LEX MACHINA NON EST: A RESPONSE TO LEMLEY'S "FAITH-BASED INTELLECTUAL PROPERTY"

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I. INTRODUCTION

In a paper published in 2015, provocatively titled *Faith-Based Intellectual Property,* Mark Lemley worries about a kind of blind "faith" in intellectual property, which he believes sometimes underpins acceptance of legal restrictions on broader access to information and inventions.[1] He argues, persuasively, that intellectual property law and policy should take notice of the substantial body of empirical data about intellectual property that have been collected in recent years[2]—with no small contribution from projects he himself has helped lead, such as Lex Machina.[3]

But Lemley's reference to "evidence" is more than a plea for the usefulness of empirical data as part of a broader conversation over intellectual property rights. He suggests, rather, that "evidence," limited largely to "data," should finally *determine* intellectual property policy.[4] In Lemley's view, there is no room in intellectual property policy for what he calls "faith"—that is, for any kind of "evidence" other than the sort of empirical data that could be fed into a predictive, utilitarian-consequentialist computing machine.[5] In other words, Lemley adopts a view of the philosophy of science rooted in logical positivism, tied to a view of the law rooted in legal positivism and utilitarianism. This view, he suggests, is "scientific," and therefore modern and right, while all others are rooted in "faith," and therefore naïve and wrong.[6]

[1] *See* Mark A. Lemley, *Faith-Based Intellectual Property,* 62 UCLA L. REV. 1328, 1331–32 (2015).

[2] *See id.* at 1332–33.

[3] *See* LEX MACHINA, https://lexmachina.com/about (last visited Jan. 21, 2018).

[4] *See* Lemley, *supra* note 1, at 1335–37.

[5] *Id.* at 1341–32.

[6] Lemley, *supra* note 1. Lemley's paper has produced a number of thoughtful responses. *See, e.g.,* Dan L. Burk, *On the Sociology of Patenting,* 101 MINN. L. REV. 421, 422–23 (2016); Brian L. Frye, *Machiavellian Intellectual Property,* 78 PITT. L. REV. 1, 4–7 (2016); Robert P. Merges, *Against Utilitarian Fundamentalism,* 90 ST. JOHN'S L. REV. 681, 681–83 (2016); James Grimmelman, *Faith-Based Intellectual Property: A Response,* LABORATORIUM (2D SER.) (Apr. 21, 2015), http://2d.laboratorium.net/post/117023858730/faith-based-intellectual-property-a-response; Irina D. Manta, *Theory and Empirics: Where Do Locke and Mossoff Leave Us,* LAW AND LIBERTY (May 8, 2015),

In his *Faith-Based Intellectual Property*, Lemley cited one of my recent papers, *Beyond Bits, Memes and Utility Machines: A Theology of Intellectual Property as Social Relations*, as an example of work that embraces strong intellectual property rights based on "faith" rather than scrutinizing it based on "evidence."[7] I am gratified by the citation, but neither that paper nor other work I have done on the philosophy and ethics of intellectual property suggest any predilection for strong intellectual property rights absent "evidence."[8] Indeed, I have published empirical and theoretical work on intellectual property that relies heavily on classical microeconomics, game theory, and hard data, and in both that work and my more explicitly philosophical-theological work I have criticized "strong" intellectual property rights where I thought the criticism warranted.[9] Empirical work

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http://www.libertylawsite.org/liberty-forum/theory-and-empirics-where-do-locke-and-mossoff-leave-us/; Lisa Ouellette, *Lemley on Faith-Based IP*, WRITTEN DESCRIPTION (Apr. 2, 2015, 9:59 PM), http://writtendescription.blogspot.com/2015/04/lemley-on-faith-based-ip.html; Jeremy Sheff, *Faith-Based vs. Value-Based IP: On the Lemley-Merges Debate*, JEREMY SHEFF (Apr. 2, 2015), http://jeremysheff.com/2015/04/02/faith-based-vs-value-based-ip-on-the-lemley-merges-debate;
Lawrence Solum, *Lemley on Non-Consequentialist Justifications for Intellectual Property*, LEGAL THEORY BLOG (Apr. 2, 2015, 11:30 AM), http://lsolum.typepad.com/legaltheory/2015/04/lemley-on-non-consequentialist-justifications-for-intellectual-property.html. Burk notes that:

> [I]t seems . . . quite possible to maintain a productive dialog in which the justifications for a particular legal regime differ and some of them are non-consequentialist. There are ongoing conversations in criminal law and tort law, for example, where some justifications such as deterrence are utilitarian—and founded on fairly dubious empirical evidence—and other justifications such as retributivism are entirely deontological. It may be that the development of deontological intellectual property justifications is a resort to a kind of IP jingoism, adherence to the status quo at any cost, but it may also be part of a fairly normal jurisprudential discussion.

Burk, *supra*, at 424.

I agree with this observation, but it is also interesting to note the background assumption that utilitarian discussions are the normal framework and "deontological" theories are a kind of oddity. This might be the case for some kinds of legal scholarship, but it certainly is not the case in legal philosophy more broadly wrought.

[7] Lemley, *supra* note 1, at 1337, 1337 n.32 (citing David W. Opderbeck, *Beyond Bits, Memes and Utility Machines: A Theology of Intellectual Property as Social Relations*, 10 UNIV. ST. THOMAS L.J. 738 (2013)).

[8] *See* Opderbeck, *supra* note 7, at 751–52.

[9] *See* David W. Opderbeck, *Patent Damages Reform and the Shape of Patent Law*, 89 B.U. L. REV. 127, 129 (2009); David W. Opderbeck, *Patents, Essential Medicines, and the Innovation Game*, 58 VAND. L. REV. 501, 507 (2005); David W. Opderbeck, *Peer-to-Peer Networks, Technological Darwinism, and Intellectual Property Reverse Private Attorney General Litigation*, 20 BERKELEY TECH. L.J. 1685, 1689 (2005); David W. Opderbeck, *Rational Competition Policy and Reverse Payment Settlements Under the Hatch-Waxman Act*, 98 GEO L.J. 1303, 1304–05 (2010); David W. Opderbeck, *Social Network Analysis of Patents and Trade Secrets as Social Relations*, 41 AIPLA Q.J. 355, 358–59 (2013). Ironically, one of my most widely cited empirical papers, *Patent Damages Reform and the Shape of Patent Law*, argues for what could be considered "strong" patent rights, contrary to the prevailing ideology in much of the legal academy.

provides information that is helpful to the exercise of practical reason, which is a virtue oriented to the end of human flourishing.[10] But practical reason is not an end in itself. Through practical reason I can construct a study that tells me whether, if I pull on a policy lever involving patent damages (say, decreasing available damages), I'll likely see a certain result (say, decreasing instances of patent lawsuits). If I think it would be "good" to decrease instances of patent lawsuits, I ought to look for this kind of data. Yet, I first must make some judgments about what is "good."

My *Beyond Bits, Memes and Utility Machines*[11] paper was a contribution to a symposium at the University of St. Thomas Law School on intellectual property and religious thought, which produced a variety of contributions from Christian, Jewish, Islamic, and Hindu scholars, all of which were rich and deeply nuanced.[12] In that paper, I focused on the theological concept of the "gift," which resonates with the economic literature commons and gift economies.[13] I noted that gifts are freely given, gifts produce good for the recipient, gifts are generative, the proper response to a gift is gratitude, and gifts elide greed.[14] I summed up the discussion with the Christian theological concept of "grace."[15] (In my alliteration, it is entirely fair to hear the results of a lifetime of listening to overly clever preachers.) My goal in that paper and in my related work on the philosophy of intellectual property has been to situate my own thinking about intellectual property and cultural production within a thicker and more resilient conceptual matrix than utilitarianism can offer.

As my previous work suggests, there are several reasons why I believe Lemley's vision of intellectual property scholarship and policy is impoverished. First, it relies on a pinched epistemology that fails to provide a meaningful grounding for legal theory. Second, and closely related to the first problem, it simply does not work. While it purports to offer more precisely measurable outcomes, it lacks a coherent vision of final goods against which any such measurement could be made. Finally, as a result, it reflects a monochromatic picture of human culture. Indeed, it reduces the *human* to the *technological*, and thereby encodes the very sort of

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[10] *See* David W. Opderbeck, *A Virtue-Centered Approach to the Biotechnology Commons (Or, The Virtuous Penguin)*, 59 ME. L. REV. 316, 316 (2007); David W. Opderbeck, *Deconstructing Jefferson's Candle: Towards a Critical Realist Approach to Cultural Environmentalism and Information Policy*, 49 JURIMETRICS 208, 210–11 (2009).

[11] *See* Opderbeck, *supra* note 7, at 738.

[12] Symposium, *Intellectual Property and Religious Thought*, 10 U. ST. THOMAS L.J. 579 (2013).

[13] *See, e.g.*, ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (James E. Alt & Douglass C. North eds., 1990).

[14] *See* Opderbeck, *supra* note 7, at 764, 766.

[15] *See id.* at 767.

authoritarianism it purports to eschew.   Although Lemley's vision is supposed to echo the libertarian ethos of Silicon Valley, that ethos finally is inimical to authentically *human* liberty.   Law—including intellectual property law—is a human cultural endeavor, not an inhuman machine.

In this essay, I respond to Lemley's paper on two levels: the philosophical and the theological. Part II offers a brief philosophical critique of Lemley's debt to logical positivism and its cousin, utilitarianism. Parts III and IV offer alternative narratives about the value of human creative activity grounded in the creation stories found in the Hebrew Scriptures. Part V continues that narrative—along with the Hebrew Scriptures—with another famous Biblical story, that of the Tower of Babel, which warns, I suggest, against the totalitarian drive of technocracy. Part VI concludes.

II. LEX MACHINA NON EST

Human beings are "moral, believing animals."[16] We cannot *not* believe certain things without losing something of our humanity. We *must* believe certain things before we can use reason to help us gain knowledge— including a belief in the power of reason. As St. Anselm stated almost one thousand years ago, we must have faith in order to understand.[17]

The kind of utilitarian theory Lemley seems to espouse wants pure understanding, pure reason, justified by no foundation other than empirical proofs. Indeed, Lemly suggests at the start of his essay that "[w]e live in an age of reason" and that "Science has explained most of the things that in a prior era seemed like magic or the will of the gods, from the seasons to lighting and thunder to the diversity of the natural world."[18]

I'm afraid Lemly is here echoing the thoroughly debunked "warfare" thesis concerning the relationship between science and religion.[19] The fact is that the modern natural sciences have historical roots in ancient Greek, Jewish, Christian, and Islamic beliefs about the regularity of creation and the integrity of "secondary causes" within nature.[20] Neither the Greek philosophers, nor the Jewish, Christian, or Islamic scriptures, nor any Jewish, Christian, or Muslim theologian of any note over the past several thousand

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[16] CHRISTIAN SMITH, MORAL, BELIEVING ANIMALS: HUMAN PERSONHOOD AND CULTURE 7 (2009).

[17] ST. ANSELM, PROSLOGIUM; MONOLOGIUM: AN APPENDIX IN BEHALF OF THE FOOL; AND CUR DEUS HOMO 1 (Sidney Norton Deane trans., The Open Court Publ'g Co. photo. reprt. 1939) (1903).

[18] Lemley, *supra* note 1, at 1330.

[19] For an excellent recent study that demonstrates the historical poverty of the warfare thesis, see PETER HARRISON, THE TERRITORIES OF SCIENCE AND RELIGION 194–196 (2015). For a good general introduction, see generally THE CAMBRIDGE COMPANION TO SCIENCE AND RELIGION (Peter Harrison ed., 2010); ALISTER E. MCGRATH, SCIENCE & RELIGION: AN INTRODUCTION 45–46 (2d ed. 2011).

[20] *See* HARRISON, *supra* note 19, at 12–15.

years, has ever suggested that lightning, thunder, the seasons, or anything of the sort, are "magic."[21]

Of course, it is true that the modern natural sciences have produced astonishing results over the past few hundred years, and even more rapidly over the past fifty to one hundred years. The methodological rigor of Baconian science, coupled with dramatic advances in optics, sensors, and computing power, has allowed us to learn things about the workings of the universe that all previous generations of humanity would have found inconceivable. But, this also derives from the belief that the "natural" world is consistent, reliable, and uniform—all a priori beliefs that cannot be empirically proven and are rooted in the religious beliefs of earlier ages.[22]

These discoveries have been accompanied, and to some extent facilitated, by profound philosophical shifts in the common understanding of how nature works.[23] Perhaps most notably, the Aristotelian concept of causality that underpinned medieval thought was rejected in favor of a more constrained approach to causality.[24] This constriction of Aristotelian causality was facilitated by the rejection of the static Aristotelian geocentric cosmos following the Copernican Revolution.[25]

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[21] *See, e.g.,* Aristotle's discussion of lightning and thunder in 1 ARISTOTLE, *Meteorology, in* THE COMPLETE WORKS OF ARISTOTLE 555, 596 (Jonathan Barnes ed., E. W. Webster trans., Princeton Univ. Press 1984). Aristotle noted that:

> As we have said, there are two kinds of exhalation, moist and dry, and the atmosphere contains them both potentially. It, as we have said before, condenses into cloud, and the density of the clouds is highest at their upper limit. (For they must be denser and colder on the side where the heat escapes to the upper region and leaves them. This explains why hurricanes and thunderbolts and all analogous phenomena move downwards in spite of the fact that everything hot has a natural tendency upwards. Just as the pips that we squeeze between our fingers are heavy but often jump upwards: so these things are necessarily squeezed out away from the densest part of the cloud.) Now the heat that escapes disperses to the up region. But if any of the dry exhalation is caught in the process as the air cools, it is squeezed out as the clouds contract, and collides in its rapid course with the neighbouring clouds, and the sound of this collision is what we call thunder. This collision is analogous, to compare small with great, to the sound we hear in a flame which men call the laughter or the threat of Hephaestus or of Hestia. This occurs when the wood dries and cracks and the exhalation rushes on the flame in a body. So in the clouds, the exhalation is projected and its impact on dense clouds causes thunder: the variety of the sound is due to the irregularity of the clouds and the hollows that intervene where their density is interrupted. This then, is thunder, and this its cause.

Id.

[22] *See, e.g.,* HARRISON, *supra* note 19, at 5–6.

[23] *See, e.g.,* AMOS FUNKENSTEIN, THEOLOGY AND THE SCIENTIFIC IMAGINATION FROM THE MIDDLE AGES TO THE SEVENTEENTH CENTURY 12–13 (1986); MICHAEL ALLEN GILLESPIE, THE THEOLOGICAL ORIGINS OF MODERNITY 7 (2009); CHARLES TAYLOR, A SECULAR AGE 26 (2007).

[24] *See* MARY-JANE RUBENSTEIN, WORLDS WITHOUT END: THE MANY LIVES OF THE MULTIVERSE 74–75 (2015) (discussing the historical origins of replacing four-fold Aristotelian causality with the "laws of nature.").

[25] *Id.* at 76.

Aristotle recognized four kinds or aspects of causation: material, formal, efficient, and final.[26] The material cause is that out of which something comes, such as the bronze of a statue.[27] The formal cause is the form or account of what it is to be something, such as the shape of a statue.[28] The efficient cause is the primary source of change or rest, such as the sculptor who chips away at the marble.[29] The final cause is the end for which something is done, such as the production of a sculpture.[30] Modern science recognizes only efficient and material causes.[31]

But while this move away from the Aristotelian cosmos has facilitated observational rigor, it presents a significant metaphysical and epistemological problem: how can we know that what we are observing and measuring is "real"? Aristotle's formal and final causes sought to embed our brief and transitory observations in something enduring and transcendent. Without this metaphysical scaffold, do material and efficient causes just hang in midair?[32]

The modern natural sciences have tried to answer this question with reference to the concept of "laws of nature." [33] The universe itself, this way of thinking goes, is a kind of machine. So, in the opening paragraph of his essay, Lemley says that although the universe sometimes seems magical, the magic always works according to the "predictable, if not logical-seeming,

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[26] *See, e.g.*, Andrea Falcon, *Aristotle on Causality*, STAN. ENCYCLOPEDIA OF PHIL., http://plato.stanford.edu/entries/aristotle-causality/ (last updated Mar. 11, 2015).

[27] *Id.*

[28] *Id.*

[29] *Id.*

[30] *Id.*

[31] For a discussion of causation in modern science, see Nancey Murphy, *Divine Action, Emergence, and Scientific Explanation, in* THE CAMBRIDGE COMPANION TO SCIENCE & RELIGION 244, 244–47 (Peter Harrison ed., 2010).

[32] For a good general survey of the issues, see PETER VAN INGAWEN, METAPHYSICS (4th ed. 2015).

[33] Until very recently, this presented a problem for theoretical physicists because of the belief that information is destroyed when a black hole evaporates. *See* S. W. Hawking, *Black Hole Explosions?*, 30 NATURE 248 (1974); S. W. Hawking, *Particle Creation by Black Holes*, 199 COMM. MATH. PHYS. 199 (1975). If physical laws are deterministic, they must run both "forward" and in "reverse." The famous author of those earlier papers, Stephen Hawking, recently advanced a theory that would allow for the conservation of information through "electric hairs" at the black hole horizon concerning which "complete information about their quantum state is stored on a holographic plate at the future boundary of the horizon." Stephen W. Hawking, Malcom J. Perry & Andrew Strominger, *Soft Hair on Black Holes*, PHYSICAL. REV. LETTERS, June 6, 2016, at 231301. As co-author Andrew Strominger stated in a recent interview, if something like this "electric hair" theory is not true, "we cannot use physical laws in the way that we've been accustomed to for thousands of years to describe the world around us." Seth Fletcher, *Stephen Hawking's New Black-Hole Paper, Translated: An Interview with Co-Author Andrew Strominger*, SCI. AM. (Jan. 8, 2016), http://blogs.scientificamerican.com/dark-star-diaries/stephen-hawking-s-new-black-hole-paper-translated-an-interview-with-co-author-andrew-strominger/.

rules of science."[34] We can rely on the principles of material and efficient causality because that's the way the laws of nature work.

It turns out, however, that the concept of the "laws" of nature is notoriously slippery. It also turns out, relatedly, that there is not so much one unified "scientific method" through which all the special sciences could be reduced to a single entity as there are overlapping sets of methodologies calibrated to the unique domains of each of the special sciences.[35]

David Hume explored the problem of instance confirmability with respect to the supposed "laws" of nature more than two hundred fifty years ago.[36] The observation that B follows A in an observed instance does not guarantee that B will always follow A. We can only claim that B has always followed A in the past, and that B will always follow A in the future, if we assume that whatever properties affect the relations between B and A are stable, uniform, and unchanging. But since we cannot observe every instance of the relation between A and B in the past, and since we cannot presently observe the future of relations between A and B, there is no way empirically to know that A "causes" B. Hume therefore concluded that the idea of natural "laws" is semantic or a matter of custom and not necessarily real.[37]

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[34] Lemley, *supra* note 1, at 1330. This sentence is confusing, because of course "science" doesn't dictate, but rather describes, how nature works. I think what Lemley means to say here is that nature always operates according to the laws of nature, and that science works because it limits its domain of inquiry to that which accords with the laws of nature.

[35] *See, e.g.,* STEVEN HORST, BEYOND REDUCTION: PHILOSOPHY OF MIND AND POST-REDUCTIONIST PHILOSOPHY OF SCIENCE 5–6 (2007) (discussing the irreducibility of many sciences and explanatory gaps, such as the failure of biology to clearly reduce to chemistry and physics).

[36] *See* DAVID HUME, AN ENQUIRY CONCERNING HUMAN UNDERSTANDING AND OTHER WRITINGS (Stephen Buckle ed., Cambridge Univ. Press 2007) (1748). Hume states:

> All events seem entirely loose and separate. One event follows another; but we never can observe any tie between them. They seem conjoined but never connected. And as we can have no idea of anything, which never appears to our outward sense or inward sentiment, the necessary conclusion seems to be, that we have no idea of connexion or power at all, and that these words are absolutely without any meaning, when employed either in philosophical reasoning, or common life.

Id. at 68.

> Hume did not want to deny the explanatory power of causation, so he located the sense of causation in experience rather than in logical induction:
> In all single instances of the operation of bodies or minds, there is nothing that produces any impression, nor consequently can suggest any idea of power or necessary connexion. But when many uniform instances appear, and the same object is always followed by the same event; we then begin to entertain the notion of cause and connexion. We then feel a new sentiment or impression, to wit, a customary connexion in the thought or imagination between one object and its usual attendant; and this sentiment is the original of that idea which we seek for.

Id. at 71.

[37] *Id.* at 71–72.

Today philosophers of science fissiparate into multiple camps: perhaps there are fundamental natural laws that we could discover by proposing counterfactual universes; perhaps there are no natural "laws" but rather Aristotelian "powers" to things; perhaps there are emergent self-organizing capacities that could be otherwise and thus are not "laws"; perhaps there are infinite multiverses with an inconceivable diversity of "laws"; perhaps there are no natural "laws" of any sort but merely epiphenomenal artifacts of a more fundamental chaos.[38]

Of course, we all know that the Newtonian laws of motion and the equations of quantum physics make verifiable predictions.[39] But we also know that Newtonian determinism does not *actually* fundamentally describe how the universe works.[40] The level of reality represented by the equations of quantum mechanics is not reducible to deterministic laws.[41] Aside from the philosophical problems explored by Hume and others, this empirical under-determination at the level of fundamental physics fatally undermines any thoroughgoing empiricism. The holy grail of cosmology and quantum physics is the search for a "theory of everything" (TOE), which would unify Newtonian and quantum physics.[42] It may be that there is no TOE, or that access to the TOE is beyond human intellectual capabilities. In either event, if "science" is supposedly the best way of knowing reality, and "science" depends on understanding the laws of nature, we are in trouble. The foundations are merely mathematical simulacra: maps, not the territory.[43]

In short, the questions underlying any effort to construct an empirical foundation for human knowledge are metaphysical, not subject to adjudication by empirical or utilitarian arguments that already embed expensive metaphysical assumptions. The truth is that, religion aside, the sort of logical positivism Lemley seems to favor has been dead for decades.

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[38] *See, e.g.,* POWERS AND CAPACITIES IN PHILOSOPHY: THE NEW ARISTOTELIANISM (Ruth Groff & John Greco eds., 2013); A.J. Ayer, *What is a Law of Nature?,* 36 REVUE INTERNATIONALE DE PHILOSOPHIE 144 (1956); E. Zilsel, *The Genesis of the Concept of Physical Law,* 51 PHIL. REV. 245 (1942); John W. Carroll, *Laws of Nature,* STAN. ENCYCLOPEDIA OF PHIL., http://plato.stanford.edu/entries/laws-of-nature/ (last updated Aug. 2, 2016).

[39] *See* Carroll, *supra* note 38.

[40] *See id.*

[41] For a discussion of how quantum mechanics seems to undermine determinism, along with some qualifications of that claim, see Carl Hoefer, *Causal Determinism,* STAN. ENCYCLOPEDIA OF PHIL., https://plato.stanford.edu/entries/determinism-causal/ (last updated Jan. 21, 2016).

[42] *See, e.g., Einstein's Quest for a Unified Theory,* AM. PHYSICAL SOC'Y (Dec. 2005), https://www.aps.org/publications/apsnews/200512/history.cfm.

[43] For one somewhat controversial discussion of this problem, see LEE SMOLIN, THE TROUBLE WITH PHYSICS: THE RISE OF STRING THEORY, THE FALL OF A SCIENCE, AND WHAT COMES NEXT 4–7 (2007). *See also Theory of Everything,* WIKIPEDIA, https://en.wikipedia.org/wiki/Theory_of_everything (last visited Jan. 21, 2018).

No one who thinks seriously about epistemology believes in pure, unmediated, theory-free evidence to which human beings have god-like access.[44] Empiricism and its step-child utilitarianism require more basic *beliefs* of the sort skeptics like Lemley cabin under the label of "faith." Even Mark Lemley's theories of intellectual property, then, finally, are "faith based."

III. "AND IT WAS *GOOD*," WHATEVER *THAT* MEANS

"Religious" or "faith-based" perspectives on intellectual property law, of course, are not rooted only in the Jewish, Christian, and Islamic traditions. Perhaps any perspective that asks about the intrinsic value of human persons, "regardless of their economic contributions," could be considered "faith-based," if "faith" is defined to mean anything beyond a positivistic kind of empiricism.[45] But since my own religious perspectives and theological training arise from the Christian tradition, in this section and the next I offer a reflection on how some resources from that tradition illustrate the problem with reductive policies that exclude the inherent value of human persons. It is fair, I think, to ask which kind of narrative offers a richer, more compelling, more beautiful, and thus more truthful, picture of human society: One based in a "faith" that human persons and their creative activities have inherent value, or one based in consequentialism alone.[46]

In the Bible's first creation story, which is shared by Jewish and Christian believers (and in modified form by Muslims), God creates the heaven and the Earth, and all the creatures of the Earth, and declares them "good."[47] God then creates humanity, which He declares "very good."[48] After, God rests.[49]

The purpose of this story in our scientific age, most Biblical scholars and theologians agree, is not to provide information about *how* the universe was created, but rather to make theological statements about God as creator and about the goodness of God's creation.[50] The fact that creation is "good"

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[44] *See, e.g.,* Richard Creath, *Logical Empiricism,* STAN. ENCYCLOPEDIA OF PHIL. §5, http://plato.stanford.edu/entries/logical-empiricism/#Imp (last updated Apr. 5, 2017) (citing J. Passmore, *Logical Positivism, in* 5 THE ENCYCLOPEDIA OF PHILOSOPHY 52, 52–57 (P. Edwards, ed., 1967) ("Logical positivism, then, is dead, or as dead as a philosophical movement ever becomes")).

[45] Frank Pasquale, *'Four Futures': The Left's Dreams & Nightmares,* COMMONWEAL MAG. (Mar. 2, 2017), https://www.commonwealmagazine.org/four-futures.

[46] *Cf.* JOHN MILBANK, THEOLOGY & SOCIAL THEORY: BEYOND SECULAR REASON, at xvi–xxii (2d ed. 2006) (discussing the importance of "narrative").

[47] *Genesis* 1:25.

[48] *Genesis* 1:31.

[49] *Genesis* 2:3.

[50] For a discussion of how mainstream contemporary Christian theology understands these concepts, see, e.g., DAVID FERGUSSON, CREATION 2 (2014). For a discussion of how the Biblical creation narratives

means that the world entails some transcendent value. Existence is not just a brute fact. Existence has *value* that exceeds the limits of time and chance. The fact that humanity is "very good" means that human beings occupy a particular, uniquely valued place in creation. The fact that God rests means humanity is entrusted with the job of tending and caring for the creation.

In the Bible's second creation account, God breathes the "breath of life" into the first human, charges him with the responsibility of tending the garden, and provides him with a companion with whom he will fill the Earth with descendants.[51] In other words, God gives humanity the opportunity to create *culture*.[52]

The Biblical creation stories, of course, are not alone in asking profound questions about the origins and goodness of the universe and the purposes of human cultural goods. Human beings have been asking such questions for all recorded history, and our distant hominid cousins probably asked them as well long before history was ever recorded. What is a "good" creation? How can I examine the raw data of existence—the green grass and sunshine and students with their backpacks just outside my office window, say, or the text on Internet law here on my desk, or the prescription drug in the cabinet at home that my spouse must take to treat her cancer—and describe them as "good," or less than "good"?

The legal positivism and related utilitarianism Lemley espouses cannot answer such questions. It can speak in terms of maximization, but it cannot answer on its own terms *why* maximizing social welfare is "good."[53] This would be true even if utilitarianism could provide adequate justification for what is meant, in any particular instance, by "social welfare" (it can't). Even if utilitarianism could meaningfully and accurately quantify that commodity (it can't), *why* is "more" innovation or "more" creativity "good"? *Why* should

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in Genesis relate to the surrounding Ancient Near Eastern culture, see, e.g., JOHN H. WALTON, THE LOST WORLD OF GENESIS ONE 69–79 (2009); JOHN H. WALTON, ANCIENT NEAR EASTERN THOUGHT AND THE OLD TESTAMENT: INTRODUCING THE CONCEPTUAL WORLD OF THE HEBREW BIBLE 18–28 (2006).

[51] *Genesis* 2:4–25.

[52] *Id.* It is generally assumed that Genesis 2:4 marks the beginning of a different "second" creation account than that found in Genesis 1:1 to 2:3. In particular, in the second creation account, humanity is created *before* other life on Earth. For a discussion of modern theories about the sources of these narratives, see *Introduction to the Pentatuech, in* THE NEW OXFORD ANNOTATED BIBLE (2010). For a good overview of the possible literary purposes of these variances as well as the possible unifying work of the canonical text's final redactors, see BILL T. ARNOLD, THE NEW CAMBRIDGE BIBLE COMMENTARY: GENESIS (2009).

[53] This is, of course, a very condensed and somewhat glib version of some standard critiques of utilitarianism. *See, e.g.,* JOHN M. ALEXANDER, CAPABILITIES AND SOCIAL JUSTICE: THE POLITICAL PHILOSOPHY OF AMARTYA SEN AND MARTHA NUSSBAUM 9–18 (2008); Barnard Williams, *A Critique of Utilitarianism, in* UTILITARIANISM: FOR AND AGAINST 75, 135 (1973); UTILITARIANISM AND BEYOND 1 (Amartya Sen & Bernard Williams eds., 1982).

a "good" society with "good" intellectual property policy avoid unnecessary restrictions on free expression? Why *should* Mark Lemley have a "right" to wear a "Fuck the Draft" T-shirt, particularly if many people find this offensive?[54]

Utilitarians may suggest the answers to these questions are self-evident—*of course* it is "better" for the most possible people to experience the most possible happiness.[55] But once we enter the realm of supposedly *per se nota* truth we have left the shores of empiricism far behind. Without some first principles that justify why some form of consequentialist calculus produces normatively "good" results, the utilitarian approach hangs in midair.[56]

IV. BE FRUITFUL AND MULTIPLY: POLICIES OF CREATION

At the climax of the Bible's first creation narrative in Genesis 1, on the sixth day, God creates humanity—הָאָדָם, hā·'ā·ḏām, the generic term "the adam."[57] God tells humanity to "be fruitful and multiply, and fill the earth,

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[54] Lemley incongruously states "I have the right to wear a T-shirt that says 'fuck the draft' whether or not I came up with the phrase—unless, that is, someone copyrights it or trademarks it, as people have done with the smiley face, the phrase 'class of 2000' the letter pi, and a host of other terms." Lemley, *supra* note 1, at 1341. The odd thing here is that Lemley asserts a "right" of free speech rooted in deontological claims about human autonomy and freedom. But any supposed "right" of free speech, like anything else, is up for grabs in a utilitarian framework. As Bernard Williams observes, at the level of an entire social system, "the utility of anything is open to question, including, of course, that of utilitarian thinking as a personal and social phenomenon." Williams, *supra* note 51, at 130. Williams further observes that some people will link their happiness to things or activities that do not have net social utility, and that "[t]o legislate them out is not to pursue people's happiness, but to remodel the world towards a form of 'happiness' more amenable to utilitarian ways of thought." Williams, *supra* note 51, at 131. The problem Williams is addressing here is one of infinite regress. *See* Williams, *supra* note 51, at 82–83. There must be some basic belief about what consequences matter and why. Williams, *supra* note 51, at 82–83. Williams notes that if, at bottom, utlitiarians simply assert that all things considered, the world should be ordered "for the best . . . utilitarianism has disappeared, and . . . the residual position is not worth calling utilitarianism." Williams, *supra* note 51, at 133–34.

[55] For a more sympathetic discussion of the development of utilitarian thought, see Julia Driver, *The History of Utilitarianism*, STAN. ENCYCLOPEDIA OF PHIL., http://plato.stanford.edu/entries/utilitarianism-history/ (last updated Sept. 22, 2014) ("The question Bentham asked, 'What use is it?' is a cornerstone of policy formation. It is a completely secular, forward-looking question."). Williams notes that many of the defenses of utilitarianism against its critics come down to the claim that even a rough-and-ready estimation of utility is better than a "relapse into unquantifiable intuition and unsystematic decision." Williams, *supra* note 51, at 148. But, as Williams notes, this is merely a form of illusory hand-waving that elevates a tool of some marginal use into an overweening system. Williams, *supra* note 51, at 148–49.

[56] The same kind of critique is made, rightly in my view, about legal positivism generally. *See generally* Leslie Green, *Legal Positivism*, STAN. ENCYCLOPEDIA OF PHIL. (Jan. 3, 2003), https://plato.stanford.edu/entries/legal-positivism/.

[57] *Genesis* 1:26–28. Most Biblical scholars agree that the creation narratives in Genesis 1 and Genesis 2 are different narratives, with a different order of events, and likely written by different authors—thus there is a "first" and "second" creation narrative in Genesis. The original redactors of the canonical text, of course, would have realized this, and made no apparent attempt to resolve the differences, suggesting

and subdue it; and rule over the fish of the sea and over the birds of the sky and over every living thing that moves on the earth."[58] The Hebrew text uses the words פְּרוּ (pə·rū), וּרְדוּ (ū·rə·dū), וּמִלְאוּ (ū·mil·'ū), and וּרְבוּ (ū·rə·ḇū), an interesting rhythmic pattern not noticed in the English translation.[59] The rhythmic pattern sets up a sort of cadence within the text, suggesting a movement towards a crescendo. Indeed, the verb מָלֵא, which is the root form of the term וּמִלְאוּ (ū·mil·'ū), can suggest accomplishment, completion, or fulfillment.[60] As many commentators have noted, God does not drop humanity into a static creation.[61] God entrusts to humanity the *purpose* of engaging in fruitful, creative activity that will make the Earth into something even more beautiful than it was in the beginning. The human "cultural mandate," as theologians often call it, has a purpose, which is that humanity would "subdue" the Earth.[62] While God "rests" on the seventh day,[63] humanity's creative work is just beginning.

So, what would it mean for humanity to "subdue" the Earth? Commentators have long wrestled with this question, and unfortunately this concept has at times been used to justify practices that degrade the natural environment.[64] Interestingly, some early commentators wondered why the Earth as originally created would have been "wild" or in need of "subduing," since Genesis 2 pictures humanity originally dwelling in the paradise of Eden.[65] But most commentators now agree that the concept here is one of wise governance or "stewardship."[66] The text suggests that God leaves to humanity the job of caring for the material creation, which includes humanity itself.[67] The purpose of human creative activity is the flourishing of all of creation, including human flourishing. Humanity is not commanded to "be

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that the purpose of including these two different texts side-by-side was to make subtly different theological points.

[58] *Genesis* 1:28.

[59] For the Hebrew text, see BIBLIA HEBRAICA STUTTGARTENSIA (Karl Elliger & Willhelm Rudolph eds., 1997). The prefix וּ, transliterated here as ū, is a waw-consecutive, which connects two words or phrases, often translated into English as "and." *See* GARY D. PRATICO & MILES V. VAN PELT, BASICS OF BIBLICAL HEBREW 43–46 (2007).

[60] For lexical information on these terms, see LUDWIG KOEHLER ET AL., THE HEBREW & ARAMAIC LEXICON OF THE OLD TESTAMENT (1996).

[61] *See, e.g.*, ANDY CROUCH, CULTURE MAKING: RECOVERING OUR CREATIVE CALLING 101–107 (2008).

[62] *See id.*

[63] *Genesis* 2:2.

[64] *See* CROUCH, *supra* note 59, at 105–106.

[65] *See* Francis J. McConnell, *The Lesson Exposition*, THE SUNDAY SCH. J. AND BIBLE STUDENT'S MAG., Dec. 1907, at 40 (discussing the need to subdue the earth and emphasizing the duty as occurring before original sin).

[66] *See, e.g.*, CROUCH, *supra* note 59, at 112–13.

[67] *Id.* at 108–09.

fruitful and multiply" just for the purpose of "more."[68] The command to be fruitful and multiply is connected to the command to fill, subdue, and rule over the Earth.[69] In the Biblical creation narratives, the end of human creative activity (including the most amazing creative activity of all, bringing new human life into the world) is that all of creation would become all that God intends for it to be.[70]

In the framework of the Bible's creation theology, then, human cultural activity has a *purpose*, with embedded values, and concepts of excellence— or, stated negatively, concepts of falling short or missing the mark. (In the New Testament, the Greek word translated "sin" in English is ἁμαρτία, which literally means "to miss the mark.")[71] The question of the purpose of cultural endeavors, what we today call the arts and sciences, of course, is not unique to the Bible. It is a theme important to every great civilization in history. But it is a theme that the kind of methodological naturalism underlying utilitarian views of the law cannot discuss.

The end result of any inquiry constrained by the rules of methodological naturalism cannot tell us what a phenomenon actually *is*. Such an inquiry can only tell us that certain results were obtained using certain assumptions. Those results may end up possessing enormous cultural and moral significance: this compound, administered in this way to people with this form of cancer, kills cancer cells without damaging other cells. From the perspective of bare "nature," there is no significance to this result at all— cells survive, cells die, genes are passed on or not passed on—something has been described, but nothing at all has been *explained*. If the cancer patient is a close friend or relative, however, this result may be cause for joy. This *person*, whom I *love*, may be saved. This treatment matters to *me*, to *my spouse*, to *my children*.

This reference to the *person* demonstrates further why empiricism and utilitarianism fail as ethical theories. Why does utilitarianism speak in terms of maximizing the utility of human *persons*? Why not speak in terms of maximizing the utility of non-human organisms, or of cells, or of genes? From a perspective on "nature" limited to naturalism, isn't the "selfish gene," after all, the fundamental driver of biological life?[72] To speak of the utility

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[68] *Genesis* 1:28.

[69] *Id.*

[70] See CROUCH, *supra* note 59, at 113.

[71] For the Greek New Testament, see THE GREEK NEW TESTAMENT, (Kurt Aland et al. eds., 4th ed. 2001). For lexical information, see A GREEK-ENGLISH LEXICON OF THE NEW TESTAMENT AND OTHER EARLY CHRISTIAN LITERATURE 50 (Frederick William Danker ed., 3d. ed. 2000).

[72] *Cf.* Richard Dawkins, THE SELFISH GENE (1976). In fact, the notion of inclusive fitness and kin selection that informs the "selfish gene" idea is hotly debated today. *See, e.g.,* Martin A. Nowak, Corina

of "persons" is to invoke categories of mind, will, agency, and subjectivity, which no thoroughgoing naturalistic theory can encompass.

This reference to the *person* further demonstrates why any jurisprudence relating to cultural goods, such as literature, art, and inventions, cannot remain satisfied with merely utilitarian explanations. Literature, art, music, films, dance, inventions, and all the other great varieties of human cultural goods matter because they are the products of *human persons* and contribute to or, all too often, damage, *human flourishing*.[73]

It may be true that *methodological* naturalism is an important limitation that demarcates "natural science" from other kinds of inquiry.[74] I am not sure that is really the case: "science" doesn't function well without some ontological commitment to the reality of the universe, and any variety of ontological realism is a metaphysical position that cannot be established with reference to methodological naturalism.[75] So, even an effort to construct a discipline limited by methodological naturalism ends up bleeding out into some deeper philosophical framework or another. In any event, it's vital to recognize that a commitment to methodological naturalism is merely a pragmatic effort to focus certain kinds of limited tools onto certain limited areas of inquiry.[76] We still must ask *why* this or that inquiry should be encouraged, or discouraged.

V. THE TOWER OF BABEL: HUMAN LIFE AND THE DANGERS OF TECHNOCRACY

The famous story of the "Tower of Babel" in the Hebrew Bible isn't only about a tower.[77] The tower appears in the center of a "city," through which humanity, sharing a common language, seeks to reach into heaven, "make a name" for itself, and prevent the possibility of becoming "scattered abroad

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E. Tarnita & Edward O. Wilson, *The Evolution of Eusociality*, 466 NATURE 1057 (2010), (sparking a highly polemical debate among evolutionary biologists). The idea of the "selfish gene" as an ontological framework is also subject to withering critique on philosophical grounds. *See, e.g.*, HORST, *supra* note 35.

[73] From a theological perspective, they also matter, and indeed ultimately matter, because they glorify God as creator of all things, including of the marvel of human beings capable of creativity. *See, e.g.*, CROUCH, *supra* note 59.

[74] *See, e.g.*, KELLY JAMES CLARK, RELIGION AND THE SCIENCES OF ORIGINS: HISTORICAL AND CONTEMPORARY DISCUSSIONS 9–30 (2014) (discussing demarcation issues between "science" and "religion").

[75] *See, e.g., id.*

[76] For a discussion of fitting methodological constraints to different areas of inquiry, see David W. Opderbeck, *Deconstructing Jefferson's Candle: Towards a Critical Realist Approach to Cultural Environmentalism and Information Policy*, 49 JURIMETRICS J. 203 (2009).

[77] *Genesis* 11:1–9.

over the face of the whole earth."[78] God becomes concerned that, if humanity completes this city, "nothing which they purpose to do will be impossible for them."[79]   God scatters humanity and causes different groups to speak different languages in order to foil humanity's plans.[80]

The story has often been interpreted as a warning against the vices of cities, the sin of pride, or a Promethean theft of technological knowledge from God.[81] Those all may be legitimate readings, but the story's placement in the timeline of the Biblical protohistory suggests another interpretation related to this essay's theme: it is a story about the violence of technocracy.

The story is situated in the generations following the great flood of Noah.[82] The narrative of Noah's flood is shocking to modern ears: God destroys all life on Earth, save for the animals and eight humans aboard the Ark.[83] Modern critics overlook the cause of this divine judgment: in the narrative, humanity had become irrepressibly violent, and that violence threatened to undo the very fabric of creation.[84] Without the Flood, everything would have been permanently destroyed by human violence.[85] By sending the Flood, God gave both the animal world and humanity a chance at a new start. As Jewish and Christian commentators have long recognized, the Flood was an act of grace as well as an act of judgment.[86]

Not long after the Flood, however, we find humanity at it again. The city of Babel, with its common language and its tower jutting with phallic assertion into the center of creation, is an act of cosmic rape.[87] A project of this scale, of course, would require significant coordination—indeed, it would require all the resources of the population, and above all, it would require a hierarchy of human control. There were no friendly open source

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[78] *Id.*

[79] *Genesis* 11:6.

[80] *Genesis* 11:7–9.

[81] *See* ARNOLD, *supra* note 50.

[82] *Genesis* 11:7–10.

[83] *Genesis* 7:1–9

[84] Modern critics who argue that the Flood narrative sanctions Divine "genocide" also, ironically, read the text, like modern religious fundamentalists, primarily as a "literal" or "historical" document of events, rather than primarily as a literary and theological text. There are a host of modern questions the text neither asks nor answers: isn't it unfair for God simply to wipe people out, even if they were wicked? How did all those animals fit on the Ark—and so on. In its Ancient Near Eastern context, consistent with contemporary stories such as the Epic of Gilgamesh, the text simply assumes God's "right" to judge creation and is utterly unconcerned with the mechanics of the Flood, the Ark and the animals. Critiques of the narratives on this score therefore are a category mistake. The over-arching *theological* point of the Genesis flood narrative is that God both judges sin and violence and preserves His creation, including humanity, against its own destructive tendencies. *See, e.g.,* ARNOLD, *supra* note 50.

[85] *See id.* at 98–99.

[86] *See id.* at 108.

[87] *Genesis* 11:1–9.

projects in the ancient near east. We should imagine the society of Babel's tower-builders as a world of single-minded zealots leading a deluded population. Babel's tower-builders were the first technocrats. So, once again, in an act of judgment and grace, God acts, humanity's common language is confused, and human beings are scattered across the Earth.[88]

Of course, like the Bible's creation narratives, the Biblical protohistory that includes the Noahic Flood and Babel stories is not considered "literal history" by most mainstream Biblical scholars and theologians.[89] The point of these stories is not to suggest a newspaper-like account of "what happened." Like many ancient narratives, whatever connection these accounts may have to distantly remembered events in time, they mean to connect us with prototypical human experience. We human beings are violent. We human beings want to impose a common, uniform vision upon the world and upon each other so that we can control all outcomes. In the name of the universal, we destroy the particular: the strong over the weak, the many over the few, the useful over the beautiful, the quantifiable over the felt.

The utilitarian technocrats of our age are like Babel's tower-builders. The effort to encompass all human values within the rubric of what is quantifiable produces a convincing simulacrum of the ziggurat: precise, logical, geometric, orderly. It reaches to heaven, but never comprehends the transcendence that awaits it there, complacent in the belief—the faith—that it occupies the center of the universe, that there is no God or other power beyond its foundations in the Earth. As Bernard Williams noted in his critique of utilitarianism, "[i]f we insist on being told from what actual social spot the utilitarian judgments are being made, and if we form some definite picture of utilitarian decision being located in government, while the populace to a significant extent is non-utilitarian in outlook, then it must surely be that government in that society is very importantly manipulative."[90] Moreover, "the social reality will appear very differently to the utilitarian elite from the way it appears to the ruled," and would require oppression and forceful coercion.[91] Utilitarian theories of culture do not produce precision and order. In the end, they produce oppression and violence, which leads to the babble of Babel.

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[88] *Id.*

[89] *See, e.g.*, Leon R. Kass, *What's Wrong with Babel?*, 58 THE AM. SCHOLAR 41, 57 (1989) (arguing that the story of Babel teaches, "the universal city of self-made men will not be a pious, moderate, just, thoughtful, or dignified home for human life, notwithstanding its ability to improve man's material conditions through technology").

[90] Williams, *supra* note 51, at 138.

[91] *Id.* at 139.

VI. CONCLUSION

Human beings are not machines. Law is a human cultural product that structures human life. Therefore, The Law is not a machine. As a cultural product that structures the production and distribution of other cultural products, intellectual property law *in particular* requires deep grounding in a vision of human flourishing. To engage in a discussion about intellectual property policy is to express beliefs about the transcendent value of human cultural production and the capacity of human beings to discipline and structure cultural goods within a framework of reason. In short, it takes great *faith* to be an intellectual property scholar.

Logical positivism is no longer part of the mainstream discourse in epistemology or the philosophy of science. Legal positivism and utilitarianism, which swim in the same intellectual currents as logical positivism, are therefore no more "scientific" than any other approach to jurisprudence.

Of course, empirical data is invaluable for scholars and policymakers as we seek to exercise practical reason about questions like the scope of patents on pharmaceuticals, or whether websites should be required to prescreen user-generated content for supposed copyright violations, or how the doctrine of trademark dilution affects market entry—or any of the myriad of other questions we engage at the intersections of law, technology, and culture. But such data cannot tell us what is "good," "right," or "just," much less what the purpose of human life and culture is or should become. To dare to engage those great questions, we need other virtues. These other virtues include faith, indeed, but also those fruits of faith that cannot be quantified: hope and, above all, love.[92]

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[92] *See* 1 *Corinthians* 13:13.