginal costs) leads to "deadweight" welfare loss. Because some consumers would gain utility from consuming content without paying the "monopoly price" (and because they see creative works as public goods that are non-rival—meaning that I can own one without taking it away from someone else), they see weak

copyright regimes as allowing more consumers to benefit without suffering harm. As economist Kenneth Arrow wrote almost 50 years ago, because information goods have characteristics of public goods, non-rivalry implies that free access is needed for economic efficiency. Likewise, as Lipsey notes, in the LNC doctrine, "the optimum condition for any piece of knowledge that already exists is that its price be zero since that maximizes its use."

Because the marginal price of information in digital form is virtually zero, and because they argue that consumer welfare is maximized by price discrimination (e.g., charging different prices based on consumers' willingness to pay), LNCs are much less likely than CNCs to view use of copyright materials without paying as a problem (maximalists, including IE moderates, call this practice piracy or theft, minimalists call it copying or price discrimination). Indeed, as LNC economist Joel Waldfogel asserts, "Stealing is just a form of do-it-yourself price discrimination." He goes on to note, "To the extent that the folks stealing would not have been purchasing, at the price where it was offered, well that's just a welfare improvement. And it doesn't harm the sellers." ²⁴

Neo-Keynesians

Like LNCs, neo-Keynesians (NKs) are copyright minimalists, but for different reasons. NKs see much of economics, including the economics of information, in distributional terms, rather than allocation efficiency terms. The real issue for NKs boils down to who gets the fruits of economic growth, workers and consumers or owners. With copyright, the conflict is not between workers and owners (whose interests are actually aligned with a stronger copyright regime) but between consumers and copyright owners, and in particular corporate copyright owners (as opposed to individual artists). In NKs' view, the benefits of strong copyright regimes flow to large content producers (e.g., the Disneys of the world) in the form of higher profits. NKs try to make their case against such regimes more convincing politically by distinguishing between "Big Content" and individual artists (the "little guys and gals"), whom they claim they actually want to help by limiting copyright.

They argue that artists are not likely to get a good deal under strong copyright regimes and may not even seek one because they are motivated not only (or even) by monetary reward but by peer recognition. ²⁵ In other words, they don't really want to or need to make money from creative works. This framing makes it easier to justify a weak copyright regime since even if it imposes costs on producers they are borne by big corporations, not individual artists. Reflecting the NK view Waldfogel admits that "it's very hard to argue, today, that copying isn't harmful to the sellers of the recorded music." But he goes on to say that this really doesn't matter, because "the artists, to the extent that they can make money on compliments to recorded music, may or may not be harmed. But the record labels clearly are harmed." ²⁶ So all is well.

Waldfogel is silent about what happens to songwriters—perhaps they can sell t-shirts or seek online donations. But many NKs are not silent on this, arguing that copyright is not needed because musicians would generate revenue by endorsements or live performances. This would be a significant shift from the traditional model where artists now receive touring income and recording income, but it certainly doesn't apply to movies, books,

software and other production that doesn't involve live performance that can be monetized. ²⁷ Although I suppose NK's could point to things like Star Trek conventions and argue that movie performers could appear at airport hotels around the nation to speak to fans while selling autographed movie posters.

NKs and to some extent LNCs have worked hard to show that copying doesn't weaken incentives to produce. If piracy doesn't hurt producers then the rationale that strong copyright is needed to encourage production of creative works is weakened. As a result, NKs and LNCs produce and cite research that attempts to show that applications like Napster and technologies like P2P either don't reduce purchases of music, or reduce it only minimally. They also argue that copying can have benefits for producers, especially in the form of sampling and enhanced network effects. The notion is that if producers of material actually benefit from weak copyright then the case for weaker copyright will be stronger.

To the extent that they admit that lax rules and enforcement against copying would affect the incentives for production of content, NKs (and to some extent LNCs) have several responses. Some argue that government tax revenues should be used to compensate copyright holders. ²⁹ For example, Romer proposes this as an alternative to legislation requiring general purpose ICTs to have copy protection installed. ³⁰ Others want artists to get paid for their actual production of copyrighted material, but want to do so in more collective ways with their individual rights forfeited. For example, they are more likely to support copyright collectives that financially benefit all content artists through some kind of compulsory licensing system.

Because NKs see "copying" as a form of societal redistribution from large profit-making corporations to individuals (LNCs see this as a form of allocation efficiency), NKs oppose virtually all steps to limit individuals from "copying" (the accepted term for stealing content under copyright), including strengthening copyright laws or keeping them strong (either domestically or through international treaties), technology mandates to limit copying, empowering intermediaries (such as ISPs or Internet registrars) to fight copying through steps like the new voluntary six strikes program, and enabling copyright holders to bring legal action against "copiers." A case in point is the Electronic Frontier Foundation's "Let the Music Play" campaign, which protests the music and film industries' prosecution of file copiers; another is Public Knowledge's campaign to have the FCC prohibit ISPs from acting as intermediary enforcers of the Digital Millennium Copyright Act. As part of this argument they claim that digital technology has evolved so that it is virtually impossible to stop copying. So why bother with copyright? As NK Larry Lessig argues, "Copying—for a digital network—is like breathing to us." So

While NCs (CNCs and LNCs) look only at impacts on cost allocation issues, NKs focus on distribution issues. For example, Benkler argues that strong copyright systems "foster commercialization, concentration and homogenization of information production, and thus entail normative implications that may be more salient than its quantitative effects." ³⁴ For NKs, copyright not only raises costs for consumers, it limits the "rights" of individuals to access content, and shifts the production of content toward greater homogenization and corporatization. ³⁵ That is the main reason NKs focus so much on fair use, even going so far as to stretch the term to imply "the ability to download and copy virtually all copyrighted"

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content, as long as one doesn't resell."³⁶ (This is the regime that some European countries have adopted, under pressure from NK advocates.) Some in the NK camp actually find intellectual agreement with the CNC libertarians when they argue that the Internet Age marks the end of intellectual property rights altogether.

In this sense, the liberal LNC and NK (and libertarian CNCs) camps are natural allies. However, to date they have not joined forces in any serious way. In fact, Pam Samuelson bemoans the lack of influence of neoclassical economics on copyright in part because, as an NK she believes that the greater influence of LNC economics would lead to more decisions and policies that favor consumers instead of producers. ³⁷ In other words, if LNC economic doctrine is more widely adopted, it would show that copyright regimes could be much weaker without significantly hurting the economic motivation of creative producers.

At the end of the day, both LNCs and NKs diminish the importance of the information industry to the economy, in large part because of their focus on consumer welfare, not on innovation, productivity or quality. Romer even goes so far to as to argue that "if all of the traditional music firms go out of business, the net harm to the economy in the United States and the rest of the world would be trivial."³⁸

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Innovation Economists

Holders of the innovation economics doctrine (IEs) look at the issue of copyright differently. First, like CNCs, IEs place more emphasis on dynamic effects, as opposed to static allocation. As IE economists Aghion and Griffith argue, "There may be a tradeoff between competition and innovation and an inverted u-shaped curve, with high and low levels of competition harmful to innovation." The same may be true with regard to copyright: a level of protection either too strong or too weak can reduce innovation. As Towse, Handke, and Stepan argue, "as greater understanding of this evolutionary approach to economics takes hold, we can expect less condemnation of some aspects of monopoly." In other words, IEs don't reflexively condemn deadweight losses due to copyright. Moreover, they generally agree with Watt: "the 'monopoly' created by copyright is not like most monopolies, it is really nothing more than the protection of private property from misuse."

IEs would argue that copyright "monopolies" are not like monopolies in other industries where substitutes are limited. For example, a monopoly in the production of steel would have serious negative consequences since there are few or alternatives to steel for many uses. But a "monopoly" on the latest song from Rihanna simply means that users who don't want to break the law have to pay for this song if they want to own it. If the copyright holder charges too much, consumers can simply choose to buy a song from Ke\$ha or Pink. Songs are not like steel.

As Lipsey notes, while NC economists see copyright as leading to deadweight losses from monopoly, "These so-called losses are another word for the profits that drive the system's economic growth, taking the economy to ever higher levels of per capita real income." In other words, IEs recognize that "increasing returns to scale" and "natural monopoly" in copyright industries are not "market failures" as LNCs argue, but rather "production"

successes," in the sense that they enable lower cost production of content and/or higher quality and choice of content. For example, increased sales can lead to lower costs for consumers as companies can cover their fixed costs with a larger number of buyers. Lipsey notes, "Scale effects, rather than being imperfections to be offset, are some of the most desirable results of new technologies." In this regard, IE's also see digital theft as redistribution, but because it raises costs for law-abiding content purchasers.

Second, unlike CNCs, IEs look at copyright as a series of tradeoffs, not an absolute. And in contrast to LNC's, IEs see the tradeoffs as sometimes between innovation and copyright protection. Thus, they are skeptical of efforts to limit piracy by limiting the introduction of new technology or by technological requirements that would impose costs and restrictions on general purpose technologies (e.g., computers). IEs want to ensure that copyright rules do not impair innovation in related industries. For example, while NKs support the Sony Betamax decision (the Supreme Court's 1984 decision that making individual copies of television shows for purposes of time shifting is fair use) because VCRs enabled copying, IEs support the decision because it enabled an innovative technology (VCRs) to go forward. Likewise, IEs opposed copyright holders who sought to restrict the introduction of MP3 players in the marketplace, and those who later tried to get copy protection technologies built into general purpose IT technologies, like PCs.

At the same time, however, they distinguish between restrictions on innovation in other industries as a way to protect the content industry and the content industry itself using technology to protect content in ways that do not harm other industries. In this sense, they generally favor the use of encryption and other digital rights management (DRM) technologies to protect digital content and identify digital pirates. Likewise, they distinguish between innovative technologies (for example, P2P file transfer) and "innovative" business models that are largely, if not exclusively, based on piracy (e.g., Napster, Kazaa, and LimeWire).

This distinction was at the heart of the debate over PIPA/SOPA with LNCs and NKs arguing that the legislation would be detrimental to Internet innovation, CNCs stressing protection of content, and IEs arguing that it was possible to design a regulatory regime to limit access to infringing content hosted overseas in ways that did not limit Internet innovation. But because the debate was so driven by doctrine, rather than analysis, this key issue was never really analyzed objectively by policymakers.

Third, IEs recognize that markets for copyrighted goods are not populated by rational actors, independently and accurately judging their utility function. Rather, markets are social constructions. For example, while LNCs and NKs can talk about "piracy" as "price discrimination" and "free culture" respectively, IEs recognize that piracy can have a tipping point. They would argue that it is quite difficult to achieve the right balance if individuals who don't value paying the full price are allowed to "copy" while the rest of the population willingly pays. As IEs argue, markets are dynamic and if copyright regimes are weakened legally or are not enforced (either because of political and social pressures placed on copyright holders, or because nations with low levels of content production don't enact or enforce legal regimes), then markets could easily tip to a state where there is very little

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purchasing and very large amounts of copying. The result would be the loss not just of future content, but of content innovation, higher quality content and the jobs that are associated with content production.

In this context, IEs view the production of expressive works in terms of economic agents embedded in complex production systems characterized by a variety of actors, including individuals (the focus of NKs, to the extent they look at the production system), small firms, and large corporations. One goal of copyright is to enable a healthy production system that includes not only productivity, quality and innovation, but also national competitiveness. As such, in contrast to the other doctrines which look at the impact of different copyright regimes largely as a binary issues (spurring a decision to produce or to not produce), IEs also focus on the impact of copyright regimes on the overall production system, including the ability to produce higher quality and more innovative content. For example, strong copyright enables the production of more complex, expensive products (particularly in movies where copyright enables studios to invest tens of millions of dollars in high-tech special effects and location shoots in exotic, faraway places). Similarly, strong copyright helps preserve and create jobs (many of them higher wage) and economic growth in nations, like the United States, that specialize in the production of copyrighted content and attempt to sell it around the world.

Fourth, in contrast to the NC model, which holds that economies do not undergo structural change and therefore that economic regulations do not need to adapt, IEs would argue that technological change "necessitates the upgrading of copyright law so as to afford the same protection before and after some technological change." In other words, the ability to make perfect copies at almost no cost and then distribute those copies around the globe is neither a continuation of the old production system nor is a development that means an end to copyright because "information wants to be free." Rather, it represents the development of a technology system that necessitates new rules to address the challenges associated with it.

CONCLUSION

Views on copyright policy are shaped in large part by the economic doctrine held by the advocate, scholar or policymaker. These differences in doctrine cause partisans to view facts differently and to focus on small segments of complex debates, leading to a breakdown of constructive dialog and much "talking past each other." Therefore, understanding the relationship between economic doctrine and copyright policy views can help bring more clarity and insight to the policy making process. Rather than debate why one advocate interprets the impacts of a policy proposal in one way and another in different way, it is more productive to appreciate that differences stem from deeply held views of how society and the economy should work and what goals are paramount. We saw this in spades on the debate over PIPA/SOPA. The LNCs and NK's simply rejected PIPA/SOPA because it did not fit their world view. No change to PIPA/SOPA would have ever satisfied those who fundamentally reject the idea that governments should have authority over the owners and operators of the networks, servers, and software that make up the Internet or that "copying" is theft.

Views on copyright policy are shaped in large part by the economic doctrine held by the advocate, scholar or policymaker.

These differences in doctrine cause partisans to view facts differently and to focus on small segments of complex debates, leading to a breakdown of constructive dialog and much "talking past each other."

Of course, an understanding of doctrines will not eliminate differences on copyright policy, but it may better illuminate them. Dialogue can't proceed toward productive conclusions until parties are agreed on a common set of facts and a common set of basic definitions. Many technology policy debates never achieve consensus on the nature of the subject matter under discussion because of impasses brought about by doctrinal effects on perception. Those debating difficult trade-offs in technology policy areas, including copyright, therefore need to clarify facts and establish a common frame of reference before turning to doctrinal notions of welfare, efficiency, and innovation enhancement.

ENDNOTES

- 1. Joseph A. Schumpeter, "Science and Ideology," American Economic Review 39, no. 2, (1949): 345-359.
- 2. ITIF has developed an online "test" to help individuals identify which doctrine best fits their thinking. See http://www.innovationeconomics.org/type/.
- 3. Milton Mueller, *Networks and States: The Global Politics of Internet Governance* (Cambridge, MA: MIT Press, September 2010).
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- 5. Adam Smith, *The Wealth of Nations* (New York: Modern Library, 1759): 423.
- 6. Heritage Foundation economist Dan Mitchell actually asks, "Is spending hindering economic performance because of the taxes used to finance government? Would the economic damage be reduced if government had some magical source of free revenue?" He concludes that even if somehow government programs could be implemented at no cost, they would still harm economic growth. Daniel J. Mitchell, Supplement to "The Impact of Government Spending on Economic Growth" (technical report, The Heritage Foundation, March 15, 2005).
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- 13. See William M. Landes and Richard A. Posner, "An Economic Analysis of Copyright Law," *Journal of Legal Studies* 18, no. 2 (June 1989): 325-63.
- 14. Ruth Towse, Christian Handke and Paul Stepan, "The Economics of Copyright Law: A Stocktake of the Literature," *Review of Economic Research on Copyright Issues* 5 no.1, (2008): 7.
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- Michele Boldrin and David K. Levine, "Intellectual Property Rights and Economic Growth in the Long Run: A Model of Discovery," *American Economic Review: Papers and Proceedings* 99, no. 2, (2009): 337-342.
- 17. Michele Boldrin and David K. Levine, "Economic and Game Theory: Against Intellectual Monopoly," (online book, Cambridge University Press, January 2008), http://levine.sscnet.ucla.edu/general/intellectual/againstfinal.htm, 300.
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- 19. Tom W. Bell, "Copyright, The First Amendment, and Unoriginal Speech," (technical report, Chapman University School of Law, April 2010), http://works.bepress.com/tom_bell/30/.
- 20. F. A. Hayek, (1944, 1994), The Road to Serfdom (Chicago, IL: University of Chicago Press): 217.
- 21. Kenneth Arrow, "Economic Welfare and the Allocation of Resources for Innovation," in *The Rate and Direction of Inventive Activity*, ed. R.R. Nelson (Princeton, NJ: Princeton University Press, 1962).
- 22. Richard G. Lipsey, "Technological Transformation, Intellectual Property Rights and Second Best Theory," *Review of Economic Research on Copyright Issues* 4, no. 2, (2007): 17.
- 23. Joel Waldfogel, "Economics of Digital Media," on *VoxEU* (interview by Romesh Vaitlingam, January 2010), http://www.voxeu.org/index.php?q=node/4536.
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- 32. "EFF Launches 'Let the Music Play' Campaign," (press release, Electronic Frontier Foundation, June 2003), https://www.eff.org/search/site/let%20the%20music%20play.
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- 39. Philippe Aghion and Rachel Griffith, Competition and Growth: Reconciling Theory and Evidence (Cambridge, MA: MIT Press, 2005).
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- 42. Lipsey, "Technological Transformation, Intellectual Property Rights and Second Best Theory," 12.
- 43. Ibid
- 44. Towse et al., "The Economics of Copyright Law," 3.

ACKNOWLEDGEMENTS

The author wishes to thank the following individuals for providing input to this report: This report is adapted from a prior ITIF report "Economic Doctrines and Network Policy." The author wishes to thank the following individuals for providing input to this report: Richard Bennett, ITIF; Daniel Castro, ITIF; and Jeff Eisenach, Navigant Economics; for helpful comments on earlier drafts, and Sue Wunder and Kathryn Angstadt for editorial and production assistance. Any errors or omissions are the author's alone.

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