

Is the Public Domain Just?: Biblical Stewardship and Legal Protection For Traditional Knowledge Assets

Ruth L. Okediji*

ABSTRACT

The present debate over the legal treatment of traditional knowledge (TK) and genetic resources tends to rationalize the precarious conditions in which Indigenous peoples and local communities live. The debate is organized around the question whether TK should be treated as part of the public domain or whether property rights should apply. Both sides presuppose either a robust utilitarianism or else a narrow conception of historical redress for past injustices. This Article argues that both property and the public domain depend on the disruption of places, people, and cultures that may stand in the way of the material conditions industrialized societies use as a proxy for human welfare. The TK debate tends to avoid fundamental moral and justice-related aspects of TK protection, including the centrality of TK to Indigenous peoples' cultural identities and ways (and quality) of life, as well as their long-term socioeconomic development. The Article proposes a theological framework of "biblical stewardship" rooted in imago Dei—the foundational concept informing Jewish and Christian understandings of human nature and social interaction—to address the socio-moral dimensions that are constitutive of TK systems and the institutional context in which they unfold. The biblical stewardship framework focuses on the cooperative and kinship arrangements that enable and sustain productive capacity for TK. It centers the need for Indigenous peoples and local communities to be able to develop and protect their knowledge assets as a precondition for those communities' thriving, both in the present and the future.

* Jeremiah Smith, Jr. Professor of Law, Harvard Law School. I am grateful to Margo Bagley, Eric Claeys, William Fisher, John C.P. Goldberg, Wendy Gordon, Justin Hughes, Sean Lau, David Nimmer, Henry Smith, and participants at workshops at Notre Dame Law School, Loyola Law School, and Harvard Law School for helpful comments on earlier drafts, and to Tatiana Kurschner for excellent research assistance. Professors Ellen F. Davis and Norman Wirzba at the Duke Divinity School generously and honestly shared their wisdom and expertise at a critical juncture of the project, and the works of theologians and revivalists long deceased—were faithful companions along the way. Finally, my deep thanks go to the Journal editorial team of Benjamin Koslowe, Dola Adebayo, and most especially to Hallie Blejewski whose tireless and consistently excellent feedback enriched the process in unnumerable ways.

© 2022 Okediji. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction, provided the original author and source are credited.

Moreover, biblical stewardship supplies a basis for accountability by Indigenous peoples and local communities for how their TK is managed, shared, and utilized within a broader framework of progress and the public good—including obligations that foreclose access and benefit-sharing agreements that may undermine conditions for flourishing of plant, animal, or human life.

TABLE OF CONTENTS

Abstract461

Table of Contents462

Introduction463

I. The Moral Problem of Traditional Knowledge468

 A. The Insecurity of Traditional Knowledge as Productive Property.....471

 B. The Cost of Categories: Traditional Knowledge as “Property” or “Public Domain”?.....477

II. What Is Biblical Stewardship?.....484

 A. Context and Caveats in the Consideration of Biblical Stewardship ..484

 B. The Origin, Attributes, and Scope of Biblical Stewardship.....487

 i. Divine Relationship491

 ii. Promoting Shared Growth and Productivity492

 iii. Human Liberty and Dignity493

 iv. Unlimited Subject Matter.....493

 C. Stewardship and Reward494

 i. Biblical Stewardship as Remunerative Labor496

 ii. Lessons from the Parable of the Talents498

III. Biblical Stewardship and A Just Society For Indigenous People502

 A. Stewardship by Nations504

 B. Stewards and Neighbors505

 C. Traditional Knowledge in an Age of Indigenous Peoples’ Rights.....507

 D. Non-religious Justifications for Stewardship.....512

IV. Property Rights, the Public Domain, and Biblical Stewardship514

 A. The Significance of Stewardship514

 i. Property as an Instrument for Alienation515

 ii. Property as a Limit to Partnership with the Divine.....516

 B. Stewardship and the Public Domain517

V. Conclusion.....522

“Through many hands, enriched with many different kinds of love and labour, the gift comes to me. It is the Law. The best fruits are plucked for each by some hand that is not his own.”

C.S. LEWIS, PERELANDRA (1943)

INTRODUCTION

In the first session of the 116th Congress, six senators introduced an intriguing but ultimately unsuccessful bill entitled “The Native American Seeds Protection Act of 2019.”¹ The bill’s principal purpose was to mandate a study by the Comptroller General of the United States on “the extent to which seeds and foods that mimic Native American seeds . . . are fraudulently identified as authentic Native American seeds or traditional foods” and “the extent to which Federal law, Federal programs, or Federal oversight protect Native American seeds and traditional foods from infringement, or unlawful or unauthorized commercialization.”² The bipartisan bill took indirect aim at the long-festered sore of United States-Tribal relations, of which uncompensated and unauthorized use of Native American knowledge assets is but one dimension. Perhaps deliberately, the bill paralleled ongoing international efforts to address harms arising from modern and historical acts separating Indigenous peoples and local communities from their productive assets.³ Those assets include knowledge of ecological systems and methods to conserve biodiversity, knowledge of animal and plant genetic resources and medicinal or therapeutic applications thereof, and a diverse range of cultural goods—assets encompassed by the term “traditional knowledge” (TK).

Had it passed, the proposed bill certainly would have upset aspects of the American intellectual property (IP) landscape.⁴ But the bill died an embarrassingly quick death. Neither the fact that Native Americans have the highest poverty rates among all U.S. minority groups nor the sponsors’ hopes that the proposed legislation

1. S. 2241, 116th Cong. (2019), <https://perma.cc/LL5L-CUCQ>.

2. Other topics for study included “the availability and long-term viability of Native American seeds, including an analysis of the storage, cultivation, harvesting, and commercialization of such seeds” and “the means by which authentic Native American seeds and traditional foods might be protected to ensure preservation and availability for future generations.” *Id.*

3. Ruth L. Okediji, *Traditional Knowledge in the Image of Private Law*, in THE OXFORD HANDBOOK OF THE NEW PRIVATE LAW (Andrew S. Gold, John C. P. Goldberg, Daniel B. Kelly, Emily Sherwin & Henry E. Smith eds., 2020) (identifying three types of harm related to TK misuse: relational harm, communal harm, and developmental harm).

4. Section 3 of the bill proposed that “The Comptroller General of the United States shall ensure the confidentiality of sensitive information of Indian Tribes that is gained through the study conducted under section 2, including traditional cultural knowledge and information about locations that are considered to be sacred by an Indian Tribe.” S. 2241, 116th Cong. (2019), <https://perma.cc/LL5L-CUCQ>. In addition to the explicit recognition of TK, the requirement of confidentiality is a direct response to concerns of Indigenous peoples who fear loss of their knowledge once it is made public through a study. The requirement to keep the study secret would have been directly at odds with prevailing industry claims that such knowledge is in the public domain.

would “support health care, food security, and economic development in tribal communities”⁵ could overcome steely resistance to even the *possibility* of exclusive rights for Native Americans in their knowledge assets and the genetic resources they have cultivated and stewarded across many generations.

In the same year, across the Atlantic, the San and Khoi peoples of South Africa concluded a historic agreement with the rooibos tea industry. The agreement grants these communities economic returns from sales of rooibos tea grown in the land they have inhabited for thousands of years. Negotiated under the auspices of the Nagoya Protocol to the Convention on Biological Diversity (CBD),⁶ the agreement provides that the San and Khoi will receive 1.5% of the price paid for unprocessed rooibos.⁷ Industry representatives initially resisted the claim for compensation, questioning the legal basis for payment for use of knowledge that had been “freely” transmitted by San and Khoi ancestors to European settlers in the eighteenth century. Nonetheless, the moral conviction that fueled supporters of the agreement—and that continues to compel demands to address uncompensated and unauthorized access or use of TK—ultimately prevailed. In this case, South Africa’s biodiversity legislation also played an important role by requiring benefit sharing for use of Indigenous biological resources.⁸

In this Article, I address the gap in IP law’s treatment of Indigenous peoples’ cultural and genetic assets. The gap is a moral one that squarely implicates justice for the poor, which is a subject that attracts significant attention in many faith traditions and especially in the Abrahamic faiths. The Torah and New Testament have influenced Western law and civilization for millennia. Both remain present—even if contested—in our legal tradition, system of government, culture, and moral values. In the Torah and New Testament, justice is defined largely by how society treats the poor and vulnerable. Both texts offer insights and prescriptions that could be useful in mediating some of the concerns that animate opposing views of TK and genetic resources protection.

The contours of the moral problem can be discerned through a few preliminary questions: Should knowledge and know-how developed by the most vulnerable people in the global economy be taken without their permission and used without compensation, financial or otherwise? Even if compensation is available, should the law ignore the environmental or other harms associated with free access to genetic resources? Is it appropriate that modern products that incorporate TK and genetic resources obtained from Indigenous peoples and local communities rarely

5. Gosia Wozniacka, *A New Bill Could Help Protect the Sacred Seeds of Indigenous People*, CIVIL EATS (Oct. 9, 2019), <https://perma.cc/2SZF-WTPZ>.

6. Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, U.N. Doc. UNEP/CBD/COP/DEC/X/1 (Oct. 29, 2010) [hereinafter Nagoya Protocol].

7. The South African government estimated that the returns to the San and Khoi would be approximately 12 million rand in 2019. See Linda Nordling, *Rooibos Tea Profits Will Be Shared with Indigenous Communities in Landmark Agreement*, NATURE (Nov. 2, 2019), <https://perma.cc/HK5K-5BSF>.

8. Margo A. Bagley, *Toward an Effective Indigenous Knowledge Protection Regime: Case Study of South Africa*, CIGI Papers No. 207, at 6–12 (Dec. 2018), <https://perma.cc/AD3T-7NKQ>.

acknowledge their contributions? To worsen matters, many of these products, especially pharmaceutical drugs, are inaccessible to these source communities, further deepening their sense of harm and sharpening the moral stakes.

Although a growing network of international instruments recognizes the value of TK and associated genetic resources (collectively “TK”) for pharmaceutical innovation, biodiversity, climate change mitigation, and other applications, TK’s legal status remains unresolved and deeply controversial. In most fora, and in the relevant academic literature, the idea that Indigenous peoples and local communities should enjoy the full panoply of rights associated with property ownership is met with firm, even if empathetic, objection. Instead, TK is considered to form part of the public domain. Thus, the key question is whether TK should be relegated to that domain or rather warrants more extensive protection as a form of property.

Those who oppose property rights or other protection for TK, and even those in favor, tend to view TK protection mainly as a tool for redressing historical sins rather than a just response to a problem of ongoing significance. At least two hidden costs are associated with this position. First, it ignores the reality of continuing production of TK and related knowledge assets.⁹ Viewing TK as some sort of historical relic makes property rights hard to justify considering the compelling interest in participatory production of cultural and knowledge goods. Many IP scholars are thus sympathetic to the argument that granting property rights in TK takes away knowledge that belongs to the public.¹⁰

A second consequence of viewing claims for TK protection primarily as a matter of correcting historical injustices is that *any* agreement to pay compensation to Indigenous communities is welcomed by advocates as a step in the right direction. Consequently, leading approaches to the regulation of TK are unduly focused on access and benefit-sharing agreements, rather than on the merits or advisability of access to and use of the TK in the first instance. More telling, willingness to pay obviates scrutiny of the social welfare costs of eliminating IP barriers to TK access—both for Indigenous peoples and for the public at large. The result is that current proposals to mitigate harm to Indigenous peoples arising from unauthorized access to and use of TK exaggerate the value of the remedy (sharing of benefits) and could miscalculate the dynamic welfare costs of facilitating access to and use of TK and other assets.

9. Antony Taubman & Matthias Leister, *Analysis of Different Areas of Indigenous Resources: Traditional Knowledge*, in *INDIGENOUS HERITAGE AND INTELLECTUAL PROPERTY* 60 (Silke von Lewinski ed., 2008) at 59–60, 77 (“Knowledge is not ‘traditional’ because of its object, nor its subject matter or content, nor its age or antiquity, nor its aesthetic qualities. What makes it traditional is the way it has been preserved and transmitted between generations within a community: ‘its nature relates to the manner [in which] it develops rather than to its antiquity.’ . . . The essential characteristics of traditional knowledge are its linkage with a traditional community as such and its dynamic, intergenerational quality. Frequently there is a spiritual and cultural element, and an historical, ethical and religious dimension that taps into the very identity of the respective indigenous group or local community. . . .”).

10. Stephen R. Munzer & Kal Raustiala, *The Uneasy Case for Intellectual Property Rights in Traditional Knowledge*, 27 *CARDOZO ARTS & ENT. L.J.* 37, 41 (2009) (“Expansive protection of TK would, with some qualifications, remove what is now in the public domain from that domain.”).

Thus far, the strong influence of IP law's utilitarian rationale has stymied negotiations over access and benefit-sharing norms in several fora.¹¹ Nonetheless, demands to address rights in Indigenous peoples' TK remain unabated, as does the moral outrage that unauthorized access to and use of TK evokes in the global community. Even scholars who eschew property rights in TK on grounds that such knowledge is in the public domain oppose IP rights for those who (mis)appropriate TK and later seek patent or other forms of IP protection.¹² In short, both sides of the debate agree that the current system imposes certain harms, but they differ as to what those harms might be and how best to resolve the admittedly problematic consequences of the public domain designation for TK.

What the property rights versus public domain discourse avoids, however, is direct engagement with what we mean by human welfare. For both camps, the principal measure of welfare is that society has greater stores of creative goods and that there are more participants in IP-dominated creative processes. When considered primarily as a resource to assure the future creation of knowledge goods, the public domain appears not much more than a tool for promoting the troubling avarice on which commodification, consumerism, and ultimately globalization depend. It is not surprising, then, that those likely to suffer the consequences of a capacious view of the public domain are also the ones likely to suffer the costs related to an unbridled IP regime, such as lack of access to essential medicines, or an inability to convert their assets for productive purposes in modern markets.

A doctrinal tool directed at the same ends as property rights seems unlikely to provide inspiration for a morally-just IP law, by which I mean one that can more consistently address the conditions that make for mutual flourishing in cooperative conditions. Both property and the public domain equally *accept* and *depend* on the disruption of places, people, and cultures that may stand in the way of the material conditions we use as a proxy for human welfare. Neither accommodates alternative measures of the good life, and neither is willing to risk disrupting the status quo despite existing harms to the most vulnerable among us, such as Indigenous peoples.

An influential source of ethical values bearing on the relationship between creative activity, productive resources, and well-being is *imago Dei*—the belief that humans are divinely created and endowed with the duty and distinctive ability to

11. Margo A. Bagley, "Just" Sharing: *The Virtues of Digital Sequence Information Benefit-Sharing for the Common Good*, 63 HARV. INT'L L.J. 101 (2022) (highlighting the World Health Organization, the Convention on Biological Diversity, the Convention on the Law of the Sea, and the Food and Agriculture Organization as examples of "fora where issues of access and benefit-sharing in relation to digital sequence information ("DSI") are under active, sometimes contentious, discussion"). Access and benefit sharing have long bedeviled the World Intellectual Property Organization (WIPO). In 2000, a WIPO Intergovernmental Committee launched negotiations aimed at concluding international agreements on genetic resources (GRs), traditional knowledge (TK), and traditional cultural expressions (TCEs). Terms of third-party access to and use of GRs, TK, and TCEs are at the heart of these protracted negotiations. For a recent overview of the developments to date, see Wend Wendland, *International Negotiations on Indigenous Knowledge to Resume at WIPO: A View of the Journey So Far and the Way Ahead*, WIPO MAG. (Feb. 2022), <https://perma.cc/G6MP-43KH>.

12. Munzer & Raustiala, *supra* note 10.

steward the flourishing of all life forms. I employ the term “stewardship”¹³ to address the full spectrum of prevailing views of *imago Dei*. In the ancient Near Eastern context, stewards performed a coordinating function that ensured cooperative arrangements to sustain productive assets, including the processes by which those assets were transformed into consumptive goods. While contemporary scholarly treatments consider stewardship as an alternative justification for property rights, the religious texts offer a different vision. Biblical stewardship does not lead ineluctably to property rights, though it could. Moreover, biblical stewardship can be inconsistent with private claims to property. Both outcomes are consistent with the vision of public welfare articulated in the religious texts. There, the central function of stewardship is that it situates humans in divinely ordered relationship with the material environment. Stewardship thus values productivity principally in the context of overall social flourishing. No one person or group can or should do better at the expense of another.

A biblical stewardship framework comprises a theological perspective towards property or, in Rawlsian terms, is a comprehensive doctrine that partly relies on presuppositions not shared by society at large.¹⁴ That framework will be most persuasive to those who hold the same presuppositions, but I argue that individual features of the framework may be attractive even to those not so aligned, not least because of how it foregrounds the moral paucity of the existing debate. The biblical stewardship approach thus has at least three implications for the contemporary discourse on the appropriate legal treatment of TK. First, biblical stewardship suggests that an emphasis on access and benefit-sharing (ABS) agreements as the principal measure of a good outcome for Indigenous peoples’ TK claims is misaligned with important requirements for justice. The agreements purport to offer a remedy for harms—such as loss of autonomy or loss of physical integrity—that have not historically warranted redress through private law mechanisms *precisely* because such harms cannot be compensated through markets. Indeed, such harms are generally viewed as antithetical to social welfare and human well-being and should be avoided at all costs. Moreover, ABS agreements do not fully address the most significant harm to Indigenous peoples, namely, the developmental harm they suffer because of multiple forms of disablement of their land, culture, and intellectual assets. For these problems, improving access to political institutions, including property rights, remains an important consideration.

Second, principles of biblical stewardship insist that all potential users of TK be treated equally, meaning that small firms and individual users should not be disadvantaged in any scheme to improve the current environment. Smaller firms and individual scientists may lack the capacity to effectively negotiate ABS agreements and are less able to afford the payments or other perks that larger multinational firms can offer.

13. I am not the only scholar to use a stewardship framework applicable to cultural claims by Indigenous peoples. See, e.g., Kristen A. Carpenter, Sonia K. Katyal & Angela R. Riley, *In Defense of Property*, 118 YALE L.J. 1022 (2009). However, biblical stewardship differs in important ways. See *infra* Part II.

14. See JOHN RAWLS, *POLITICAL LIBERALISM* 34 (1993).

Third, biblical stewardship requires accountability for how TK is managed and shared. No such accountability mechanisms exist in the current national and international frameworks that address unauthorized access to and use of TK. Such accountability is crucial for preserving and nourishing the invaluable contributions of Indigenous peoples, including to the commons.

In Part I, I review the current landscape for TK protection, highlighting the harms foisted on Indigenous or local communities when TK, genetic resources, or other knowledge assets are accessed and used without authorization. I argue that current approaches, whether based on property or the public domain, underscore the limits of conceptualizing Indigenous peoples' knowledge assets as raw material for the creative and, often, exploitative energies of other creator-communities who may reside in faraway places and cultures. I further claim that failure to recognize the rights and obligations of Indigenous peoples in their knowledge assets violates principles of stewardship and so undermines human flourishing—both for Indigenous communities *and* for the researchers involved in unauthorized access and use.

In Part II, I discuss *imago Dei* and outline the key features of stewardship and the goals against which stewardship is measured. Biblical stewardship provides distinctive grounds to combat efforts by developed countries to map IP rules onto Indigenous peoples' knowledge production systems. It also offers a more gratifying account for why the claims of Indigenous peoples merit a positive response from the international community.

In Part III, I provide an overview of key lines of argument about property rights and the public domain considering the stewardship principles outlined. Drawing from the stewardship framework, this Part offers brief thoughts about the structural conditions for human flourishing.

Finally, in Part IV, I discuss insights from biblical stewardship that suggest adjustments to the public domain doctrine to better reconcile human flourishing with the tools necessary for creativity to thrive in Indigenous and local communities. An important conclusion is that biblically-informed stewardship may preclude payment for use of TK, especially where discouraging such use is necessary to safeguard resources on which plant, animal, and human life depend. In other words, some TK use *should* be prohibited even if payment would benefit Indigenous communities in the short term. Moreover, stewardship obligations may require access to TK and genetic resources only when such access would not unduly harm those resources *and* would enable productive use by others.

I. THE MORAL PROBLEM OF TRADITIONAL KNOWLEDGE

Indigenous communities are among the most economically disadvantaged in the world. Regardless of their population size or the country's level of economic development, leading studies show that by most socio-economic indicators Indigenous peoples around the world live persistently in what Peter Drahos describes

as a “non-developmental state.”¹⁵ A non-developmental state is one in which disabling conditions for human flourishing persist, attributed to the maldesign of institutions of economic development. In these conditions, legal rules limit the recourse available to Indigenous communities, or they otherwise insufficiently address the distinctive harms the communities endure.¹⁶ The non-developmental state is not the inevitable result of conditions that could benefit all but which, for a variety of reasons, some are unable to exploit or enjoy. Rather, it is a state that is legally engineered to exclude specific types and forms of development activity *because* those activities interfere with the interests of others who are more fully represented in the political system.

In the non-developmental state, economic institutions that are beneficial to some groups are “extractive” to others; legal rules that govern these institutions facilitate the conversion of resources into productive assets that can be leveraged by only a few, usually the political elite.¹⁷ Classic examples of such institutions include property, contracts, know-how, and, more recently, data for machine learning.¹⁸ But the extractive nature of these institutions is not a metaphysical phenomenon or a scientific fact. Identifying these institutions as “extractive” is fundamentally an exercise in moral judgment; we cannot avoid moral scrutiny or ignore moral outcomes simply by describing a positive law regime as morally neutral. These so-called value-neutral frameworks, like IP’s utilitarian rationale, in fact have significant moral valences. To that end, insights from religious texts may help us

15. PETER DRAHOS, INTELLECTUAL PROPERTY, INDIGENOUS PEOPLE AND THEIR KNOWLEDGE 1 (2014); GILLETTE HALL & HARRY ANTHONY PATRINOS, INDIGENOUS PEOPLES, POVERTY AND HUMAN DEVELOPMENT IN LATIN AMERICA (2006); INDIGENOUS PEOPLE AND POVERTY IN LATIN AMERICA: AN EMPIRICAL ANALYSIS (George Psacharopoulos & H.A. Patrinos eds., 1994). *See also Indigenous Peoples*, WORLD BANK, <https://perma.cc/DG4M-T3YY> (“There are between 370 and 500 million Indigenous Peoples worldwide, in over 90 countries. Although they make up over 5 percent of the global population, they account for about 15 percent of the extreme poor. Indigenous Peoples’ life expectancy is up to 20 years lower than the life expectancy of non-indigenous people worldwide Indigenous Peoples . . . safeguard 80 percent of the world’s remaining biodiversity.”)

16. Douglass C. North, *Institutions*, 5 J. ECON. PERSP. 97 (1991) (“Institutions provide the incentive structure of an economy; as that structure evolves, it shapes the direction of economic change towards growth, stagnation, or decline.”).

17. Katharina Pistor has captured this phenomenon by her use of the term “code” in relation to the production of capital. *See* KATHARINA PISTOR, THE CODE OF CAPITAL: HOW THE LAW CREATES WEALTH AND INEQUALITY, at x (2019) (“Ordinary assets are just that—a plot of land, a promise to be paid in the future, . . . individual skills and know-how. Yet every one of these assets can be transformed into capital by cloaking it in the legal modules that were also used to code asset-backed securities and their derivatives, which were at the core of the rise of finance in recent decades. These legal modules, namely contract, property rights, collateral, trust, corporate, and bankruptcy law, can be used to give the holders of some assets a comparative advantage over others.”). Her intuition about “capital’s legal code,” *id.* at 1, echoes Laurence Lessig’s arguments about the technical protocols (embedded in software) that shape the contours of activity on the Internet. *See* LAURENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE (1999).

18. Thus, for example, without the salutary prospects of a fair use defense, copyright-fueled opposition to the machine copying necessary to train neural networks will determine which firms can afford to participate in the data economy. *See* Raul Incze, *The Cost of Machine Learning Projects*, COGNIFEED (Sept. 12, 2019), <https://perma.cc/2J28-KK62> (reviewing various costs).

question more critically the justifications for our existing approaches that persist despite their avoidance of the hard moral questions.¹⁹

But not every appeal to religion is illuminating. Without proper understanding of the religious text or its overarching theological vision, appeals to morality can distort the principle at stake. As Professor Margo Bagley has observed, for example, ill-informed appeals to morality can expand the reach and impact of patents (and other forms of IP) in ways that are contrary to the biblical text on which the claim purportedly rests.²⁰ Similarly, legal categories of information goods reflect the classic conversion of productive assets in a manner that constrains the freedom of specific types of creators, such as work-for-hire agreements or invention assignment clauses, and for certain forms of creative works.²¹ In material respects, these arrangements and categories compromise the moral vision that informs biblical stewardship.

For example, patents protect inventions that are new, useful, and nonobvious, and copyright protects original works of authorship that are fixed in a tangible medium of expression. The legal boundaries for each type of creative work are informed by considerations of who is likely to produce the types of cultural goods valued within a specific conception of social progress. At any given historical moment, those excluded from that conception—slaves,²² women, populations in colonial outposts, and Indigenous peoples—are inevitably barred from enjoying the benefits of their creativity. The classic vision of utilitarian progress is paradigmatic, but by excluding many forms of creative output, these IP rules consign certain groups to persistent harm through loss of autonomy, loss of dignity, and displacement. The historical *and* current design of IP law thus “concentrate[s] power in the hands of an elite few and allow[s] this elite to prey on the economic efforts” of others.²³ As this Section

19. It is not a coincidence that claims of IP infringement routinely invoke the seventh commandment, “Thou shalt not steal,” as the rallying cry of an infringement lawsuit. *See, e.g.*, *Grand Upright Music Ltd. v. Warner Bros. Records, Inc.*, 780 F. Supp. 182, 183 (S.D.N.Y. 1991) (“‘Thou shalt not steal’ has been an admonition followed since the dawn of civilization. Unfortunately, in the modern world of business this admonition is not always followed. . . . The conduct of the defendants herein, however, violates not only the Seventh Commandment, but also the copyright laws of this country.”).

20. Margo A. Bagley, *The Morality of Compulsory Licensing as an Access to Medicines Tool*, 102 MINN. L. REV. 2463 (2018).

21. *See, e.g.*, Olufunmilayo Arewa, *From J.C. Bach to Hip Hop: Musical Borrowing, Copyright and Cultural Context*, 84 N.C. L. REV. 547, 550–51 (2006) (“Existing copyright structures are based on a vision of musical authorship that is both historically and culturally specific. . . . [C]opyright structures are rooted in a notion of musical practice and authorship that is linked to the formation of the classical music canon, an invented tradition that had largely emerged by the last half of the nineteenth century. . . . [C]urrent copyright structures reflect a pervasive bias toward musical features that lend themselves more readily to established forms of musical notation. As a result, these structures reflect an emphasis on fidelity to the musical text. . . . In contrast, other types of musical expression . . . have generally related to musical texts in a different way.”).

22. Kara Swenson, *Race and Selective Legal Memory: Reflections on “Invention of a Slave,”* 120 COLUM. L. REV. 1077 (2020).

23. DRAHOS, *supra* note 15, at 3. The classic analysis of extractive institutions is framed as a majority/minority account in which European colonizers overwhelmed the capacity of the Indigenous society, and over time designed legal rules that first subordinated, and then dispossessed, these societies of rights in their resources and assets. *Id.* at 3–4.

illustrates, rules that treat the genetic resources and TK of Indigenous peoples as part of a global public domain function precisely in this manner, creating insecure conditions for flourishing in Indigenous communities.²⁴

A. THE INSECURITY OF TRADITIONAL KNOWLEDGE AS PRODUCTIVE PROPERTY

Traditional knowledge consists of “know-how, skills, innovations, practices, teachings or learnings”;²⁵ it is “developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.”²⁶ In addition, TK is “a *constitutional* structure within which institutions, values and norms are cultivated, dynamically implemented, and sustained. This knowledge continues to evolve in response to, and in interaction with, external forces,”²⁷ and can be embodied in a diversity of tangible goods and symbols.

Ultimately, TK reflects a system of care for created life. Such care, or stewardship, is exercised over plant and other resources on physical territories where Indigenous peoples live, and over creative activities required by political, religious, or cultural institutions within their societies. TK deeply informs a socio-legal order that regulates conduct affecting plant, animal, and human life. Not every aspect of TK is sacred, but every expression represents an aspect of the constitutional features of the Indigenous community—its governance mechanisms, fundamental beliefs, allocation of rights and powers, and its legal provenance. Plants, songs, music, cultural rituals, and artifacts have distinctive roles and values in the daily experiences of the community. Interference with these knowledge assets thus disrupts an integrated governance framework within which private and public functions are carried out—a framework that also defines the appropriate spheres of interaction between members and non-members.²⁸

Despite the importance of TK systems for identity, culture, and governance, it is the economic potential of TK that has defined the contours of the global controversy.

24. For example, the International Undertaking on Plant Genetic Resources (1983) was based on “the universally accepted principle that plant genetic resources are a heritage of mankind and consequently should be available without restriction.” U.N. Food & Agriculture Org. Res. 8/83, art. 1 (Nov. 23, 1983). The Preamble to the UNESCO Recommendation for the Protection of Movable Cultural Property (1978) states, “[M]ovable cultural property representing the different cultures forms part of the common heritage of mankind.” Similarly, the Preamble to the UNESCO Recommendation on the Safeguarding of Traditional Culture and Folklore (1989) states that “folklore forms part of the universal heritage of humanity,” as did the Preamble to the UNESCO-WIPO Model Provisions for National Laws on the Protection of Expressions of Folklore for Illicit Exploitation and Other Prejudicial Actions (1982) (“[F]olklore represents an important part of the living cultural heritage of the nation. . .”).

25. WIPO, *The Protection of Traditional Knowledge: Draft Articles*, WIPO/GRTKF/IC/31/4 annex at 5 (May 13, 2016), <https://perma.cc/RC5C-5J7X>.

26. See WIPO, *Traditional Knowledge*, <https://perma.cc/9S8C-JMCV> (last visited May 9, 2022).

27. Ruth L. Okediji, *Traditional Knowledge and the Public Domain*, 2 CIGI Papers No. 176 (June 2018), <https://perma.cc/H8XG-V8NR>.

28. See generally Ruth L. Gana, *Has Creativity Died in the Third World? Some Implications of the Internationalization of Intellectual Property*, 24 DENV. J. INT’L L. & POL’Y 109 (1995).

Beginning in the 1980s, a number of high-profile disputes attracted significant international attention. In the exemplary case, a researcher from a multinational firm or an individual scientist would access an Indigenous community to harvest plant genetic materials or other biological materials. Information about the medicinal or therapeutic use of the materials would be derived from independent study, discussions with members of the Indigenous community, or both, followed by development of valuable pharmaceutical or other products for which the researcher or firm obtains IP rights. This practice, often described as “bioprospecting,” once relied on repeated physical access to Indigenous lands. Today, however, synthetic biology researchers are using sequence information from genetic resources acquired from gene banks or via other contractual arrangements, with no attribution as to the source and, similarly, no sharing of benefits with the Indigenous community.

For example, IXEMPRA (Ixabepilone), a breast cancer drug from Bristol Myers Squibb, is a product of a soil bacterium from South Africa. IXEMPRA is used to treat local or metastatic breast cancer when other treatments have failed. A South African researcher collected the microbe and allegedly transferred it to scientists in Germany, who then turned it over to the pharmaceutical firm. Reports indicate that the microbe came from an unspecified location “along the banks of the Zambezi River.”²⁹ Controversy between the South African scientist and the German scientists over where the sample was obtained complicated efforts to determine how local communities use the chemical entity. In the meantime, IXEMPRA has been a blockbuster drug for Bristol Myers, generating millions of dollars in annual sales.³⁰ Studies financed by Novartis and Bayer “opened the door to create still more analogs, derivative chemical ‘riffs’ based on the compounds naturally produced by the African strain.”³¹ No monetary benefits have been shared with the South African researcher nor with people in the South African community from where the microbe was obtained.

Indigenous peoples and their advocates identify a web of diverse types of access-based harm from bioprospecting. These include ecological damage from unauthorized access to the land or unauthorized retrieval of plants and animal life, emotional or spiritual harm from violations of strongly held beliefs in relation to the knowledge or resource that was unlawfully accessed, and harms related to the impairment of the group’s resource management protocols. The nature of an access harm is that it weakens the ability of an Indigenous community to maintain its cultural integrity. Access harms are amplified when knowledge about the utility of the genetic resource is obtained directly or indirectly from the Indigenous group or

29. Doug McInnis, *Chemistry Grads Compete and Collaborate to Develop Treatment for Breast Cancer*, ALLEGHENY MAG. (Summer/Fall 2008), <https://perma.cc/2S7C-YJFU>.

30. After its U.S. launch in October 2007, IXEMPRA generated \$15 million in sales for Bristol Myers Squibb in the fourth quarter of 2007. Press Release, *Bristol-Myers Squibb Company Reports Financial Results for the Fourth Quarter and Twelve Months of 2007* (Jan. 31, 2008), <https://perma.cc/8LHL-8826>.

31. Edward Hammond, Briefing Paper, *The African Cancer Drug Claimed by Bristol Myers, Novartis, and Bayer*, Third Meeting of the Open-Ended Ad Hoc Intergovernmental Committee for the Nagoya Protocol (ICNP) on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (Feb. 24–28, 2014).

local community (including from digital databases) without complying with the governing social or cultural norms. For most Indigenous groups, this is where the immediate harm is keenly felt—unless acquisition of an IP right by the firm in addition precludes or interferes with economic opportunities for the group. Access-related harm also occurs when a non-Indigenous person applies for an IP right claiming as an invention practices and products known and used in Indigenous communities for centuries.³² Or, in cases of Indigenous art, non-Indigenous artists, firms, and other actors copy the art wholesale and pass it off as “Indigenous art,” exacerbating both economic and sometimes spiritual injury to the group.³³

It is difficult to overstate the scope, diversity, and persistence of the problem of misappropriation of cultural and genetic resources. To be sure, some accounts of multinational access and use of the human, plant, or animal resources of the poor inadequately distinguish between conduct that violates TK holders’ rights as such, and conduct that raises broad questions about the ethics or fairness of outcomes that result when Indigenous peoples are unable to determine terms of access to their resources. But both categories of behavior share a common root.

The conduct of firms and organizations that trade in genetic resources, and the assumptions that underlie that trade, can be traced to the profound conviction of European intellectual superiority that shaped eighteenth-century discourse about worlds and peoples beyond Europe.³⁴ The ascendancy of science as the chief lens through which non-Western cultures were assessed resulted in an indelible association between perceived European cultural dominance and scientific progress, which required and assumed unfettered access to biological and other resources in foreign lands. As I explore further in Section B below, even with the formal end of colonialism, access to Indigenous peoples’ resources for scientific purposes was legally justified under prevailing international law. This general disposition, though more subtle, remains influential today and is reflected in a few recent examples involving the patent system and protection for pharmaceutical and agricultural products.

On June 29, 2018, South African media reported that a patent on teff flour and related products was issued by the European Patent Office to a Dutch firm.³⁵ Teff, a

32. Such conduct could also be perpetrated by a member of the Indigenous group. See, e.g., K. Jayaraman, *US Patent Office Withdraws Patent on Indian Herb*, NATURE, Sept. 4, 1997, at 6, 6, <https://doi.org/10.1038/37838> (effort by Indians to patent the Indian herb turmeric).

33. See, e.g., Francesca Fionda, *Fake Art Hurts Indigenous Artists as Appropriators Profit*, DISCOURSE (Nov. 30, 2018), <https://perma.cc/3SY7-3E87>; *Bulun Bulun v R & T Textiles Pty. Ltd.* (1998) 86 FCR 244 (Austl.).

34. For the leading work on this subject, see MICHAEL ADAS, MACHINES AS THE MEASURE OF MEN: SCIENCE, TECHNOLOGY, AND IDEOLOGIES OF WESTERN DOMINANCE (1990) (see especially Chapter 2). I first discussed this link between race and IP’s treatment of non-Western creativity in 1995. See Gana, *Has Creativity Died in the Third World?*, *supra* note 28.

35. Simon Allison, *Whose Injera is it Anyway?*, MAIL & GUARDIAN (June 29, 2018), <https://mg.co.za/article/2018-06-29-00-whose-injera-is-it-anyway/>; see also Yona Abiye, *Attorney General to Sue Dutch Company Over Teff Patent*, REPORTER (Addis Ababa), May 19, 2018; Tsegaye Tilahun, *Efforts to Claim Teff Patent Right*, ETHIOPIAN HERALD, Apr. 19, 2018; Haftu Gebrezgabiher, *Dutch Company Using Scientific Jargon to Avoid Teff Patent Right Controversy*, ETHIOPIAN HERALD, July 19, 2018.

plant endemic to Ethiopia, is used to make injera—the fermented pancake that comprises part of the daily subsistence meal of most Ethiopians. Teff is reputedly the world’s smallest grain, is gluten-free, and is rich in minerals and nutrients. Dutch researchers formed a firm, Health and Performance Food International, to exploit the prospects for capitalizing on the global nutrition trend that transformed other grains, such as quinoa, into a multi-billion-dollar industry. The firm negotiated with the Ethiopian government and concluded a deal to plant and distribute teff in Europe in return for sharing a percentage of the profits with the Ethiopian government.

Although hailed by some as a “win-win” deal and an example of a private-public partnership in which an African country would profit from the commercialization of its plant genetic resources, critics noted that the deal essentially sought to commercialize teff varieties developed by Ethiopian farmers and community plant breeders for millennia.³⁶ The patent claims covered most forms of teff flour, as well as products that result from blending the flour with liquids.³⁷ Arguably, injera, a mainstay of Ethiopia’s historical diet, fell within the scope of the patent claims.³⁸ Pursuant to the agreement with the Dutch firm, the Ethiopian government shipped a box of teff seeds to the Netherlands where teff products were produced and distributed in international markets without meaningful returns to Ethiopia—much less Ethiopian farmers.³⁹ The patent rights constrained what Ethiopia could itself do with teff genetic resources, as well as what might be possible through arrangements with other foreign companies. At the same time, sales of teff products outside Ethiopia from seeds provided by Ethiopia did not produce any returns to Ethiopian people.

A more recent example highlighted by Edward Hammond involves Regeneron Pharmaceuticals, the developer of the Ebola drug REGN-EB3, now known as INMAZEB.⁴⁰ The drug was developed in part through use of a virus strain sequence obtained by Regeneron from the publicly accessible GenBank database. The sequence information was from a survivor of the 2014 Guinean Ebola outbreak and was uploaded without restriction to the GenBank database by the Germany-based Bernard Nocht Institute for Tropical Medicine (BNITM). Although recipients of *physical* samples of the virus had to sign a material transfer agreement (MTA) with obligations to negotiate benefit-sharing arrangements with Guinea for any

36. See REGINE ANDERSEN & TONE WINGE, FRIDTJOF NANSENS INST., THE ACCESS AND BENEFIT-SHARING AGREEMENT ON TEFF GENETIC RESOURCES: FACTS AND LESSONS 8 (2012), <https://perma.cc/3SHY-YRAM>.

37. See European Patent 1 646 287 B1, granted January 10, 2007. A U.S. patent application, filed in 2006, received a final rejection on Oct. 5, 2012 and is currently abandoned. See US 2006/0286240 A1; ANDERSEN & WINGE, *supra* note 36, at 50–51.

38. Allison, *supra* note 35 (“These patents are incredibly broad, covering most forms of teff flour, as well as all products that result from mixing teff flour with liquids. These include bread, pancakes, shortcake, cookies, cakes and, of course, injera. . . . Now Ethiopia wants its intellectual property back.”).

39. ANDERSON & WINGE, *supra* note 36 (“In practice, the teff patent excludes all other parties, including Ethiopia itself, from utilizing teff for most forms of relevant production and marketing in the countries where the patent is granted.”).

40. Edward Hammond, *Ebola: Company Avoids Benefit-Sharing Obligations by Using Sequences*, THIRD WORLD NETWORK (May 2019), <https://perma.cc/DRP8-4HPT>; see also Bagley, “Just” Sharing, *supra* note 11.

commercial products developed using the samples, BNITM did not require such an agreement for the use of the uploaded *sequence* information. The drug attracted over \$400 million in research and development commitments from the U.S. Department of Health and Human Services Biomedical Advanced Research and Development Authority (BARDA) and received an “Orphan Drug” designation (providing tax breaks and market exclusivity) from both the U.S. Food and Drug Administration (FDA) and the European Medicines Agency. To date, more than 100 patent applications have been filed on the drug worldwide. BARDA contracted to purchase as much of the drug as Regeneron could produce, in order to create a domestic stockpile for the U.S. market.⁴¹

Other examples beyond patent law involve the appropriation of Indigenous peoples’ artistic and literary works. For example, Professor William Fisher describes cases involving Tibetan carpets and Wandjina spirit images created by the Mowanjum community in Australia.⁴² Terri Janke’s formative report to the Australian government further documents the extensive copying and commercialization of Aboriginal artwork in Australia and the nature and extent of harms to both consumers and members of the Aboriginal community occasioned by such conduct.⁴³

Despite their factual differences, the central question is the same in all these cases: What compels a right to prevent access to cultural or genetic resources, or a right to compensation for those who have contributed resources to the development of knowledge goods? Should the holder of a patent for a blockbuster drug developed from genetic information sequenced from a survivor of the 2014 Guinean Ebola outbreak, without permission, share benefits (including non-monetary benefits, such as free doses of INMAZEB) with either the survivor or the government of Guinea? Should countries who share biological or genetic resources needed for the development of new life-saving drugs and vaccines be entitled to benefits earned from the patents or other IP obtained therefrom?

An argument for compensation to an Indigenous community could be made based on the known utility of the genetic material. Indeed, claims of joint authorship in copyright law or joint inventorship in patent law that create entitlements to royalty payments in the case of licenses, or to damages for infringement, have succeeded on creative contributions that arguably are far less.⁴⁴ But there is some danger lurking in a system that facilitates ease of compensation generally, no matter how just such compensation might be in a specific case.

First, the cost of access would need to be sufficiently high to avoid socially pernicious competition—low or de minimis access costs would lead to overuse of

41. Additionally, “when new outbreaks of Ebola occurred in the Congo in 2020 and 2021, BARDA agreed to provide the drug to the Congolese government for free.” Bagley, “*Just*” *Sharing*, *supra* note 11, at 4 & n.22.

42. William Fisher, *The Puzzle of Traditional Knowledge*, 67 DUKE L.J. 1511 (2018).

43. TERRI JANKE & CO., INDIGENOUS KNOWLEDGE: ISSUES FOR PROTECTION AND MANAGEMENT (IP AUSTRALIA 2018), <https://perma.cc/F5M9-ZK9Z>.

44. See, e.g., *Janky v. Lake County Convention & Visitors Bureau*, 576 F.3d 356 (7th Cir. 2009) (recognizing joint authorship despite claim that the co-author had contributed only 10% of the lyrical content of the song).

the resource, invoking Hardin's tragedy of the commons.⁴⁵ Conversely, high access costs may discourage socially valuable activities that could benefit many people—such as the development of an Ebola drug. Determining the fair value of the contribution of Indigenous peoples to downstream creative activity is thus arguably a crucial factor in discerning where the public domain should end, and property interests attach. Such line drawing is an exercise well familiar in patent and copyright law, where subject matter eligibility requires identification of what originated with the creator and satisfies the statutory criteria. Such an analytical framework has yet to be applied to TK because for other doctrinal reasons—none of which are terribly compelling—all expressions of TK are considered to be in the public domain.⁴⁶ The question of what Indigenous peoples' knowledge contributed to the product is entirely discounted at the outset.

Different national approaches are emerging as countries seek to regulate access to genetic resources or to capture benefits from their use, creating an alarming web of rules for scientists.⁴⁷ In these emergent approaches, and in developments in international fora, the idea that TK comprises raw materials in the public domain is slowly yielding in favor of a moral intuition that some returns must flow to resource holders. Providing returns to knowledge holders from profits earned from inventive activities based on genetic resources in territories owned or occupied by Indigenous peoples or in poorer countries is increasingly viewed as “fair,” “just,” and equitable.

The World Health Organization (WHO) and the U.N. Convention on the Law of the Sea are leading examples of fora where questions of access and benefit sharing of genetic resources have attracted significant institutional acknowledgement. For example, the WHO's Pandemic and Influenza Preparedness Framework (PIP), adopted in 2011, is directed at improving “pandemic influenza preparedness and response . . . with the objective of a fair, transparent, equitable, efficient, effective system for, on an equal footing: (i) the sharing of . . . influenza viruses with human pandemic potential; and (ii) access to vaccines and sharing of other benefits.”⁴⁸ In a study on how the implementation of the Nagoya Protocol might affect the sharing of pathogens for global public health, the WHO concluded that “the Nagoya Protocol provides a foundation, based on core principles, such as fairness and equity, for a

45. See generally Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

46. In copyright law, doctrines of authorship, originality, and duration pose problems for TK. In patent law, nonobviousness is the primary concern. But as Dan Burk and Mark Lemley have observed, patent law doctrines apply differently to different sectors. There is no compelling reason that different types of innovation should be subject to uniform applications of doctrines—and indeed that is not the case in patent law. See Mark A. Lemley & Dan L. Burk, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003).

47. See Margo Bagley et al., *Fact-Finding Study on How Domestic Measures Address Benefit-Sharing Arising from Commercial and Non-Commercial Use of Digital Sequence Information on Genetic Resources and Address the Use of Digital Sequence Information on Genetic Resources for Research and Development*, U.N. Doc. CBD/DSI/AHTEG/2020/1/5, at 25–30 (identifying at least five different national approaches).

48. WORLD HEALTH ORGANIZATION, PANDEMIC INFLUENZA PREPAREDNESS FRAMEWORK FOR THE SHARING OF INFLUENZA VIRUSES AND ACCESS TO VACCINES AND OTHER BENEFITS 6 (2011), <https://perma.cc/9R6P-4VKL>.

global common approach to accessing pathogens, and sharing benefits arising from their use.”⁴⁹

Similarly, in the proposed U.N. treaty to regulate access to and use of genetic resources in the high seas,⁵⁰ countries are discussing ex ante permission or notification measures that scientists fear may stifle research and require sharing of benefits with poorer countries.⁵¹ The high seas are beyond the jurisdictional reach of any country. Nonetheless, there is deep concern that wealthy firms from developed countries will commercialize biological resources without sharing the benefits with developing countries. “These concerns are not without cause—reports indicate that about 12,998 genetic sequences from marine species have already been patented.”⁵²

What moral impulse compels consideration of access and benefit sharing as an appropriate legal framework to address the demands of Indigenous peoples and the biodiversity of poor countries? Should these communities be entitled to international protection on the same or similar terms as established by the minimum standards of the Great Conventions⁵³ and the TRIPS Agreement that constitute the international IP framework? At the national level, should Indigenous peoples be able to challenge patents or other IP rights granted on inventions based on knowledge or genetic resources stewarded or produced in their communities?

These questions require an understanding of justifications that facilitated the transformation of Indigenous knowledge assets into a type of commons—the “public domain.” The next section considers the question of TK insecurity in historical context and outlines the rise of the public domain as an integral dimension of that insecurity.

B. THE COST OF CATEGORIES: TRADITIONAL KNOWLEDGE AS “PROPERTY” OR “PUBLIC DOMAIN”?

In the “age of discovery,” as European exploration and incursion into distant lands was expanding, plant and animal resources, along with any knowledge developed by Indigenous peoples, were treated by scientists from industrialized countries as part of a commons.⁵⁴ This view of natural and intellectual resources associated with

49. WORLD HEALTH ORGANIZATION, IMPLEMENTATION OF THE NAGOYA PROTOCOL AND PATHOGEN SHARING: PUBLIC HEALTH IMPLICATIONS 14 (2018), <https://perma.cc/D4GD-V4GV>.

50. See Eli Kintisch, *U.N. Talks to Tackle Tough Question: Who Should Benefit from DNA Collected from the High Seas?*, SCIENCE (Sept. 3, 2018), <https://perma.cc/99N5-WP4K>.

51. Olive Heffernan, *Why a Landmark Treaty to Stop Ocean Biopiracy Could Stymie Research*, NATURE (Mar. 27, 2020), <https://perma.cc/37T9-WPWY>; Kintisch, *supra* note 50.

52. Heffernan, *supra* note 51.

53. Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 828 U.N.T.S. 305 [hereinafter Paris Convention]; Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, 1161 U.N.T.S. 3 [hereinafter Berne Convention].

54. Scholars ascribe the confidence with which European explorers and scientists appropriated local knowledge to their assumption that Indigenous peoples’ land was considered part of a global commons. See JEROME H. REICHMAN, PAUL F. UHLIR & TOM DEDEURWAERDERE, GOVERNING DIGITALLY INTEGRATED GENETIC RESOURCES, DATA, AND LITERATURE: GLOBAL INTELLECTUAL PROPERTY STRATEGIES FOR A REDESIGNED MICROBIAL RESEARCH COMMONS 50–52 (2016) (noting that

Indigenous peoples was reinforced by the social environment that emerged from colonization and the Enlightenment. Colonial attitudes towards local citizens in territories in Africa, Asia, and the Americas tended to be dismissive of the idea that anything of real value—social or economic—could come out of the natives.⁵⁵ These attitudes were evident in both religious and political institutions, and ironically were fueled by a sense of relative technological superiority. As Michael Adas has observed,

From the very first decades of overseas expansion in the fifteenth century, European explorers and missionaries displayed a great interest in the ships, tools, weapons, and engineering techniques of the societies they encountered. They often compared these with their own and increasingly regarded technological and scientific accomplishments as significant measures of the overall level of development attained by non-Western cultures. By the mid-eighteenth century, scientific and technological gauges were playing a major and at times dominant role in European thinking about such civilizations as those of India and China and had begun to shape European policies on issues as critical as the fate of the African slave trade. In the industrial era, scientific and technological measures of human worth and potential dominated European thinking on issues ranging from racism to colonial education. They also provided key components of the civilizing-mission ideology that both justified Europe's global hegemony and vitally influenced the ways in which European power was exercised.⁵⁶

With the advent of bioprospecting in the 1980s, a coalition of developing countries sought an international framework for the protection of genetic resources and TK.⁵⁷ Viewed both as a matter of justice and of encouraging innovation in developing countries, the persistent claim for entitlement-like protection for the resources of Indigenous peoples has been unfolding at the World Intellectual Property Organization (WIPO) for more than twenty years.⁵⁸ WIPO's efforts to explore an international framework for TK protection have been mired in definitional battles about subject-matter scope, disputes about the nature of possible rights to be conferred, and questions about the form of any emergent international instrument.⁵⁹

scientific norms and practices supporting free access by researchers to biodiversity-rich environments in former colonies and developing countries were well established by the 1950s). I am open to this reading of history, but I suspect this approach had more to do with lingering subtexts from the colonial encounter which dispossessed natives of all property rights except those allowed by colonial authorities.

55. See MICHAEL ADAS, *MACHINES AS THE MEASURE OF MEN: SCIENCE, TECHNOLOGY, AND IDEOLOGIES OF WESTERN DOMINANCE* 6 (1989) ("In the early phase of overseas expansion, European travelers and missionaries took pride in the superiority of their technology and their understanding of the natural world. Their evaluations of the tools and scientific learning of the peoples they encountered shaped their general estimates of the relative abilities of these peoples.").

56. *Id.* at 3–4.

57. See generally PROTECTING TRADITIONAL KNOWLEDGE: THE WIPO INTERGOVERNMENTAL COMMITTEE ON INTELLECTUAL PROPERTY AND GENETIC RESOURCES, TRADITIONAL KNOWLEDGE AND FOLKLORE (Daniel F. Robinson, Ahmed Abdel-Latif & Pedro Roffe eds., 2017). These concerns also informed negotiation and adoption of the Convention on Biological Diversity (CBD). See Convention on Biological Diversity, May 22, 1992, 31 I.L.M. 818 [hereinafter CBD].

58. See Wend Wendland, *The Evolution of the IGC from 2001 to 2016: An Insider's Perspective*, in PROTECTING TRADITIONAL KNOWLEDGE, *supra* note 57, at 31.

59. A rich body of literature has carefully explored the competing arguments and the institutional context in which any resolution must emerge. See PROTECTING TRADITIONAL KNOWLEDGE, *supra* note

Thus far, however, the most powerful argument against recognizing some exclusive rights in genetic resources and TK is the importance of preserving the public domain.⁶⁰

The public domain carries a heavy burden in IP law. Since the late seventeenth century, it has been the inimitable tool of choice for advancing policy arguments about the appropriate boundaries of IP.⁶¹ In the conventional account, the public domain is constituted by things that “are the universal heritage, the public commons, from which all may freely draw sustenance which all may use as seems most satisfactory to them.”⁶² Such things include facts, ideas, laws of nature, or naturally occurring substances. They are “denied protectibility because . . . they are the raw materials with which creative imaginations must work, and under no circumstances can they in and of themselves become the private property of any individual.”⁶³ The public domain thus represents a realm in which stores of old knowledge, and the tools to build new knowledge, are freely accessible. In this narrative, it is an essential and noble limit to private property rights in knowledge goods.

For proponents of the public domain, resisting property rights in TK is consistent with a commitment to enlarge and democratize the commons. Leading academic defenses of the public domain thus coalesce around the importance of enabling continued production of knowledge goods in the interest of human progress. A public domain that is as robust as possible, and as accessible by as large and diverse a range of citizen-creators as possible, is central to this goal.⁶⁴

It is ironic that the public domain has been so effectively deployed against the claims of the world’s most vulnerable and exploited communities.⁶⁵ The argument is not that TK lacks economic or other value. Instead, the argument is that the value of TK is held by society at large because it fails to satisfy the requirements for IP in several key respects.⁶⁶

57; Ruth L. Okediji, *A Tiered Approach to Rights in Traditional Knowledge*, 58 WASHBURN L.J. 271 (2019); *The Consolidated Document Relating to Intellectual Property and Genetic Resources – Rev. 2*, WIPO/GRTKF/IC/25 (Mar. 23, 2018), <https://perma.cc/Z4HL-MHGH>.

60. See generally PROTECTING TRADITIONAL KNOWLEDGE, *supra* note 57.

61. For example, when England’s Licensing Act was up for renewal in 1693, John Locke argued against perpetual monopolies for booksellers. See LORD PETER KING, *THE LIFE OF JOHN LOCKE* 201–08 (1829). Locke played a prominent role in the demise of licensing, arguing against perpetual copyright and that issuing “patents for the sole printing of ancient authors is very unreasonable and injurious to learning.” *Id.* at 208.

62. See David L. Lange, *Recognizing the Public Domain*, 44 LAW & CONTEMP. PROBS. 147, 150 n.20 (1981) (quoting William B. Carman, *The Function of the Judge and Jury in the “Literary Property” Lawsuit*, 42 CAL. L. REV. 52, 57–59 (1954)).

63. *Id.* The public domain also includes works in which IP protection has expired.

64. The classic work on the public domain is, of course, Jessica Litman’s *The Public Domain*, 39 EMORY L.J. 965 (1990). See also JAMES BOYLE, *THE PUBLIC DOMAIN: ENCLOSING THE COMMONS OF THE MIND* (2008).

65. Ruth L. Okediji, *Negotiating the Public Domain in an International Framework for the Protection of Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions*, in PROTECTING TRADITIONAL KNOWLEDGE, *supra* note 57, at 141.

66. Munzer & Raustiala, *supra* note 10. At times, the claim that TK is in the public domain is merely the outcome of influential definitional treatments. See, e.g., BOYLE, *supra* note 64, at 38 (“The

For example, to be eligible for copyright protection a creative work need only be original; that is, it must originate from the human author and not have been copied.⁶⁷ Moreover, copyright protection does not depend on formalities such as registration. Indeed, such formalities are expressly forbidden under the Berne Convention,⁶⁸ the governing treaty for international copyright protection.

Given the universally quite low threshold for the originality doctrine⁶⁹ and lack of formalities, some types of TK could qualify for copyright protection, but questions of authorship and duration plague potential protection under the copyright system. TK may be produced over generations, with multiple—and sometimes unidentifiable—“authors.” Moreover, under the unique values that characterize Indigenous communities, protection for creative works is not subject to temporal, individual, or proprietary terms, violating a number of limits imposed under modern copyright laws.

But notions of authorship are of course culturally contingent. The choice to consider specific works copyrightable subject matter involves value judgments derived from the distinctive mix of values and political compromises that drive copyright legislation in most developed countries. The idea that TK is inconsistent with existing copyright norms is not a reflection on Indigenous peoples or local communities—it is, rather, a statement of copyright law’s limits with respect to non-Eurocentric forms of creative expression.

With respect to patentable ideas, public use beyond the permissible timeframe for filing a patent application and the high bar imposed by the non-obviousness standard and other patentability criteria similarly preclude patentability for TK. As some TK skeptics put it:

Although we are sympathetic to the efforts of [traditional knowledge] advocates, we find that [it] fits poorly within standard justifications of property. Meaningful protection will therefore require a major deviation from established legal as well as philosophical doctrine. Whether looked at individually or collectively, the chief arguments employed in the moral, political, and legal philosophies of property do not justify a robust package of rights in [traditional knowledge]. . . .⁷⁰

Arguments that justifications for property do not apply to TK presume that existing approaches to property are the only ones that matter for human flourishing or *the ones that matter most*.⁷¹ The opposition to TK also presupposes that “established” property doctrines are scientifically derived rather than the result of complex interactions between rulers, citizens, demographic pressures, trade, and

public domain is material that is not covered by intellectual property rights.”); *see also* Anupam Chander & Madhavi Sunder, *The Romance of the Public Domain*, 92 CAL. L. REV. 1331, 1357 (2004).

67. 17 USC § 102 (“Copyright protection subsists, in accordance with this title, in original works of authorship. . . .”); *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884) (“An author in that sense is ‘he to whom anything owes its origin; originator; maker; one who completes a work of science or literature.’”) (citation omitted).

68. Berne Convention, *supra* note 53.

69. *See* William W. Fisher III, *Recalibrating Originality*, 54 HOUS. L. REV. 437, 438–48 (2016).

70. Munzer & Raustiala, *supra* note 10, at 40, 41.

71. Carpenter, Katyal & Riley, *In Defense of Property*, *supra* note 13.

war.⁷² The rise of private property in Europe was the culmination of multiple processes that were as much economic as they were cultural and political. Property—including intellectual property—reflects norms, values, and political choices. So, defining TK out of the modern IP system is not an ineluctable choice. If concern about expansive IP is a major consideration, making TK freely accessible is hardly a logical response if all that is likely is that more IP will be produced by all others except Indigenous peoples and local communities. The IP-public domain binary inflicts damage primarily on the weakest and most vulnerable members of society—communities starkly different than us but with whom we are called to share life and without whose well-being we ourselves cannot fully flourish.

Efforts in the TK debate to set aside the value of Indigenous peoples' knowledge reveal a fundamental misapprehension highlighted by the Torah. Modern agrarians and biblical thinking both focus on how humans can meet their needs sustainably without foreclosing prospects for well-being for future generations.⁷³ As discussed in Part II below, biblical stewardship charges Indigenous groups to utilize their resources productively. Indigenous peoples have a duty to steward their material resources; whether we classify those resources as property or as the public domain, they are resources that must be used productively by those that possess them. Insistent efforts to destabilize traditional systems or re-orient them to emphasize economic returns ignore our collective welfare. The role of Indigenous knowledge systems in responding to the pressures of climate change, loss of biodiversity, and degradation of ecosystems has become increasingly clear to wealthy nations. Nonetheless, these societies, with all their power and technology, lack a critical element to transform heightened awareness into respect and learning. That element is humility, or its foil, wisdom.

In his wonderful study, Professor Peter Drahos describes how Australian Aboriginals had been using fire technology to manage the land and its ecosystems and how early colonizers who did not understand it saw no value in it. This practice, which maintained important ecological balance and kept their cosmos healthy, subjected Indigenous Australians to violence by colonists who were interested in other uses of the land. As Indigenous peoples were driven off the land or were sufficiently threatened to cease the practice, the open Australian forests “descended into a dangerous wild capable of releasing fires that travel at the speed of hurricanes leaving behind ashes and the charred remains of what once lived there.”⁷⁴ Drahos notes that it was 200 years after colonization that scientists began seriously considering “the possibility that the Australian wild was more akin to a managed park that had been built through firestick technology.”⁷⁵ These Indigenous methods promoted

72. ELLEN MEIKSINS WOOD, *LIBERTY AND PROPERTY: A SOCIAL HISTORY OF WESTERN POLITICAL THOUGHT FROM RENAISSANCE TO ENLIGHTENMENT* (2012) (chronicling the historical interactions that shaped the development of “private property”).

73. ELLEN F. DAVIS, *SCRIPTURE, CULTURE, AND AGRICULTURE: AN AGRARIAN READING OF THE BIBLE 36* (2009).

74. DRAHOS, *supra* note 15, at 46–47.

75. *Id.*

ecological integrity as measured by a number of indicators such as biodiversity, the presence of rare native fauna and threatened fire-sensitive vegetation types. Through fire regimes, indigenous groups shaped ecosystems to produce a diversity of flora and fauna that helped foraging indigenous groups to survive. . . . [Indigenous innovation] is a place-based form of innovation that is deeply integrated into a cosmological connectionist scheme [that] disposes those in the system to careful observation. . . . The goals and expressions of innovation have less to do with products and everything to do with services to [territorial cosmos].⁷⁶

Drahos concludes that “[t]oday, much more scientific attention is given to indigenous fire burning methods.”⁷⁷

There are many other examples of scientific inquiry into Indigenous innovation, in areas ranging from environmental management and agriculture to community health.⁷⁸ One can only imagine the cost to Australia’s past, present, *and* future generations of the arrogance that colonizers directed at Indigenous peoples’ innovation. That arrogance was a function not only of the hierarchies of power represented in the vast global colonial system, but also of the violence against the poor that has indelibly shaped the global economic order since then.

Certain genres of biblical writing acknowledge the kind of pride and ignorance expressed by colonialists, and later codified into various discriminatory laws, as part of humanity’s woundedness. The biblical texts argue for and point to a hidden wisdom to be mined from the fabric of Creation and from the character of the Creator for whom humanity serves as steward. As the leading Old Testament scholar Ellen Davis writes:

The willingness to be ignorant in this deepest sense is what biblical writers call the “fear of YHWH.” It is the beginning of wisdom for its essence is the rejection of arrogance and intellectual dishonesty. . . . The fear of YHWH leads to a critical appreciation of both the world and ourselves; it is the necessary condition for reading the world accurately. . . . Wisdom is about trying to integrate knowledge, understanding, critical questioning and good judgment with a view to the flourishing of human life and the whole of creation.⁷⁹

Biblical teachers speak strongly of the idea that moral and spiritual well-being starts with acknowledging the limits and insufficiency of one’s own knowledge. Only in so doing can other forms or sources of knowledge be appropriately valued and sought after. Resistance to TK protection inevitably projects a persistent inability to acknowledge the past and present value of Indigenous innovation. The

76. *Id.* at 51–52.

77. *Id.* at 47.

78. See Rosemary Hill, Chrissy Grant, Melissa George, Catherine J. Robinson, Sue Jackson & Nick Abel, *A Typology of Indigenous Engagement in Australian Environmental Management: Implications for Knowledge Integration and Social-ecological System Sustainability*, 17 *ECOLOGY & SOC’Y* 23 (2012); Katy B. Kozhimannil, *Indigenous Maternal Health—A Crisis Demanding Attention*, 1 *JAMA HEALTH F.* (May 18, 2020) (noting that “[l]oss of life in Indigenous communities has deep cultural and historical resonance” but observing recent positive developments such as “Inuit midwives [who] . . . provide care that recognizes cultural and language traditions and facilitate local births surrounded by family members.”).

79. DAVIS, *supra* note 73, at 35 (citations omitted).

public domain descriptor obscures this fundamental distortion of TK and thus continues to perpetuate harm against Indigenous peoples. In contrast, entitlement protection for TK could enable stewardship and well-being in a way that the public domain simply cannot. Like IP, entitlement protection for Indigenous peoples' knowledge could function partly as an incentive for third parties to invest in the knowledge, as a lever that enables defense of their resources against abuse, or as a means to generate economic return from faithful use of their resources.

The risk that the public domain may cause *greater* harm to vulnerable populations does not make the public domain unworkable in a stewardship framework. Rather, as I have argued elsewhere, this tension suggests that the public domain must be differently constituted to reflect the unique features of productive endeavors in Indigenous communities:

The constellation of moral and spiritual values, that animate systems of [traditional knowledge] protection [must be] woven into the nature and scope of property entitlements and interests. . . . [I]ntellectual property law envisages many public domains, and each is distinctly constituted. The public domain can be expressed, shaped or designed to suit the particular features and function of the property regime to which it relates. The public domain, after all, is an idea—a legal or perhaps even rhetorical, construct—not a scientific discovery or law of nature.⁸⁰

In brief, there are several types of commons; the public domain is simply one of many possible designs whose unique virtues of free access and use by others make it less compatible with the obligation to do no harm to Indigenous peoples and local communities. Other types of commons designs offer alternatives to the public domain that might be suitable for specific types of TK, without the unrestrained access that has proven inimical to Indigenous communities.⁸¹ Examples include regimes such as marriage, close corporations, partnerships, community gardens, and affordable housing cooperatives.⁸² Each arrangement requires cooperation to enjoy the resource and also recognizes certain rights, such as the right to exit in the case of marriage or the right to dissociate from a partnership. As summarized by Professors Dagan and Heller:

When well-tailored, these institutions encourage people voluntarily to come together to create limited-access and limited-purpose communities dedicated to shared management of a scarce resource. They offer internal governance mechanisms to facilitate participatory cooperation and the peaceable joint creation of wealth, while simultaneously limiting minority oppression and allowing exit.⁸³

80. Okediji, *Negotiating the Public Domain*, *supra* note 65, at 143.

81. See, e.g., Hanoch Dagan & Michael A. Heller, *The Liberal Commons*, 110 YALE L.J. 549, 553 (2001) (proposing a “liberal commons” structure that “enables a limited group of owners to capture the economic and social benefits from cooperative use of a scarce resource”); see also Anna di Robilant, *Common Ownership and Equality of Autonomy*, 58 MCGILL L.J. 263, 277 (2012).

82. Dagan & Heller, *supra* note 81, at 552.

83. Dagan & Heller, *supra* note 81, at 553. As Professor di Robilant notes, however, while liberal commons solve a number of problems, there are still difficult tradeoffs. See di Robilant, *supra* note 81, at 277–80.

Nonetheless, even the range of designs that the commons can take outside of the public domain associated with the various types of IP does not capture the distinctive moral concerns (and related costs to the public) presented by TK, such as limited access to and engagement with sacred art forms or the unique structures of secrecy, often defined by gender, that determine how knowledge is governed and controlled even when diffused within the community. Furthermore, exit or dissociation is hardly possible for communities for which membership is limited to right of blood (*jus sanguinis*) or to right of birth (*jus soli*).

In practical terms, failure to protect TK and value Indigenous stewardship affects more than just loss of attribution and compensation to Indigenous peoples. As minorities in the modern State, Indigenous peoples face especial vulnerabilities related to ongoing effects of their historical displacement and continued social disruption from efforts to integrate their values and practices into the modern economic system. The structural disorder that continues to undermine the well-being of Indigenous groups, the fragility of existing Indigenous institutions, and the dispersion of Indigenous communities that makes TK harms easy to perpetuate make some type of entitlement system a more appropriate framework for regulating the production, use, and dissemination of TK.

Resistance to entitlement protection for TK is fueled by implicit assumptions that warrant airing. At a minimum, consigning Indigenous knowledge to the public domain implies that Indigenous groups are not endowed with the talents and gifts biblical texts clearly say they are (and with which secular accounts agree), and that they are not entitled to govern those resources despite the distinctive harms they suffer as a consequence of the current system. Because States, collectives, and individuals all have a responsibility to manage their resources productively, denying Indigenous peoples control over their TK seems in all respects incompatible with a shared aspiration for well-being.

In sum, neither the public domain nor property rights are inherently good or evil, but neither are they morally neutral. Both are essential in biblical stewardship where justice for and accountability by the poor are required measures. A morally responsible IP law thus demands equal attention to private property and the public commons as assets to be stewarded for divinely created order. That created order compels the good of all humanity, and especially the good of the poor among us.

II. WHAT IS BIBLICAL STEWARDSHIP?

A. CONTEXT AND CAVEATS IN THE CONSIDERATION OF BIBLICAL STEWARDSHIP

Imago Dei—the belief that humanity was made in God’s likeness or image—forms a central part of Christian theology. According to the first book of the Torah, human beings were divinely created and authorized to manage the earth’s resources for the flourishing of all life—animal, plant, and human. The central passage in Genesis states in part:

Then God said, Let us make man in our image, according to our likeness, and let them rule over the fish of the sea, and over the birds of the air, and over the livestock, and over all the earth, and over everything that moves upon the earth.

So God created man in his image, in the image of God he created him, male and female he created them.⁸⁴

Notwithstanding fierce hermeneutical debates about *imago Dei*, the prevailing Christian view holds strongly to the affirmation that these verses are imbued with significant consequences for life on earth. Those consequences flow from certain perspectives of what it means that humans were created in the image and likeness of God. The first of these perspectives—the “substantialist” perspective—views *imago Dei* as evoking the power of human reason, including concepts of freedom, conscience, memory, intellect and will.⁸⁵ To say humanity is created in God’s image is to recognize these distinguishing attributes revealed in the literary texts of the Torah and New Testament, and visible in the created order (and disorder) of the world.

The second perspective offers a “relational-ethical” view of *imago Dei*, originating with Martin Luther and more fully developed by John Calvin, that emphasizes the capacity to be rightly or ethically responsive to God in conformity with His precepts. In John Calvin’s expansive treatment of *imago Dei*, humanity’s relationship to God facilitates a revealing of God’s beauty throughout all Creation. A distinct aspect of this relational view of *imago Dei* specifically highlights the capacity for relationships between opposing genders. The co-humanity of male and female means each can respond to the other in conducting life, in sharing spaces, in relating to the earth and relating to God.⁸⁶

A third and most influential understanding of *imago Dei* is the “royal-functional” approach. This reading draws from Old Testament scholarship that stresses “visibility and bodiliness,” consistent with the Hebrew word “*selem*” used in the Genesis 1 text.⁸⁷ *Selem* includes the idea of image or representation (much like an ambassador or officer put in place to represent another). As a leading examination of *imago Dei* observes, the royal-functional reading is consistent with the ancient Near Eastern culture that provides immediate context for the *imago Dei* for the writer of Genesis.⁸⁸ In that culture, kings or priests were defined in the image or likeness of a specific deity and charged with mediating between the deity and the earth. Middleton points out that “[w]hen the clues within the Genesis text are taken together with comparative studies of the ancient Near East, they lead to what we could call a functional—or even missional—interpretation of the image of God in Genesis 1. . . .”⁸⁹ On this reading, the *imago Dei* designates the royal office or calling of human beings as God’s representatives and agents in the world, granted

84. Genesis 1:26–27 (NASB).

85. J. RICHARD MIDDLETON, THE LIBERATING IMAGE: THE IMAGO DEI IN GENESIS 1, at 19 (2005).

86. *Id.* at 22–23 (describing the contributions of Karl Barth).

87. *Id.*

88. *Id.* at 27.

89. *Id.*

authorized power to share in God's rule or administration of the earth's resources and creatures.⁹⁰

This dominant royal-functional reading of *imago Dei* is captured by the term "steward" in this Article. There is no literal Hebrew word for steward, but there are Old Testament corollaries of the office, and scholars point to such a role in ancient Near Eastern culture. Drawing from this body of work, I use "steward" here to denote a person in charge of a household or kingdom, who exercised authority and responsibility in the owner's (usually a king's) interests. The king reigned for the benefit of the people, and the steward's faithful representation of the king served to establish and preserve conditions for the good of the citizens. Imagined thus, stewardship involves "vertical" and "horizontal" relationships: Vertically, it requires accountability to a divine Creator of all earthly resources and the giver of gifts of creative skill and talent to humanity. Horizontally, stewardship entails utilizing one's resources in a manner that facilitates flourishing of the created environment and in relationship with others. In the New Testament, the co-humanity dimension of *imago Dei* is captured in the classic injunction to "love Thy neighbor as thyself"; in other words, to place the needs and interests of others as integral to the question of how resources are managed, distributed, and used.

The *imago Dei* and the stewardship construct (and more generally biblical law⁹¹) have rich implications for IP law's treatment of Indigenous peoples that cannot be fully addressed in the constraints of a law review article. In addition to admitting an inevitably fragmentary treatment, a few caveats are necessary to frame the discussion.

First, my focus on biblical stewardship should not be understood as a claim that the scriptures on which I focus are the only relevant ones, or that stewardship is a solely Jewish or Christian construct. However, stewardship is a significant aspect of biblical law, which has had extraordinary influence on popular culture, politics, and governance institutions in Western society, and indeed on IP law's early development.⁹² That influence continues today, making what biblical texts have to offer a credible and viable addition to the plurality of perspectives that should enrich and inform IP law and policy.

Second, values firmly associated with stewardship are already expressed, however imperfectly, in IP law. The ideas of infringement as "theft," of "reward" for one's labor, and of human agency as a basis for "originality" in copyright law, as well as the proscription on patenting nature, are all notable examples of the established moral

90. *Id.*

91. For my purposes, "biblical law" is defined as the principles, judgments, and instructional teachings (such as parables) in the Torah and New Testament, which comprise a consistent system of social order and justice prescribed by God for human society. For a fuller conceptualization of biblical law, see JONATHAN BURNSIDE, GOD, JUSTICE, AND SOCIETY: ASPECTS OF LAW AND LEGALITY IN THE BIBLE, at xxx–xxxviii (2011). See also Jonathan Burnside, *The Spirit of Biblical Law*, 1 OXFORD J.L. & RELIGION 127 (2012).

92. See BURNSIDE, *supra* note 91, for a detailed account of the role of biblical law in contemporary Western society.

intuitions that underlie IP law and nomenclature.⁹³ Understanding key justifications for biblical stewardship thus seems an appropriate and useful endeavor to provide an alternative framing of the source of a significant fault line in the field. By explicitly delineating the contours of biblical stewardship (divine relationship, promoting shared growth and productivity, and advancing human dignity) I hope to interrogate leading justifications for IP that have advanced conditions necessary for some citizens to productively engage with the resources present in every society. At a minimum, biblical stewardship will be helpful for evaluating the dangers of a post-human understanding of welfare that is increasingly evident in IP law.

Third, a biblically-driven vision of stewardship does not presume that IP law is the preferred legal order for regulating human creativity and innovation. There is no divine prescription about *how* to steward human creativity—but there are clear obligations that derive from *imago Dei*. IP law can better advance its stated goal of promoting human welfare should its norms and doctrines incorporate what it means to be human and how to respect different ways of living so that prospering *together*, and not at the expense of others, is yet possible.

Finally, an important goal of this line of inquiry is to begin a sustained exploration of policy options that might produce the best results for human flourishing. King Solomon wrote that “it is the glory of kings to search out a matter.”⁹⁴ Part of the effort in this preliminary elaboration of the stewardship framing for contemporary IP theory is to force us to consider implications of our fealty to the public domain, and to enrich policy prescriptions that might advance a vision of progress that honors the value and diversity of all people and communities. Such renewed vision is a predicate for any legal design to promote human welfare.

B. THE ORIGIN, ATTRIBUTES, AND SCOPE OF BIBLICAL STEWARDSHIP

Biblical stewardship begins with the premise that God created the earth, all its resources, and human beings. In teleological terms we are born with nothing that is truly “ours.” The prodigious Psalmist and most famous king of Israel, David, declares that “the earth is the Lord’s and its fullness thereof.”⁹⁵ In other words, everything belongs to God—the tangible and intangible endowments that are essential to and that define human existence, are meant to orient humanity to a

93. See, e.g., Oracle USA, Inc. v. Rimini Street, Inc., 6 F. Supp. 3d 1108, 1131 (D. Nev. 2014) (“[T]here is no meaningful distinction between ‘theft’ and ‘copyright infringement.’ One of the leading Ninth Circuit copyright infringement cases refers to the copyright infringement defendant as an ‘ordinary thief.’ Further, the Supreme Court has stated that ‘deliberate unlawful copying is no less an unlawful taking of property than garden-variety theft.’”) (citations omitted); Mazer v. Stein, 347 U.S. 201, 219 (1954) (“The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in ‘Science and useful Arts.’ Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered.”); Ass’n for Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576 (2013) (“We have ‘long held that . . . Laws of nature, natural phenomena, and abstract ideas are not patentable.’”) (citation omitted).

94. Proverbs 25:2.

95. Psalms 24:1.

purpose greater than the individual person, and to objectives beyond physical or material comfort.

The steward's office derives from an assigned responsibility to humanity set forth in the opening chapter of Genesis:

God blessed them and said to them, "Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish of the sea and the birds of the air and over every living creature that moves on the ground."⁹⁶

This central passage is understood in Christian theology to mean that the objects of stewardship are unlimited. Consistent with the royal-function approach to *imago Dei*, this is a view of humanity as a mediator of power on earth.

The royal-functional understanding, however, was not limited to the theological guilds. Leading Renaissance humanists

[blended] the volitional thinking of Augustinian theology with the divinization notion of the Eastern fathers (mediated through the Hermetic literature), . . . [and] imagined a creative, transformative energy by which humans (in imitation of God's own creative activity) shaped earthly life through cultural-historical action, whether in city-building, alchemy, politics, scholarship, or the arts.⁹⁷

Humans thus were regarded as responsible agents for the transformation of culture and the material environment. Within the specific context of human creative output, such transformation necessarily involved scientific innovation and the cultivation of wisdom to resolve problems in human society.

Regardless of the object being managed, however, stewardship in the classical humanist literature was mostly defined not in terms of property "rights," but as duties—duties to God, to others, or the public.⁹⁸ The royal reading's emphasis on humans' mediation of power did not usurp the relational-ethical view entirely since the essence of this delegated power is to imitate God's pattern of rule. Indeed, parallels of *imago Dei* in Near Eastern culture projected a network of values and norms that governed human engagement with universal creation. Humans' mediating authority could be applied over all resources in the material environment, in addition to personal assets such as time, intellect, talents, and other faculties with which humans are endowed. These resources clearly were meant for productive engagement—hence the directive to "be fruitful" in the Genesis text. But nowhere in the Torah or New Testament are these productive assets subject to exclusive property rights as we understand property today, nor are such rights introduced as a prerequisite for productivity.

Obviously, the world ordered by Genesis and that of ancient Israel are radically different from our contemporary society. That difference, however, is not between agrarian societies and industrialized ones; rather, it is a difference of value propositions. Ideologies that propound models of human welfare but are untethered

96. Genesis 1:26–30.

97. MIDDLETON, *supra* note 85, at 29.

98. See 1 CHARLES TRINKAUS, IN OUR IMAGE AND LIKENESS: HUMANITY AND DIVINITY IN ITALIAN HUMANIST THOUGHT 230 (1970).

to any conception of what it means to be human tend to lack tools to shape sustainable conditions for flourishing life. Nowhere is this difference in values more evident than in the idea of private property in productive assets such as land.

Theologians have described how agricultural land in ancient Israel was “literally invaluable”:

There is no record, biblical or inscriptional, of an Israelite voluntarily selling land on the open market, because—in contrast to their neighbors in Egypt and Mesopotamia—Israelites seem to have had no concept of arable land (*‘adāmā*) as a commodity to be bought and sold freely. Whereas Leviticus (25:29–30) allows for sale of houses within the city wall . . . the fertile soil cannot be handled thus, as “private property.” Rather, a piece of land is the possession of a family, to be held as a trust and transmitted from generation to generation. Although rights to land use may temporarily be sold to pay off debts, the land reverts to the original family unit every fiftieth year. . . . There is to be no permanently landless underclass in Israel.⁹⁹

This picture of a sacred relationship between people and land is not unique to ancient Israel. Indigenous peoples similarly hold the earth’s care as a primary duty and obligation of human community, and their innovation is placed in what Peter Drahos describes as a “connectionist cosmological framework.”¹⁰⁰ Both in ancient Israel and among Indigenous groups, creativity is directed to the care of the created world—to those conditions, practices, and rituals (including legal rituals) that make shared flourishing possible. The ancestral systems of Australia’s Indigenous groups, for example,

spread duties of care over living organisms amongst many individuals through the use of totemic systems. Within this network of decentralized responsibility, those who are charged with the care of a plant have special responsibility to ensure the use of the plant stays true to ancestral purposes. . . . When patent systems allow for unilateral acquisition of rights over ancestral plants they directly challenge the authority of ancestral systems.¹⁰¹

Similarly, in the Senegalese Diola faith tradition,

the Earth, humans, flora, and fauna are empowered by the deity to reproduce and become participatory agents in the creative process. Seen this way, the universe, earth, fauna, and flora are not objects at the mercy of human control and whimsical manipulations, but subjects.¹⁰²

In the nurtured cosmology of Indigenous peoples, then, the well-being of communities is deeply connected to environmental health and to kinship ties that link generations together through the transmittal of knowledge, including knowledge about plant and animal life. Such knowledge sustains the life and livelihood of

99. DAVIS, *supra* note 73, at 39.

100. Peter Drahos, *When Cosmology Meets Property: Indigenous People’s Innovation and Intellectual Property*, 29 PROMETHEUS 233 (2011).

101. DRAHOS, *supra* note 15, at 21.

102. ALIOU CISSE NIANG, *THE POETICS OF POSTCOLONIAL BIBLICAL CRITICISM: GOD, HUMAN-NATURE RELATIONSHIP, AND NEGRITUDE* 6 (2019).

Indigenous communities. It is what defines their sense of welfare, notwithstanding the technologically-saturated societies in which these groups live today.

The classical liberal ideology that orients people principally to the maximization of self-indulgence is at odds with this worldview that characterized ancient Israel and colonial societies, and that is shared by many Indigenous groups today. The centering of the individual as the focus of creation and all creativity can project an exploitative and extractive relationship with earth's resources, with access limited only to those powerful enough to appropriate the resources for their individually directed needs and interests. Nowhere is this more evident than in the current environmental and public health crises—in both of which IP law plays a crucial enabling role. The extractive culture of technology-mediated societies is quite unknown in the Torah and Bible and stands in meaningful tension with the nature of biblical stewardship.

Even more profound is the understudied effect of this impulse to maximize access and use of tangible and intangible resources on States. While many IP scholars have (rightly) decried the State's role in pushing an aggressive global IP agenda that intentionally excludes the poorest from the very goods—such as essential medicines—necessary to live, indeed the state too is a victim of the IP system. As the political economy of IP shows quite vividly, the utilitarian justification for IP that prevails today transforms the state into a servant of corporate interests with little to no power over basic ethical uses of innovation—including innovation such as COVID-19 vaccines that are entirely funded by the state.

In contrast, the biblical stewardship framework informs and orients a person's relationship with God and other living beings. Both the Torah and New Testament are replete with references about the minute details of human and animal life that are intimately known and carefully observed by a loving Creator. Biblical law is centered around God's sovereignty over all things. This is evident from the very precise instructions in the Torah about various aspects of human existence, including the care of animal and plant life, diet, and societal obligations, to personal assurances that “even the very hairs on your head are numbered, . . . do not fear.”¹⁰³ As C.S. Lewis puts it,

Every faculty you have, your power of thinking or of moving your limbs from moment to moment, is given you by God. If you devoted every moment of your whole life exclusively to His service, you could not give Him anything that was not in a sense His own already.¹⁰⁴

The grant of authority and responsibility over earth's resources did not devolve to humanity in a vacuum.¹⁰⁵ An explicit divine purpose was communicated in

103. Matthew 10:30–31 (NKJV).

104. C.S. LEWIS, *MERE CHRISTIANITY* 110 (Macmillan 1960) (1952).

105. The idea of human dominion is not without controversy. This is largely because the term “dominion” evokes perceptions of subjugation. Without question, human proclivity to act exclusively in one's self-interest, or to engage in abusive behavior, might justify skepticism towards dominion-based stewardship. The fact that dominion is misused, however, does not lead unalterably to a conclusion that dominion is bad. When the exercise of dominion is non-compliant with the message or character of God, the purpose of stewardship is inevitably displaced, and interest divergence exists between God's goodness

Genesis 1, namely, to identify and harness every resource for the enhancement of life for all the species. As Jonathan Burnside explains in relation to humanity and the environment:

[T]he meaning of rule or dominion in Genesis 1:26 and Genesis 1:28 need not be simply reduced to subjugation. . . . [R]ule or dominion involves some degree of power and authority. But how this power is exercised depends on the type of rule one has in mind. . . . [H]umanity is supposed to exercise its rule in a way that reflects the character of God, . . . [H]umanity exercises rule by maintaining the optimum conditions in which life can flourish. Dominion “discerns and abets goodness wherever it may be found.” Humanity’s calling is thus to imagine “the endlessly diverse and expandable” forms of goodness. . . . Its role is to “mediate God’s creation blessing to Earth and stand in creative, not exploitative, relationship with [Earth] and the rest of creation.” Humanity reigns through service.¹⁰⁶

Thus, at the core of biblical stewardship lies a vision for what the Creator sought to achieve in the creation of humanity—persons who, by sharing and exercising sovereign attributes, could relate productively with their Creator and with all other aspects of Creation. In short, a steward is both the recipient of, and an officer over, earth’s bounties, including the joys and challenges of human co-existence.

To be clear, the description of an integrated, wholistic mediation of power for relational-ethical expressions of life as divinely created is not a longing for Eden. Indigenous peoples, like communities in the Global South and ancient Israeli society, are not without exploitation, disharmony, or abuse. The key, though, is that disordered life was viewed through a lens that understood such disorder as unholy and unjust. The moral limits on exploitative conduct meant that institutions that normalized structural injustice were slower to emerge and harder to embrace or defend.

As a consequence of the obligation to cultivate resources without exploiting others, the productive purpose for stewardship set forth in Genesis 1 is qualified by several features, namely: (1) divine relationship that defines the scope of stewardship; (2) promoting shared growth and productivity as the key focus of stewardship; (3) human dignity as a fundamental justification for caring for all life forms; and (4) the exercise of stewardship over unlimited subject matter.

i. Divine Relationship

As already mentioned, in ancient Near Eastern culture, when a representative of the king spoke or acted with the authority of the king, the representative was said to “bear the image” of the king, a physical representative of the king and his

and humanity’s self-indulgence. In such a condition, dominion does not enable stewardship; rather, it destroys it.

106. BURNSIDE, *supra* note 91, at 154–55 (2011) (applying the language of DIANE KELSEY MCCOLLEY, A GUST FOR PARADISE: MILTON’S EDEN AND THE VISUAL ARTS at xvi, 5 (1993) on a different topic; then quoting Laurie J. Braaten, *Earth Community in Hosea 2*, in THE EARTH STORY IN THE PSALMS & THE PROPHETS 185, 197 n.14 (Norman C. Habel ed., 2001)).

authority.¹⁰⁷ One expert notes that “the primary purpose of an image . . . was to demarcate the boundaries and limits in and from which a higher power exercised legitimate rule. . . .”¹⁰⁸ The idea of “image” thus emerges in the context of a relationship. In this regard, stewardship confers *relational status*, with rights and obligations that flow therefrom. It is not merely a vocation or an office for the efficient exercise of economic and managerial functions. Nor is biblical stewardship a religious title or special qualification. As Scott Morschauser describes, “Essentially, the individual appointed as ‘an image of/for’ a king or deity was in a covenantal relationship: a person’s duty being the carrying out of the bond which tied the parties to one another” as they exercised their respective roles. An image thus is “a sign or herald” which always points back to its original author.¹⁰⁹

As seen in the foundational text in Genesis 1, humanity is empowered to faithfully represent what was made evident about God in Creation, including God’s authority and rulership that enabled care for living things. The resources over which authority and rulership are to be demonstrated include the physical, intellectual, emotional, and relational capacities necessary to live life meaningfully in the natural environment and in community with others.

ii. Promoting Shared Growth and Productivity

The command to “be fruitful and multiply” and “to exercise dominion over all the earth” requires *protecting sources of growth and productivity*. A basic condition of biblical stewardship is that stewards do not serve in their own interests but in the interest of the well-being of God’s creation, including the environment. The obligation to work the earth¹¹⁰—to guard it, to take care of it, and to live productively within it—is intimately bound with the biblical account of God’s relational pursuit of humanity. In Genesis, God begins this pursuit by engaging the created environment and describing it as “good.”¹¹¹ Similarly, as Genesis 1 recounts, the first recorded action towards humanity is the blessing of empowerment and rulership (“and God blessed them”). Repeatedly, the Bible’s account in Genesis reveals words of affirmation for humanity and other creation, directed to pursue the productive exercise of the authority granted in the interests of shared, sustained growth.

107. WOLFRAM VON SODEN, THE ANCIENT ORIENT: AN INTRODUCTION TO THE STUDY OF THE ANCIENT NEAR EAST 63 (Donald G. Schley trans., 1994); Scott N. Morschauser, *The Ideological Basis for Social Justice/Responsibility in Ancient Egypt*, in SOCIAL JUSTICE IN THE ANCIENT WORLD 101, 101–102 (K.D. Irani & Morris Silver eds., 1995).

108. Scott N. Morschauser, *Created in the Image of God: The Ancient Near Eastern Background of the Imago Dei*, 3 THEOLOGY MATTERS 1, 2 (1997).

109. *Id.*

110. Genesis 2:15 (NIV) (“The Lord God took the man and put him in the Garden of Eden to work it and take care of it.”).

111. Genesis 1:25, 1:31.

iii. Human Liberty and Dignity

Third, stewardship requires *human dignity*. This status is imbued with authority and the capacity to exercise functions as each person might choose. The gift of reasoning capacity suggests that stewards mature and becomes fully formed primarily in the context of interactions in which they apply the power of choice and other incidents of liberty that are axiomatic expressions of dignity. Freedom of choice, reason, and the exercise of judgment facilitate the meaningful exercise of autonomy and independent will, including the freedom to reject engagement with God, with others, and with the material environment. This agency by design is on display in the first intellectual exercise by Adam when he named the species. It is God who personally brought animals to Adam

to see what he would call them. And whatever Adam called each living creature, that was its name. So Adam gave names to all cattle, to the birds of the air, and to every beast of the field.¹¹²

In Genesis, and throughout the Torah and New Testament, human ingenuity and creativity is expressed in response to material conditions and personal challenges,¹¹³ but, critically, also in reaction—both positive and negative—to divine prescriptions. In supreme displays of autonomy and liberty, some human responses complied with God’s express commands, other responses ignored them. Still others responded with self-help rather than faith in a cosmological process or timing. Notable examples of each type of response that are familiar in popular culture include Noah’s selection of the animals to be saved from the flood,¹¹⁴ the supernaturally foiled plan to erect the tower of Babel,¹¹⁵ and Sarah’s successful plan of disobedience to have Abraham father a child by her handmaiden, rather than believe in the long-awaited promise of a child.¹¹⁶

iv. Unlimited Subject Matter

Finally, stewardship is *unlimited in terms of its subject matter*. One is not a steward over a select number of things, but a steward in relation to everything. Guided by the command to “increase” the earth, or, put differently, to improve human well-being, biblical stewardship facilitates reconciliation of interests across personal, community, and societal spheres. Effective reconciliation of these interests at the individual level requires conditions that enable citizens to access, cultivate, and use material resources. It also requires designing institutions that might facilitate such access and use.

112. Genesis 2:19–20.

113. A good example is Jacob’s breeding scheme with his father-in-law’s sheep. The exercise resulted in economic benefit to him. See Genesis 30:29–41.

114. Genesis 6:9, 7:1–24.

115. Genesis 11:1–8.

116. Genesis 16:1–16.

To sum up, stewardship is structured around relationships that are fundamental to who we are as human persons. Stewardship operates under the fiat that humans are to utilize resources to produce wellness in all the domains that define human experience, namely: (1) interpersonal relationships; (2) the natural/material environment; (3) political organization (which includes legal order and economic regulation); and (4) the life of the mind (intellect, skills, and talent).

The extent to which individuals, communities, and nations can fully and sustainably pursue the responsibility to “be fruitful” and to “govern the earth” by overcoming events (including human behavior) that could destroy life and the environment, relies substantially on the kind of laws, norms, institutions, and governance systems adopted in a society or by the international community. This includes the design of laws that govern creative activity.

C. STEWARDSHIP AND REWARD

If stewardship is directed at the flourishing of all creation, and flourishing produces returns, how should those returns be distributed and what determines appropriate allocations? With respect to creative activity, IP rights are the essential tools of appropriability, designed to reward intellectual stewardship. So how did patent and copyright law become such central tools of extractive behavior and hyper-commodification in the global economy? And why does IP expansion seem to forerun—or, at least, march bravely alongside to make room for—an economy in which reward for innovation ignores the toll on the weak and poor and, indeed, accepts that burden as an acceptable tradeoff?

Intellectual property theory legitimates and, in some cases, encourages the injustice associated with innovation. The great moral ills of the nineteenth century (the effects of which continue to reverberate today) such as colonialism, slavery, and genocide all were facilitated by technologies protected by IP. These historical events are paralleled by ills that arguably are of analogous magnitude: new forms of slavery and forced labor; the displacement of virtuous human labor by advances in robotics, artificial intelligence, and nano-technology; and ecocide and domicide. The unifying thread of this past, present, and continuing motif is the possibility that humans and their communities can be deemed irrelevant or dispensable relative to what scientific advancement makes possible for a minority of the world’s people. The essential assumptions of IP theory thus turn on a view that human activity is best fueled by magnifying the base impulses of the soul; one motivated by insatiable lusts for material excesses consumed or controlled by deployments of political or other power against others.

In every case of bioprospecting in which Indigenous peoples’ knowledge (or other resources) is exploited and taken against their will, the explicit message is that the knowledge is better in the hands of the more powerful who will transform it into something that will attract capital and consumers. To frame it more bluntly, Indigenous peoples’ knowledge lacks value in the current IP framework precisely because Indigenous peoples themselves are devalued in the global discourse about human progress and welfare.

But how did a regime with such profoundly unjust effects on the most vulnerable segments of society emerge in a historical era in which the public life was suffused with religious overtones? And how has it flourished in an era seemingly more sensitive and responsive to inequality and injustice?

Nothing in the history of IP law suggests that there were any specific efforts to design legal rules that purposefully reflected the religious texts, despite how extensively specific understandings of those texts permeated British society. Nonetheless, the Bible's influence in Europe, and particularly in the development of the common law, undisputedly affected the legal culture in which IP law emerged. General ideas of right and wrong—ideas about justice and morality espoused by Christendom—were explicitly present in some of the earliest debates about IP protection. In England, both the strongest advocates and harshest critics of copyright appealed to notions of justice or fairness to justify their respective positions against or in favor of copyright protection.

In the earliest efforts to protect literary property, Lord Mansfield in *Millar v. Taylor*,¹¹⁷ for example, argued that

it is *just*, that an author should reap the pecuniary profits of his own ingenuity and labor. It is *just*, that another should not use his name without his consent. It is fit that he should judge when to publish, or whether he will ever publish. It is fit that he should not only choose the time, but the manner of publication; how many; what volume; what print. It is fit he should choose to whose care he will trust the accuracy and correctness of the impression; in whose honesty he will confide, not to foist additions; with other reasonings of the same effect.¹¹⁸

Those rejecting the common-law right to own the product of one's intellectual labor similarly invoked ideas of justice or *rightness*, but some did so explicitly (even if incompletely) in relation to the idea of biblical stewardship. Lord Camden, who was hostile to a common-law right to literary works, strenuously argued:

They forget their Creator, as well as their fellow creatures, who wish to monopolize his noblest gifts and greatest benefits. Why did we enter into society at all, but to enlighten one another's minds, and improve our faculties, for the common welfare of the species? Those great men, those favoured mortals, those sublime spirits, who share that ray of divinity which we call genius, are intrusted by Providence with the delegated power of imparting to their fellow-creatures that instruction which heaven meant for universal benefit; . . .¹¹⁹

Some may view the conflict between Lord Mansfield and Lord Camden as another example of how indeterminate, and thus ultimately futile, is the application of biblical precepts to modern problems. Religious critics since the Enlightenment are prone to argue that religious text is too personal, or too susceptible to manipulation by the powerful, to offer any meaningful guidance for law and policy. But such criticism merely applies to religious texts the same limits that flow from

117. [1769] 98 Eng. Rep. 201 (K.B.).

118. *Id.* at 252.

119. Lord Camden's speech before Parliament, in WILLIAM COBBETT, XVII THE PARLIAMENTARY HISTORY OF ENGLAND col. 999 (London, R. Bragshaw 1813).

subjective, materially-oriented interpretation of secular law. Rather than diminish the utility of religious texts, this criticism points to the need to engage more purposefully with an examination of what the texts might teach us today. And it reminds us to beware the temptation of interpretive efforts to make one's own what belongs to others—in other words, to consider the ethical implications of an interpretation with sincere effort to acknowledge, if not displace, selfish interests and biases that may produce erroneous results, as evinced by once-popular efforts to mount biblical defenses of colonialism or slavery.¹²⁰

Importantly, the evidence belies the claim that religious texts do not offer meaningful policy guidance. From property law to criminal law, to laws about restitution and marriage, specific understandings of biblical text have distinctively shaped the foundations of many modern legal practices and institutions.¹²¹ In addition, as we shall see below, different schools of thought regarding how to manage intellectual gifts or resources are firmly embedded in (mostly unstated) assumptions about the design of biblical stewardship. It is not unanimity about means that best confirms the relevance of biblical stewardship for IP but, rather, shared conviction about the ends or purpose for the intellectual gifts being stewarded. Two principal points are helpful in consideration of the gifts under stewardship: (1) understanding the relationship between biblical stewardship and remunerative labor; and (2) insights from the New Testament's parable of the talents as an illustration of stewardship obligations over assets, no matter how meager those might be in relation to what others have.

i. Biblical Stewardship as Remunerative Labor

At the heart of the literary property debates in eighteenth-century England were two deeply intertwined issues that remain salient in contemporary IP discourse: (1) the nature of property; and (2) how to protect the interests of the public. But also discernible in the debates over literary property was a struggle over the nature of the motivations for creativity, and what justifications merited a grant of exclusive rights that others (usually the poor and disenfranchised) would have no right or opportunity to benefit from. Was it right that a creator be able to exclude others from her works—the result of talent and capacity which she herself received freely as a gift?

The moral concern about excluding others was expressed by Scottish jurist Lord Kame in the case of *Hinton v. Donaldson*: “Why was man made a social being, but to benefit by society, and to partake of all the improvements of society in its progress toward perfection?”¹²² Repeatedly, in England's great debates over copyright, the social nature of human beings was a key theme in arguments for and against literary

120. See MARK NOLL, *THE CIVIL WAR AS A THEOLOGICAL CRISES* (2015).

121. BURNSIDE, *supra* note 91, at xxvi, xxix (“Biblical law continues to exert a hold over popular culture at a basic level, including the structure of the working week and the idea of the day of rest, the constraints placed upon political authority, the use of everyday language (such as references to a ‘scapegoat’), the idea of mercy, employee rights, and the special significance historically attached to marriage and the monogamous family unit. . . . [B]iblical law is nascent in the history of English law and so continues to be an influence on many citizens.”).

122. BURNSIDE, *supra* note 91, at xxxvii.

property. As Lord Camden asked, “Why did we enter into society at all, but to enlighten one another’s minds, and improve our faculties, for the common welfare of the species?”¹²³ These eighteenth-century debates focused not on the fairness of recognizing authorial rights, but on the nature of those rights—whether to grant an absolute property right in perpetuity, rather than a limited term grant.

But even this more granular question was not completely unmoored from the earlier question—tentatively answered in the sixteenth century through the grant of printing privileges and monopolies¹²⁴—about the moral considerations of property rights in cultural products in the first instance. Having recognized such a right in England, the negative effect of a perpetual monopoly in society became as clear as it was untenable. As the distinguished literary critic Samuel Johnson famously remarked,

reason and the interest of learning are against it; for were it to be perpetual, no book . . . could be universally diffused amongst mankind, should the proprietor take it into his head to restrain its circulation. No book could have the advantage of being edited with notes, however necessary to its elucidation, should the proprietor perversely oppose it. . . . [A] literary work, once issued by an author should be understood as no longer in his power, but as belonging to the publick; at the same time the author is entitled to an adequate reward. This he should have by an exclusive right to his work for a considerable number of years.¹²⁵

The Bible exerted important influence in British culture, but the debates over literary property certainly did not reflect a meaningful measure of the constitutive elements of biblical stewardship. For example, nothing in biblical stewardship requires, or attributes greater virtue to, the forfeit by a creator of remuneration or reward for her creative goods. One is not a more faithful steward simply because one gives away the fruit of her creativity. It is certainly inconsistent with biblical stewardship to propound as a general matter, as Lord Camden did, that “Glory is the reward of science, and those who deserve it scorn all meaner views. . . .”¹²⁶

The ideas of reward or a return on labor, of responsibility for one’s productive enterprise, and of exercising authority and control over the fruits of applied intellectual talent are all embodied in biblical stewardship. Several texts make clear, for example, that one who does not work should not eat,¹²⁷ that a laborer is worthy of what she works for,¹²⁸ and that gifts and talents must be productively used.¹²⁹ In

123. JOHN CAMPBELL, *LIVES OF THE LORD CHANCELLORS AND KEEPERS OF THE GREAT SEAL OF ENGLAND FROM THE EARLIEST TIMES TILL THE REIGN OF QUEEN VICTORIA* 352 (John Allan Mallory ed., new ed. 1876).

124. See, e.g., W.S. Holdsworth, *Press Control and Copyright in the 16th and 17th Centuries*, 29 *YALE L.J.* 841, 843–46 (1920) (describing the emergence of printing monopolies, a precursor to literary property, in sixteenth-century England).

125. JAMES BOSWELL, *BOSWELL’S LIFE OF JOHNSON* 546–47 (R.W. Chapman ed., OUP 1953) (1791).

126. COBBETT, *supra* note 119, col. 1000.

127. 2 Thessalonians 3:10.

128. 1 Timothy 5:18.

129. See, e.g., Deuteronomy 25:4 (NIV) (“Do not muzzle an ox while it is treading out the grain.”); 1 Timothy 5:14 (“The worker is worthy of his wages.”).

other words, proper accounts of stewardship entail *both* return to the author and a service to others. In biblical stewardship, both personal gain and service to others are mutually dependent. Failure to use one's resources productively involves more than just a personal economic loss—it is a loss of investment in the human community. For this reason, the failure of stewardship is of great significance in the royal-functional view.

Next, I turn to the New Testament Parable of the Talents. This parable illustrates unequivocally that failure to productively use one's talent is a serious violation of biblical stewardship.

ii. Lessons from the Parable of the Talents

As discussed earlier, the foundation for biblical stewardship rests on a clear command to tend to, cultivate, and “multiply” the diversity of resources and gifts to ensure flourishing. A well-known account in the New Testament offers additional insight into the relationship between productive labor and biblical stewardship.

In the Parable of the Talents,¹³⁰ a master traveled and left a certain number of resources for each steward. The first steward received ten talents and, after investing it, doubled the original amount. The second received two talents and similarly invested it, earning a return that doubled the original investment. However, the third steward buried the resources in the ground and did nothing with it, unwilling to risk any loss. This refusal by a risk-averse steward to use his talent productively was fiercely denounced:

[H]is lord answered and said to him, “You wicked and lazy servant, you knew that I reap where I have not sown, and gather where I have not scattered seed. So you ought to have deposited my money with the bankers, and at my coming I would have received back my own with interest.” So take the talent from him, and give it to him who has ten talents.¹³¹

There are three insights from the Parable of the Talents that help illustrate why stewardship is consistent with the notions of responsibility and reward for the fruits of intellectual creativity.

First, governments are entrusted with human resources and, with them, responsibility for establishing conditions in which people can flourish.¹³² This obligation to promote human development is key to the biblical design of just institutions. While liberal philosophers such as John Rawls have emphasized the just institutions themselves,¹³³ demoting a person's natural talents to arbitrary

130. Matthew 25:14–30.

131. Matthew 25:26 (NKJV).

132. JOSEPH RAZ, *THE MORALITY OF FREEDOM* (1986) (arguing that a liberal state must secure conditions that make citizens autonomous. Personal autonomy is necessary for human well-being, he argues, and requires the availability of a set of options from which citizens can construct choices consistent with their vision of the good life.).

133. JOHN RAWLS, *A THEORY OF JUSTICE* 4 (rev. ed. 1999) (1971) (“A set of principles is required for choosing among the various social arrangements which determine [the] division of advantages and for underwriting an agreement on the proper distributive shares. These principles are the principles of justice:

characteristics,¹³⁴ biblical stewardship places a greater emphasis on the need to nurture those talents. A closer analog of biblical stewardship in contemporary political theory might be the capabilities approach to human development elucidated by Martha Nussbaum and Amartya Sen, who stress the need to nurture the fullness of human potential.¹³⁵ But a biblical stewardship framework shows how human development is itself connected to the emergence of just institutions—though not necessarily the ones neatly envisioned through the Rawlsian original position. Citizens are to maximize their skills and talents to be productive in service to others and society at large. The duty to be productive, to contribute to society by utilizing all of one’s talents, skills, and resources, is precisely why rewarding labor is not antithetical to biblical precepts¹³⁶ but, rather, is an essential aspect of stewardship. Resources are a tool for serving *others*. As such, stewardship does not permit the destructive exploitation of *any* system of life that nurtures those “others.”

Second, it is noteworthy that not every servant received the same number of talents, but each was held *equally* responsible for the amount she received. There is no requirement in biblical stewardship to achieve the same level of return as another person. In the relational theology of redemption that links the Old and New Testaments, labor—including intellectual labor—is a way of embracing the gifts and talents given, and of enabling engagement with the material world. Adam’s naming of the animals in Eden,¹³⁷ Noah’s selection of the animals for the ark,¹³⁸ Jacob’s scheme to multiply his sheep while working for an unfair father-in-law,¹³⁹ David’s psalms set to music¹⁴⁰—all were responses to, and reflections of, ingenuity and creative expression. Exercising one’s gifts and talents through creative enterprise allows others to see and experience an aspect of God’s attributes revealed in the person whose labor is reflected in the creation of a knowledge asset.¹⁴¹

These examples of creative labor were not linear responses to a well-reasoned incentive scheme. The exercise of gifts that result in the production of knowledge assets is part of being fruitful, of exercising rulership and order, and of being human. As Tarunabh Khaitan has noted (albeit in a different context), a life of well-being is one spent pursuing goals that have value both personally and collectively. Each

they provide a way of assigning rights and duties in the basic institutions of society and they define the appropriate distribution of the benefits and burdens of social cooperation.”).

134. JOHN RAWLS, COLLECTED PAPERS 132 (2001) (arguing that, in the “original position of equality,” no one would “know his position in society, nor even his place in the distribution of natural talents and abilities”).

135. See AMARTYA SEN, DEVELOPMENT AS FREEDOM (1999); MARTHA NUSSBAUM, CREATING CAPABILITIES: THE HUMAN DEVELOPMENT APPROACH (2011).

136. Indeed, the Bible describes God as a rewarder; the principle of reward is central in the Torah and in the New Testament.

137. Genesis 2:19.

138. Genesis 6:19.

139. Genesis 30:33–43.

140. 1 Samuel 16:14–23.

141. Both continental European ideas about moral rights and Hegelian personhood theory reflect the ideal of protection of intellectual assets because it embodies the spirit or essence of the creator. As such, moral rights, for example, are inalienable and may be protected far beyond the duration of economic rights. See, e.g., Berne Convention, *supra* note 53.

person brings something valuable to her collective, each collective brings something of value to society, and each society something of value to the world.¹⁴² Joseph Raz describes this as “value pluralism,” the idea that “there are various forms and styles of life which exemplify different virtues and which are incompatible.”¹⁴³ In short, no one can choose to be, to pursue, or to have all things at any one time (i.e., perfection).

Biblical texts acknowledge this perfectionist approach to human well-being but go much further than secular approaches to highlight the root problem. The Parable of the Talents suggests, for example, that well-being requires primary pursuit of those things that a person is gifted or equipped to do—to use *one’s* own talents (gifts, opportunities, resources, time) rather than to pursue what has been granted to others. Even liberal philosophers have pointed to the biblical injunction “Thou shall not covet,” including the

unrestrained perfectionist [who] may argue that even though there are innumerable ways of living a good life, for a particular person—given their particular talents and tastes—there is one, or only a few, best ways of living. So, for example, a person with a particular facility for music should, one may say, become a musician of some sort to realize her potential.¹⁴⁴

In short, between the Tenth Commandment, “Thou shall not covet,”¹⁴⁵ and the second most important commandment “to love your neighbor as yourself”¹⁴⁶ lies the Bible’s unique perfectionist view of human well-being. In this view, human well-being comes from the pursuit of those goals compelled by one’s talents—which everyone has been given—and by intentionally recognizing the importance of other people pursuing *their* talents. Thus,

[t]he life of a farmer is valuable not only because it is the life of a person—who is intrinsically valuable—but also because it is spent pursuing a productive activity: farming. The same is true for the life of a philosopher, a dancer, a parent, and an ascetic monk living in the woods. No one life can embody all, or even more than a few, of these and numerous other valuable but incompatible pursuits.¹⁴⁷

Both the Torah and the New Testament have advanced this principle in slightly different terms that point to a relationship with the Creator and creation as core to how one identifies and pursues her goals, consistent with her talents and the place in which she is located. Illustrative examples that loom large include Moses, who, although raised in an elite culture, upon discovering his birth identity, eschews his privilege and chooses instead “to suffer oppression with God’s people”;¹⁴⁸ or David, a young shepherd boy whose indomitable sense of purpose compels him to confront

142. TARUNABH KHAITAN, A THEORY OF DISCRIMINATION LAW (2015).

143. RAZ, *supra* note 132, at 395.

144. KHAITAN, *supra* note 142, at 94.

145. Exodus 20:17.

146. Matthew 22:38–39.

147. KHAITAN, *supra* note 142, at 93–94.

148. Hebrews 11:24–25.

an oppressive enemy bent on destroying Israel;¹⁴⁹ or Ruth, an immigrant to Bethlehem whose embrace of Jewish law and tradition through marriage catapults her into becoming an advocate for an elderly widow.¹⁵⁰

In addition to the Parable of the Talents, the New Testament avers, “Whatever you do, work at it with your whole being, for the Lord and not for men.” In other words, stewardship of labor embodies both productivity and worship—the two are inseparable. Quite distinctive from Lockean justifications, labor in this sense requires more than intellect and reason; labor demands an acknowledgement by the laborer that she is “properly placed within a network of creation and God,”¹⁵¹ since “anything that humans are charged to preserve, they are also capable of neglecting or violating.”¹⁵² Accordingly,

[T]he two elements of the human vocation stand in some tension as well as in complementary relation; each verb leads us back to the other. In order to live, we are obliged to “work” the land . . . manage it and take from it. In order to live a long time on it, we are equally obliged to “preserve it.” . . . Limiting our take, we must submit our minds, our skills, and our strength to serving its needs. . . .¹⁵³

Regarding IP, “limiting our take” requires conditions that make it possible to: (1) recognize and defend one’s “talents”; and (2) engage with the tangible expressions of the talents of others. This is one important reason the public domain is important to a flourishing society—the public domain enables access to tools and materials that make possible the widest array of choices that allow people whose talents include authorial skill to engage with it, and to facilitate enjoyment of those talents by others. In its best image, the public domain supports the pursuit of well-being by securing legal conditions that make engaged creativity possible in the first place. Nonetheless, an important lesson also is that efforts to impose uniform definitions of what should count as valuable knowledge—as IP law purports—does violence to *imago Dei*. Uniformity requires a selection among things of equal value, drawing arbitrary lines between what counts as IP-worthy and what does not. For the latter, the only remaining category is the public domain, thus disabling the potential for accountable and dignifying stewardship.

The third and last point from the Parable of Talents is that the steward has wide discretion in choosing *how* to be productive. A steward has great autonomy to choose how to use the gifts bestowed, including by giving the resources away so others can benefit from them or working with others to enhance the value of the gift and its utility for others. In an economy governed by stewardship, productive engagement involves the active exercise of gifts, talents, and labor in the use of resources and in relationship with creation. It also involves periods of rest and renewal.

Productivity through rest is observed in the creation narrative where God calls universal Creation “good,” not just because it supplies the means by which humanity

149. 1 Samuel 17.

150. Ruth 1–4.

151. NORMAN WIRZBA, THIS SACRED LIFE: HUMANITY’S PLACE IN A WOUNDED WORLD (2021).

152. DAVIS, *supra* note 73, at 32.

153. *Id.* at 32–33.

can be productive, but as good *in itself*.¹⁵⁴ Labor and rest, gift and remunerative work, service and stewardship all define the contours of what stewardship-based rules for creative goods should exhibit. Biblical stewardship for creative goods thus can be summarized in reference to three defining characteristics: (1) *responsibility* to use intellectual resources and gifts given to each person (or nation); (2) *relationship* with God and others as the focus of and underlying purpose for the faithful management of those gifts; and (3) *satisfying reward* through markets (economic) or by giving knowledge assets away as a gift to a specific group of people or via the commons.

The current IP system already has elements of responsibility, reward, and relationship, but these characteristics lack a coherent and coordinated policy design. As a result, the discourse of the public domain bears the burden of capturing all the possible limits to the destabilizing expansion of IP rules. That goal cannot be achieved if defending the public domain requires the forcible removal of productive assets and resources from the legal reach of the community to which they were bestowed.

In the first two Parts of this Article, I sketched the basic contours of the problem of legal insecurity for TK and the ways that biblical stewardship offers a different conceptual framework for thinking about the human welfare costs of TK's public domain designation. In Part III, I discuss how the obligations of biblical stewardship—obligations to work the earth, to use one's intellectual resources and gifts productively to benefit society—are fundamentally incompatible with treatment of Indigenous peoples' knowledge and other resources as part of a global public domain. Even for those who do not accept the theological presuppositions of the biblical stewardship paradigm, my argument is that the paradigm at a minimum clarifies the myopia of the current debate over TK.

III. BIBLICAL STEWARDSHIP AND A JUST SOCIETY FOR INDIGENOUS PEOPLE

The absence of protection for Indigenous peoples' knowledge assets violates biblical stewardship in at least three fundamental ways. First, by limiting the ability of Indigenous peoples to protect their resources and knowledge, the IP system violates the basic sense of fairness essential to human institutions. Arguments that attributes of Indigenous knowledge do not meet requirements for the main categories of IP (patent, copyright, and trademark) elevate form over substance. Rules of eligibility for IP are not scientifically derived; these rules were constructed along cultural lines and values removed from consideration of shared flourishing. They neither represent an absolute truth, nor do they reflect the wide variety of creative forms made possible by diverse human creators and, according to biblical texts, a loving Creator who places all life in relationship. Rules that categorically eliminate

154. God "saw all that He had made, that it was good," Genesis 1:31, and "on the seventh day God ended His work which He had done. . . . Then God blessed the seventh day . . . because in it He rested from all His work." Genesis 2:2-3.

entire bodies of knowledge fail to meet the standards of justice required by any of the leading secular accounts, as well as the obligations of biblical stewardship.

Second, the current IP rules that eliminate protection for TK subordinate Indigenous peoples' interests to the whims and priorities of those who access and utilize TK by sheer force of economic or political power. This is a barely-concealed extension of a colonial apparatus that is now widely condemned. Stripping Indigenous peoples of the authority and duty to define their systems of life and to pursue their conception of welfare makes it difficult for them to steward their resources. More tragically, it disrupts the lifestyle and values upon which their societies are organized while disempowering them from adapting or choosing modes of engagement with rapidly changing conditions. As Peter Drahos observed about the way knowledge is managed in Indigenous society:

[K]nowledge is part of an ancestral place-time cosmology. . . . Powerful ancestors have transformed the land into a territorial cosmos in which they remain present as active forces. . . . The human inhabitants of these territories have to understand, respect and care for these territories. . . . Senior indigenous people are part of long chains of custody of knowledge . . . that they impart in various ways to others in order to ensure that the chain of knowledge continues. . . . The concepts that dominate the use of knowledge in this world are duty and permission. Senior people have duties in this ancestral system to ensure that the chain of custody of knowledge is maintained and that the ancestral system is used wisely to help indigenous groups adapt to change.¹⁵⁵

The management and stewardship of TK cannot be reduced to “communal title” or the “bucolic life” of commons-based social organization. Trade, commerce, and economic transactions over knowledge goods and other forms of resources often were (and are) significant aspects of life in Indigenous communities. But in Indigenous communities, resources are governed by “duties and use-permissions” under the leadership of specific offices in the community.¹⁵⁶ Jonathan Burnside similarly describes the deep identification between people and land in biblical law when he notes that land comprises a network of relationships and memories in which ritual declarations serve to construct the history of acquisition, to facilitate creation of an administrative archive, and to establish and legitimate title.¹⁵⁷ Property, in other words, is not substantially about alienability or entitlement. Instead, it is about justice and duty—values without which human flourishing is infeasible.

Finally, the current situation with TK violates all three views of *imago Dei*: the substantialist, the relational-ethical, and the royal-functional. In every region in which they live, Indigenous peoples are certainly “the least of these.” By every discernible measure, they are systematically excluded from access to basic material resources.¹⁵⁸ Indigenous peoples' vulnerable political status and different lifestyles make it difficult for them to access or benefit from the institutions that should be responsible for facilitating *their* conception of the good life.

155. DRAHOS, *supra* note 15, at 7–8.

156. *Id.* at 8.

157. BURNSIDE, *supra* note 91, at 185–90.

158. DRAHOS, *supra* note 15, at 4 (“Extractive property systems exclude particular groups from participation in economic life because they cut groups off from the ownership of productive assets.”).

In sum, the IP system works violence on divinely created life; it forces asset transfers from Indigenous peoples to others with no return to the Indigenous community or, necessarily, to *any* “community.” Whether framed as an asset transfer, misappropriation, or bioprospecting, the outcome of the existing legal landscape is that unregulated and uncompensated access to Indigenous peoples’ knowledge continues to pose significant existential risks for Indigenous peoples’ capacity to live the quality of life and well-being that should be the baseline for all human creation.

So, if IP rights as currently constructed do harm to stewardship, what are the ethical implications for political units such as States?

A. STEWARDSHIP BY NATIONS

States also are called to stewardship and are accountable for, among other things, the policy conditions which enable or disable human flourishing. In one of numerous accounts of displeasure against Israel’s kings, God says through a prophet, “You have not strengthened the weak, you have not healed the sick, you have not bound up the injured, you have not brought back the strayed, you have not sought the lost, but with force and harshness you have ruled them.”¹⁵⁹

Specific attention to society’s most vulnerable members is a strong and unequivocal theme throughout the Torah and New Testament. Moreover, these texts set parameters for the judgment of nations in explicit welfare terms, reflecting the consequences of policy decisions with respect to the allocation of national resources and the administration of justice.¹⁶⁰ Importantly, the efficacy of a State’s stewardship is measured not in utilitarian terms but by the treatment of the most vulnerable in society, whose desperate plight is masked by acceptance of the status quo.¹⁶¹ Given the specific requirement to account for the well-being of all, especially the most vulnerable in society, biblical stewardship is inhospitable to utilitarianism as the sole or ideal criteria for a just society.

For States, the Torah and New Testament are replete with instructions about defending the vulnerable. Similarly, in the period leading up to the Babylonian exile, Jeremiah warns, “Woe to him who builds his house by unrighteousness And his chambers by injustice, *who* uses his neighbor’s service without wages And gives him nothing for his work. . . .”¹⁶² Such warnings against oppression of the poor pervade biblical accounts of God’s expectation of what rules should govern social

159. Ezekiel 34:4 (ESV).

160. See, e.g., Judgment of the Nations, Matthew 25:35–36 (CEB) (“I was hungry and you gave me food to eat. I was thirsty and you gave me drink. I was a stranger and you welcomed me. I was naked and you gave me clothes to wear. I was sick and you took care of me. I was in prison and you visited me.”).

161. Matthew 25:37–40 (ESV) (“[T]he righteous will answer him, saying, ‘Lord, when did we see you hungry and feed you, or thirsty and give you drink? And when did we see you a stranger and welcome you, or naked and clothe you? And when did we see you sick or in prison and visit you?’ And the King will answer them, ‘Truly, I say to you, as you did it to one of the least of these . . . you did it to me.’”).

162. Jeremiah 22:13 (NKJV).

structures.¹⁶³ Throughout the Torah, prophetic admonitions to Israel’s leaders paint a clear picture of what the *imago Dei* requires of a nation or society intent on justice as its central aspiration. The New Testament contains similar admonitions.¹⁶⁴

In sum, States are stewards of the human and material resources that are subject to their delegated authority. They too must govern in a manner that ensures the good of their citizens, both individually and collectively. What kind of laws, institutions, processes, and values produce societies in which both individual autonomy (understood as elemental to flourishing) and collective well-being is assured, while maximizing productivity, remains an enduring topic of political philosophy. But as I have argued in relation to IP, that debate is intractable largely in connection with a failure to regard other conceptions of welfare that might usefully chart a way forward to lovingly designed spaces in which all created life can sustainably flourish.

To understand how biblical stewardship offers an alternative conception of human well-being in relation to the regulation of knowledge goods, it is helpful to highlight the approaches that have been salient in justifying the current configuration of IP rights, and how biblical stewardship relates to that configuration. I briefly discuss this in the following Section.

B. STEWARDS AND NEIGHBORS

The prevailing utilitarian justification for IP offers a glimpse of the version of human flourishing implicit in contemporary IP frameworks. It holds that sufficient property rights to incentivize private investment in the production of knowledge assets, appropriately balanced with exceptions and limitations that facilitate access to and use of those assets by the public, satisfy the human well-being criteria. This well-recited measure of human well-being in IP evokes tension with the biblical framework. Recall from Part II that stewards have a duty to use their assigned resources and gifts productively. And to count as “productive,” the utilization of resources must serve purposes consistent with moral integrity—captured theologically by the phrase “the righteousness of God”—which includes service to humanity and the care of creation.

Creativity may take place in response to well-fashioned incentives, but incentives are not solely what motivate stewardship. Recent scholarship confirms that creativity can flourish regardless of incentives or remuneration, and that other motivations

163. The Bible speaks powerfully and persistently against maltreatment of the poor, such maltreatment consisting both of what one withholds from the poor without cause and failure to care for the poor. See, e.g., Exodus 22:25 (NKJV) (“If you lend money to *any of My people who are poor* among you, you shall not be like a moneylender to him; you shall not charge him interest.”) (emphasis added).

164. See, e.g., James 5:4 (BSB) (“Look, the wages you withheld from the workmen who mowed your fields are crying out against you. The cries of the harvesters have reached the ears of the Lord of Hosts.”); Ezekiel 34:16 (KJV) (“I will seek that which was lost, and bring again that which was driven away, and will bind up *that which was broken*, and will strengthen that which was sick: but I will destroy the fat and the strong; I will feed them with judgment.”) (emphasis added).

support innovation equally well, including attribution, a sense of loyalty to employers, dignity of labor, and pride.¹⁶⁵

Given these observations, the utilitarian emphasis on incentives lacks moral force when the adverse effects of the current IP system are tangibly felt across the broader society, and when those who bear the greatest cost to maintain the status quo are the weakest among us. The emphasis on incentives in IP law depends on an image of humanity acting rationally to maximize material and economic interests. But upward mobility is not the locus of human well-being, just as the true value of knowledge goods is not primarily economic, but social. As Jacques Godbout has argued:

The fragmentation of community life has brought in its wake an inability to understand the way in which, in any society, the individual and the collective meet and merge. . . . Between a forced collectivization of human relations and the market, between an authority external to personal ties to the “community” and the market, the individual will always choose the market. But outside the market or state he continues to live, suffer, and love, to work for his friends and children. He continues to inhabit a society, community, and social network. . . . [B]efore human beings are understood in terms of any economic, political, or administrative functions they fulfill, they must be understood as persons. . . . The transformation of biological individuals into social persons does not occur first in . . . the market or the state, . . . but in the world of primary sociality, where, within the family, in relations with neighbours, in comradeship and friendship, person-to-person relationships are forged.¹⁶⁶

Certainly, attempts to justify protection for human creativity have always been subject to earnest and substantial consideration of the effects of exclusive rights on other creators and on society at large. The exercise of stewardship in a world where social engagement defines the nature and boundaries of property is radically different from stewardship in a world defined by the right to exclude others in defiance of any communal duties. In the latter, personal interest and social welfare can and do diverge quite significantly. This is a major challenge underlying our utilitarian-themed IP framework.

In biblical stewardship, however, the social well-being of one’s neighbor is paramount. This sense of obligation is cultivated first by the recognition that one is not an owner of the talents that made the created object possible, nor of the land on which food is grown and life sustained. This distinguishing feature of biblical stewardship is reinforced throughout the Torah and New Testament, and is expressed both as code, regulation, instruction, judgment, and precept.

After their enslavement in Egypt, the Israelites are instructed about the limits of rights in land, starting with God’s directive, “The land shall not be sold in perpetuity, for the land is mine. . . . And in all the country you possess, you shall grant a redemption in the land.”¹⁶⁷ The legal precepts regarding land in Israel made clear that neither land nor people are commodities to be bought and sold. Land could be leased for a limited period of time, but no one could buy or sell a freehold in land.

165. Teresa M. Amabile, *The Motivation for Creativity in Organizations*, Harvard Business School Background Note 396-240 (Jan. 1996).

166. JACQUES T. GOUBOUT, *THE WORLD OF THE GIFT* 14, 15 (1998).

167. Leviticus 25:23–24 (RSV).

Moreover, certain uses of property were prohibited, such as selling food for profit to the needy,¹⁶⁸ and there was a command to leave enough grain in the field for the disadvantaged to glean.¹⁶⁹

These limits flow from divine ownership and the gift not just of land but of the capacities to “be fruitful” in the land and grow. As the Israelites arrived to the land of promise and began to work not as slaves but as freed people able to produce and, for the first time in 400 years, to keep the fruit of their labor, they were reminded in Deuteronomy 8:17–18, “[Y]ou may say to yourself, ‘My power and the strength of my hands have produced this wealth for me.’ But remember the Lord your God, for it is He who gives you the ability to produce wealth, . . .”¹⁷⁰

In short, although entrusted with full authority and endowed with physical and intellectual capacity, biblical stewardship makes awareness of interests beyond the personal a mandatory part of the exercise of *imago Dei*.

C. TRADITIONAL KNOWLEDGE IN AN AGE OF INDIGENOUS PEOPLES’ RIGHTS

The radical difference between ancient Israel’s agrarian society and our modern economy cannot justify the public domain status of TK and other Indigenous assets given the conditions in which Indigenous peoples live. In country after country, the available data indicates that Indigenous peoples persistently lag in access to or enjoyment of the basic rudiments for well-being—health, education, employment, and housing opportunities and conditions—when compared to non-Indigenous citizens. According to a report published by the United Nations:

The situation of indigenous peoples in many parts of the world continues to be critical: indigenous peoples face systemic discrimination and exclusion from political and economic power; they continue to be over-represented among the poorest, the illiterate, the destitute; they are displaced by wars and environmental disasters; the weapon of rape and sexual humiliation is also turned against indigenous women for the ethnic cleansing and demoralization of indigenous communities; indigenous peoples are dispossessed of their ancestral lands and deprived of their resources for survival, both physical and cultural; they are even robbed of their very right to life.¹⁷¹

With increased national and international attention, several countries have made important strides to establish legal and policy frameworks that enhance the prospects of Indigenous peoples to attain greater levels of socio-economic well-being. For example, in Australia, the Closing the Gap initiative is a tremendous effort to accomplish equality between Indigenous peoples and other Australians.¹⁷² Initially launched in 2008 to address high mortality rates among Indigenous populations, the initiative represents “a far more holistic approach” to addressing “indigenous

168. Leviticus 25:37.

169. Leviticus 23:22.

170. Deuteronomy 8:17–18 (NIV).

171. See Department of Economic and Social Affairs Division for Social Policy and Development Secretariat of the Permanent Forum on Indigenous Issues, State of the World’s Indigenous People (SOWIP), ST/ESA/368 (2009) [hereinafter SOWIP (2009)], <https://perma.cc/F7KB-4Z8Q>.

172. See CLOSING THE GAP, PRIME MINISTER’S REPORT 8 (2018), <https://perma.cc/97ZX-GM55>.

disadvantage.”¹⁷³ The most recent report by the government shows progress in several goals, but huge gaps remain between levels attained by non-Indigenous Australians and the Indigenous population.¹⁷⁴

Similarly, Canada’s Community Well-Being Index (CWB), which reflects a combined score based on data on income, education, housing, and employment, revealed persistent gaps in several socio-economic measures between First Nations and Canada’s non-Aboriginal people.¹⁷⁵ In 2011, “the average CWB score for First Nations communities was 20 points lower than the average score for non-Aboriginal communities. This gap is the same size as it was in 1981.”¹⁷⁶ A 2012 Aboriginal Peoples Survey showed that “28% of First Nations people living off reserve, 58% of Inuit and 23% of Métis aged 18 to 44 were not attending high school and had not met the requirements for a high school diploma. . . .”¹⁷⁷ For the non-Aboriginal population the figure was 11%.¹⁷⁸ To be fair, the survey also shows that there have been improvements in discrete areas and among specific First Nations.

A 2016 study on Indigenous peoples’ health showed, in general, “evidence of poorer health and social outcomes” than the benchmark populations in the twenty-three countries studied.¹⁷⁹ As with the other studies, the size of the health differences when compared to the non-Indigenous population varies across specific questions and across Indigenous communities.¹⁸⁰ What is clear, however, is that the health gaps exist and, in some cases, are likely to worsen.

173. *Id.*

174. *See id.* at 10 (noting that four of the seven targets regarding improvement of the well-being of Indigenous peoples in relation to other Australians are not on track, although improvements are discernible).

175. Aboriginal Affairs and Northern Development Canada, *The Community Well-Being Index: Well-Being in First Nations Communities, 1981–2011* (2015), <https://perma.cc/UD4P-B8KN>.

176. *Id.*

177. EVELYNE BOUGIE, KAREN KELLY-SCOTT & PAULA ARRIAGADA, *THE EDUCATION AND EMPLOYMENT EXPERIENCES OF FIRST NATIONS PEOPLE LIVING OFF RESERVE, INUIT, AND MÉTIS: SELECTED FINDINGS FROM THE 2012 ABORIGINAL PEOPLES SURVEY 6* (2013), <https://perma.cc/G9BP-ZSWG>.

178. *Id.*

179. Ian Anderson et al., *Indigenous and Tribal Peoples’ Health: A Population Study*, 388 LANCET 131, 131 (July 9, 2016), [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)00345-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00345-7/fulltext).

180. For example, this study documents poorer outcomes for Indigenous populations for, among other things:

life expectancy at birth for 16 of 18 populations with a difference greater than 1 year in 15 populations; infant mortality rate for 18 of 19 populations with a rate difference greater than one per 1000 livebirths in 16 populations; maternal mortality in ten populations; low birthweight with the rate difference greater than 2% in three populations; high birthweight with the rate difference greater than 2% in one population; child malnutrition for ten of 16 populations with a difference greater than 10% in five populations; child obesity for eight of 12 populations with a difference greater than 5% in four populations; adult obesity for seven of 13 populations with a difference greater than 10% in four populations; educational attainment for 26 of 27 populations with a difference greater than 1% in 24 populations; and economic status for 15 of 18 populations with a difference greater than 1% in 14 populations.

Id. See pages 148–51 for detailed discussion.

At the multilateral level, the conclusion of the United Nations Declaration on the Rights of Indigenous People (UNDRIP)¹⁸¹ marked a pinnacle in efforts to address the historical, discriminatory, and structural conditions in which the lives of most Indigenous peoples unfold. The UNDRIP affirmed that “indigenous peoples are equal to all other peoples” and recognizes “the urgent need to respect and promote the inherent rights of indigenous peoples which derive from their political, economic and social structures and from their cultures, spiritual traditions, histories and philosophies, especially their rights to their lands, territories and resources.”¹⁸² It goes on to recognize specific political, economic, and cultural rights, such as rights to land, education, property, and self-determination.¹⁸³

Most commentators agree that a root cause of disenfranchisement and non-development in Indigenous communities can be traced to historical conditions arising from the colonial encounters, which I discussed briefly in Part II. Those encounters produced structures that facilitated long-term growth on terms that excluded Indigenous peoples from governance institutions and immobilized their access to resources (including IP rights) and public goods.

The failure to recognize rights for Indigenous peoples in their genetic resources and TK makes it unworkable for these communities to fully exercise their stewardship obligations. In the wake of the Nagoya Protocol,¹⁸⁴ national efforts to address the protection of TK and to establish pathways for benefit sharing with Indigenous peoples have gained momentum. Additionally, national TK laws also are on the rise.¹⁸⁵ These are important developments and, in conjunction with UNDRIP, the optics appear favorable for Indigenous communities.

But statistics continue to show gaps in the substantive advancement of Indigenous communities in areas critical for human flourishing, including health, housing, and education. A recent State of the World’s Indigenous People (SOWIP) report by the United Nations notes, for example, that “social, economic and political marginalization of indigenous peoples is pervasive in all the regions of the world.”¹⁸⁶ Reasons for this include the incongruence of the internal constitutional values in Indigenous societies and those that govern dominant society.¹⁸⁷ The report explains:

181. United Nations Declaration on the Rights of Indigenous Peoples (Dec. 13, 2007), <https://perma.cc/S85R-RYSG> [hereinafter UNDRIP]. Recognition of Indigenous peoples’ knowledge is also evident in several international environmental and cultural agreements. See CBD, *supra* note 57, art. 1, 8(j); Nagoya Protocol, *supra* note 6; United Nations Convention on the Protection and Promotion of the Diversity of Cultural Expressions, Oct. 20, 2005, 2440 U.N.T.S. 311.

182. See UNDRIP, *supra* note 181, Preamble, para. 7

183. See, e.g., *id.* art. 3, 4, 8, 10, 14 & 25.

184. Nagoya Protocol, *supra* note 6.

185. See, e.g., Protection, Promotion, Development and Management of Indigenous Knowledge Act 6 of 2019 (S. Afr.).

186. Department of Economic and Social Affairs Division for Social Policy and Development Secretariat of the Permanent Forum on Indigenous Issues, State of the World’s Indigenous People (SOWIP): Education, Vol. 3, ST/ESA/368 (2017) [hereinafter SOWIP Vol. 3 (2017)], <https://perma.cc/F659-NXNZ>.

187. *Id.* at 5 (“While decolonization within the sphere of education may, in principle, be perceived as a process that revitalizes indigenous knowledge systems, there are several conceptual and practical challenges which have proved difficult to address. Clashes related to epistemology-related factors, values

The gradual loss of the traditional identity of indigenous youth, which has never been fully replaced by a sense of belonging to the dominant national society, is an important determinant of their high rates of substance abuse and suicide. Colonization has entailed a denial of indigenous peoples' intellectual capacity, the benchmark by which academic qualifications and competencies are measured. Such standards are grounded in implicit, untested perceptions, and as dictated by those standards, indigenous peoples are expected to acquire skills they are assumed to lack, rather than to build on the strengths and real assets that they possess. Indigenous peoples are collectively the treasure bearers of much-needed experiential knowledge and hold the potential to articulate visions of the future of education and development. They are not passive recipients of aid and external interventions. Instead, their own worldviews and pedagogies should be accepted to enable them to exert an influence over educational processes and systems.¹⁸⁸

Given the thick ecosystem of international law instruments recognizing the rights of Indigenous peoples,¹⁸⁹ including rights of equality and self-determination, it might seem self-evident that property rights that have proven so central to the economic progress of Western societies are indispensable to meaningful advancement of human flourishing for Indigenous communities. Yet, recognizing economic rights—particularly property rights—for Indigenous peoples has proven most difficult in national and international spheres. The situation is particularly puzzling since it is well established that respect for the institutions, cultures, and values that define the governance structures of Indigenous peoples is indispensable to sustainable solutions regardless of the sphere that is being addressed.

In education, for example, the SOWIP report notes that:

Indigenous values, institutions, practices and economies are often based on sustainable management of natural resources. Along similar lines, indigenous peoples have their own methods of knowledge transmission, based on oral traditions. When States and religious organizations developed frameworks of formal education for indigenous peoples, often, either indigenous cultures, languages and practices were ignored or their preservation was discouraged. In consequence, such preservation was confined to the domestic sphere or suppressed entirely, resulting in the disruption of the transmission of languages, cultural values and practices. Globally, formal education has contributed to the loss of both indigenous languages and traditional bodies of knowledge and lifestyles.¹⁹⁰

Addressing the significant institutional deficits and structural conditions in which Indigenous peoples live requires recognition, protection, and valorization of their knowledge systems. This includes establishing processes and granting rights that facilitate transformation of their genetic resources and TK into productive assets in global markets. It also requires a transborder regime that ensures the protection of

and institutional structures, as well as the power relations involved, are present in the experiences in several regions.”).

188. *Id.* at 211.

189. See Okediji, *A Tiered Approach to Rights in Traditional Knowledge*, *supra* note 59, at, 281–84.

190. SOWIP Vol. 3 (2017), *supra* note 186, at 4.

TK, and national IP systems that preclude the extension of IP rights to actors who wrongfully acquire Indigenous peoples' knowledge.

As things stand currently, the former seems implausible, with stiff resistance by leading industrialized countries to recognition of proprietary rights in TK. As a result, national solutions will be unavoidably limited in effect, both because the requirements of the formal IP systems make it possible for TK to be exploited without compensation or recognition, and because the cross-border exploitation of genetic resources and TK within the patent system, especially, is viewed as an acceptable feature of the public domain designation.

This situation denies Indigenous peoples the nurturing needed to cultivate their creative and innovative gifts with the possibility of economic or other returns, and to do so under rules that are congruent with their cultural, spiritual, and environmental values. The 2009 SOWIP report noted explicitly that among the risks to the well-being of Indigenous peoples is the reality of "more modern versions of market exploitation [in which] indigenous peoples see their traditional knowledge and cultural expressions marketed and patented without their consent or participation."¹⁹¹

Fundamentally, the legal systems, political arrangements, and institutions that govern interaction between Indigenous peoples and other citizens, perpetuate and perfect a set of disabling conditions that make it implausible to secure a progressive path to the sustained flourishing of Indigenous peoples. The exclusion of the knowledge assets of Indigenous peoples from protection is among those disabling conditions. Moreover, the disabling effect occurs principally because of the time which IP owners have had to perfect legal and political processes at the domestic and multilateral levels that justify exclusion of norms that could address human development more broadly.¹⁹²

191. SOWIP (2009), *supra* note 171, at 1.

192. For example, commentators have noted the exclusion of Indigenous peoples from the U.N. Sustainable Development Goals (and, before that, the U.N. MDGs). *See, e.g.*, Victoria Tauli Corpuz, Addendum: Indigenous Peoples and the Millennium Development Goals, U.N. Economic and Social Council Permanent Forum on Indigenous Issues Fourth Session, New York, May 16–27, 2005. As the Australian government's Closing the Gap report acknowledged, "The past 10 years of Closing the Gap have also provided governments with valuable lessons. One of the key lessons we have learned is that effective programs and services need to be designed, developed and implemented in partnership with Aboriginal and Torres Strait Islander people." CLOSING THE GAP, *supra* note 172, at 8. Other governments have also recognized the importance of meaningful engagement with Indigenous people. *See, e.g.*, Malcolm Mulholland, *New Zealand's Indigenous Reconciliation Efforts Show Having a Treaty Isn't Enough*, CONVERSATION (May 11, 2016), <https://perma.cc/Y3KG-YX5T> ("Lessons that other countries can learn from New Zealand's experience of reconciliation is for indigenous people and governments to have a genuine and robust discussion at the outset of any attempt to resolve grievances."); *see also* Anderson et al., *supra* note 179, at 154 ("Meaningful Indigenous engagement in a revitalised global partnership for development is needed to address the shortcomings in global health governance, and to counter political marginalisation within home countries thereby fostering stronger national accountability mechanisms.").

D. NON-RELIGIOUS JUSTIFICATIONS FOR STEWARDSHIP

At the heart of the various justifications for IP rights is an effort to identify or advance principles that promote a just society. Accordingly, IP justifications must relate to *some* understanding of justice in its conception of human well-being.

Two leading theoretical approaches to resolving the structural conditions necessary for human flourishing are John Rawls' "justice as fairness"¹⁹³ and Amartya Sen's "development as freedom."¹⁹⁴ Negotiating the terms of the collective enterprise or, in Rawlsian terms, how to assign basic rights and duties and define the appropriate distribution of "the benefits and burdens of social cooperation,"¹⁹⁵ is critical for a just society. For Rawls, human well-being is bound up in "rational plans" directed at fulfilling personal interests and ends.¹⁹⁶ Rawls prioritizes fundamental rights and liberties (freedom of thought, liberty of conscience, competitive markets, and private property) as the things that "define men's rights and duties and influence their life prospects, what they can expect to be and how well they can hope to do."¹⁹⁷ His is the search for just institutions that will shape human behavior and compel compliance because people would have chosen those same institutions in their natural state.

For Sen, freedom is elemental to a social framework that enables development. Development is a set of political and economic conditions that empower human autonomy; it "requires the removal of major sources of unfreedom: poverty as well as tyranny, poor economic opportunities as well as systematic social deprivation, neglect of public facilities as well as intolerance or overactivity of repressive states."¹⁹⁸ He identifies instrumental freedoms (political freedoms, economic facilities, social opportunities, transparency guarantees, and protective security) that foster human capabilities and so enable citizens to "live the kind of lives they have reason to value."¹⁹⁹ In his *Idea of Justice*,²⁰⁰ Sen further emphasizes the importance of reducing manifest injustice, and the need for a theory of justice that practically informs decisions of what choices should be made about laws, institutions, and resources that accomplish this end.

In both the development-as-freedom and justice-as-fairness frameworks, societies are constituted by individuals who are empowered to pursue their own self-interests, subject to constraints imposed by the need for social cooperation. In both accounts, the choice of rules that govern the collective and that define individual welfare is made with human autonomy (expressed through reason and choices) as the

193. John Rawls, *Justice as Fairness: Political not Metaphysical*, 14 PHIL. & PUB. AFFS. 223 (1985); RAWLS, A THEORY OF JUSTICE, *supra* note 133.

194. SEN, DEVELOPMENT AS FREEDOM, *supra* note 135.

195. RAWLS, A THEORY OF JUSTICE, *supra* note 133, at 5.

196. *Id.* at 78–86. See also Chapter VII where Rawls lays out his theory of goodness as rationality. Specifically, "a person's good is determined by what is for him the most rational plan of life given reasonably favorable circumstances." *Id.* at 347.

197. *Id.* at 6.

198. SEN, DEVELOPMENT AS FREEDOM, *supra* note 135, at 3.

199. *Id.* at 10.

200. AMARTYA SEN, THE IDEA OF JUSTICE (2009).

centerpiece of those decisions. Property rights, of course, amplify this vision. The institution of property is fundamental to the structure of legal relations that undergirds the liberty and equality norms and related institutions necessary to pursue this anemic version of human well-being.

The common general themes in Rawls' *Theory of Justice* and Sen's *Idea of Justice* do not suggest that the two are halves of the same whole; Sen clearly views Rawlsian efforts to delineate the terms of "perfect justice" as derived from a different intellectual tradition than his comparativist approach. He is less interested than Rawls in the attributes of just societies and compelled, instead, to consideration of how to define through reason ways to remove remediable injustice. Neither scholar appeals to matters of faith, or belief in a higher living sovereign being whose creative power fundamentally defines human existence. Both emphasize the power of human reasoning—recognizing limits certainly but extolling its significant role in addressing the challenges to human flourishing. Indeed, reason (for Sen in particular) is "central to the understanding of justice"²⁰¹ because it is the basis on which human choices regarding what constitutes justice or injustice can be reasonably identified. Reason in Sen's expansive view includes perceptions, feelings, and intuitions about right and wrong; it is the capacity to think, feel, and act in response to values that one prioritizes.²⁰²

I view Sen's reasoning as a basis for justice in a similar light as Rawls' veil of ignorance behind which rational persons make choices about their "fundamental terms of association."²⁰³ Just as Sen asks what reasoning would demand for the pursuit of justice, Rawls asks what kind of choices people would make about the basic distributions of rights, duties, and obligations when ignorant of their peculiar social characteristics. Reason and choices are conditions in which people exercise liberty about what they can do in relation to others that would enhance their individual well-being. This choice of institutions for Rawls and the reasoned basis for addressing certain situations of injustice both stem from a sense that one "owns" her choices and has the right to define how to exercise and use her abilities or natural environment.

In both Rawls' and Sen's approaches to justice, human well-being is invariably related to, and affected by, the nature and scope of property rights. Property is among the institutions Rawls deems fundamental to human flourishing, and thus to justice, which comprises political and economic arrangements. For Rawls, property is a major social institution that is part of the basic structure of society, with a profound effect on people's lives. Indeed, Rawls' first principle states that "each person is to have an equal right to the most extensive scheme of equal basic liberties compatible with a similar scheme of liberties for others."²⁰⁴

For Sen, property appears less dominant because the capabilities perspective "focuses on human life, and not just on some detached objects of convenience, such

201. *Id.* at xix.

202. *See id.* at vii.

203. RAWLS, A THEORY OF JUSTICE, *supra* note 133, at 11.

204. *Id.* at 53.

as incomes or commodities that a person may possess. . . .”²⁰⁵ But one of the components for assessing capability is the difference in individuals’ ability to transform resources into valuable activities. In this light, capabilities are highly contingent on property rights, which have historically defined social and economic status in Western society. Acceptance of justice as a component of flourishing forces us to reconsider what biblical stewardship might offer.

Stewardship by governments is inextricably bound up with the *definition* and *regulation* of property rights, especially IP rights. This is because access to knowledge delimits the extent to which citizens can exercise political liberties and access social goods. For example, absent mitigating doctrines such as fair use, by giving the author an exclusive right to copy (and more recently, an exclusive right to communicate or make available),²⁰⁶ copyright could constrain freedom of expression, undermine privacy, and weaken competitive markets. Defining something as the subject of intellectual property invariably limits the reach of the State, since property is a distinct locus of power and confers unusual autonomy vis-à-vis the State.

The fact that states impose some limits on IP rights tends to obscure the harsh reality that the central challenge with IP is not how best to address distributive justice concerns, but that the decision regarding what constitutes IP has the capacity to disrupt notions of equality of persons. In short, neither one of the leading theories offers an answer for how states might fairly regulate something an individual possesses in her mind—an indicium of what it means to be human—but that also fundamentally impacts the extent to which others can pursue their own legitimate ends. Behind a veil of ignorance, rational actors invariably will choose rules under which each person keeps what they create.

Biblical stewardship offers a way to break the moral impasse. To restate, in the biblical narrative, economic productivity is not an end in itself—even for states. To the extent certain incidences of ownership (such as the right to possess, the right to use, or the right to income) exist in legal arrangements endorsed by the State, it is in fact only a lever for stewardship and not a substitute for it.

IV. PROPERTY RIGHTS, THE PUBLIC DOMAIN, AND BIBLICAL STEWARDSHIP

A. THE SIGNIFICANCE OF STEWARDSHIP

If legal title to personal and material resources belongs to the Creator, of what significance is the exchange described in Genesis 1 where biblical stewardship is first articulated? Why are attributes fundamental to what it means to be human—talent, the capacity to reason, to exercise one’s will freely, to make moral judgments, to care for others—gifts to steward and not things that are “owned” and over which to exert unilateral will?

205. SEN, *THE IDEA OF JUSTICE*, *supra* note 200, at 233.

206. WIPO Copyright Treaty, Dec. 20, 1996, 2186 U.N.T.S. 121.

These questions are not just theological. To the extent our extant justifications for IP point at things like creative choice, reason/judgment,²⁰⁷ labor,²⁰⁸ or the relationship of the creator to the created object²⁰⁹ as among the chief bases for exclusive rights in knowledge goods, qualifying these attributes is a key first step to debating who is entitled to property rights and what the scope of those rights might be. Importantly, the attributes suggest that stewardship and property are not in irreconcilable tension.

i. Property as an Instrument for Alienation

One of the ways biblical stewardship meaningfully differs from conveyances of property is the necessity of ongoing relationship or connection between the steward and master. Transactions over tangible property invariably alienate one party, in the case of a sale, or restrict access in some way to the thing owned (such as in the case of a leasehold). This severing of legal ties after the transfer of property is largely absent in the stewardship framework.

In the first instance, land in the Torah is not a commodity but, instead, a way of permanently linking the source of any assets to God. It is also a constant reminder of how property is to be used—with conditions that invariably secure the welfare of the weakest members in society. The steward is no servant merely discharging duties mechanically or following rote instruction; her work is undertaken with autonomy and discretion, and her actions judged in light of divinely revealed purposes. Moreover, the relationship between the steward and owner ideally is deepened by the autonomy and shared interests in the beneficence of the decisions made by the steward about the land, subject to any limits on use already prescribed. The steward's well-being is sustained *precisely* by exercising authority and discretion in relation to the resources allocated to her, consistent with the overall moral scheme of life in relation to God and others.

In short, in the Torah *and* New Testament, God and humanity are purposed for a deeply meaningful relationship, glimpses of which are seen in the unashamed

207. See *Feist Publ'ns, Inc. v. Rural Telephone Serv. Co.*, 499 U.S. 340, 349 (1991) (“The compilation author typically chooses which facts to include, in what order to place them, and how to arrange the collected data so that they may be used effectively by readers. These choices as to selection and arrangement, so long as they are made independently by the compiler and entail a minimum degree of creativity, are sufficiently original that Congress may protect such compilations through copyright laws. . . .”); see also *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53 (1884).

208. JOHN LOCKE, TWO TREATISES ON GOVERNMENT II, ch. 5, sec. 27 (1690) (“Though the earth, and all inferior creatures, be common to all men, yet every man has a property in his own person: this no body has any right to but himself. The labour of his body, and the work of his hands, we may say, are properly his. Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property. It being by him removed from the common state nature hath placed it in, it hath by this labour something annexed to it, that excludes the common right of other men: for this labour being the unquestionable property of the labourer, no man but he can have a right to what that is once joined to, at least where there is enough, and as good, left in common for others.”); see Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533 (1993) (applying Locke's property theory to IP).

209. See Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957 (1982).

transparency and regular communion that existed between humans and God in a productive space called Eden,²¹⁰ and later between God, Abraham, and Abraham's descendants.²¹¹ Stewardship facilitates the enduring relational purpose behind human creation in ways more amenable than the exclusive nature of property.

ii. Property as a Limit to Partnership with the Divine

Second, the Genesis covenant in which God bestows everything on humans reflects something about what it means to be fully human. Whereas most justifications for property rights link ownership to liberty, the biblical framework advances a vision of the good life, unconnected to ownership as such. The New Testament's question, "what does it profit a man to gain the whole world and lose his soul?"²¹² makes the point most starkly. Ownership ties a person to things, but what one owns or how much one owns does not translate into more meaningful or satisfying lives. This point is well-accepted and has been powerfully advanced in scholarly literature. As Amartya Sen puts it,

[t]he usefulness of wealth lies in the things it allows us to do—the substantive freedoms it helps us to achieve. . . . An adequate conception of development must go much beyond the accumulation of wealth and the growth of gross national product and other income-related variables. Without ignoring the importance of economic growth, we must look well beyond it.²¹³

Although recognizing the limits of material possession in facilitating human well-being,²¹⁴ Rawls, Sen and other leading scholars still largely devolve to viewing "unfreedom" as a lack of access to those things material resources can purchase, or opportunities that that rely on social arrangements, whether derived from just institutions²¹⁵ or other human choices.²¹⁶ Biblical stewardship on the other hand requires primary dependence on God, and, as a result, a view of life that acknowledges the equal worth and dignity of others in a non-reciprocal way. Human beings created in God's image act autonomously, sovereignly, and with authority

210. See Genesis 3.

211. See Genesis.

212. Mark 8:36.

213. SEN, DEVELOPMENT AS FREEDOM, *supra* note 135, at 14.

214. Sen notes, "The usefulness of wealth lies in the things it allows us to do—the substantive freedoms it helps us to achieve." *Id.* "Expanding the freedoms that we have reason to value not only makes our lives richer and more unfettered, but also allows us to be fuller social persons, exercising our own volitions and interacting with—and influencing—the world in which we live." *Id.* at 14–15. "With adequate social opportunities, individuals can effectively shape their own destiny and help each other." *Id.* at 11.

215. RAWLS, A THEORY OF JUSTICE, *supra* note 133, at 7.

216. "[F]reedom is not only the basis of the evaluation of success and failure, but it is also a principal determinant of individual initiative and social effectiveness. Greater freedom enhances the ability of people to help themselves and also to influence the world. . . ." SEN, DEVELOPMENT AS FREEDOM, *supra* note 135, at 18; Amartya Sen, *Capability and Well-Being*, in THE QUALITY OF LIFE 30, 33 (Martha Nussbaum & Amartya Sen eds., 1993) ("The freedom to lead different types of life is reflected in the person's capability set. The capability of a person depends on a variety of factors, including personal characteristics and social arrangements.").

because of the material resources in universal Creation and the obligation to use them productively—individually and in relationship with others. God saw the various aspects of creation as “good” and established conditions in which human beings could benefit from, and care for, universal Creation in the respective spheres in which they operate.

B. STEWARDSHIP AND THE PUBLIC DOMAIN²¹⁷

The obligations and limits biblical law impose on property reveal important lessons for existing conceptions of the public domain. To begin, there is no functional equivalent of the public domain in biblical law because property as we conceive it sits uncomfortably in the idea of stewardship. The combination of limits on how property rights may be exercised with stewardship obligations that guide specific decisions ensures a sufficiency of resources to enable all citizens to pursue the faithful use of their gifts in society. Put differently, one could say that ongoing creativity is assured because: (1) creativity represents an outworking of the mandate to be a productive member of society; and (2) rules regarding the treatment of property incorporate limits that result in materials left available for everyone.

For example, roughly ten percent of the first harvest (“first fruits”) produced from the land was required to be given away as a gift to those without access to agricultural land of their own, including to “the stranger, the fatherless, and the widow, so they may eat within your gates and be filled.”²¹⁸ This giving away of a significant part of the first harvest was a high priority in the obligations of a landowner, reflecting the deep network of relationships between people in ancient Israeli society. Similarly, during the feast and holiday to celebrate the productivity of the agricultural year (Shavuot), those allocated land had an obligation to not reap to the very corners of the field “nor gather the gleaning of your harvest; you are to leave them for the needy and the alien.”²¹⁹

As a general law, those allocated agricultural land could not exercise absolute rights over the harvest. Those harvesting in the field who forgot a sheaf were prohibited from going back to the field to get the sheaf. It was to be left for “the foreigner, the fatherless, and the widow, so that the Lord your God may bless you in all the work of your hands.”²²⁰ Also,

when you beat your olive trees you shall not go over the boughs again; it shall be for the stranger, the fatherless, and the widow. When you gather the grapes of your vineyard, you shall not glean it afterward for it shall be for the stranger, the fatherless, and the widow.²²¹

217. My discussion of the public domain draws mainly from the wealth of literature in copyright. In my view, the themes and concerns addressed in the copyright literature apply also to patent law, though, where necessary for the arguments advanced, I have highlighted differences between the two subjects.

218. Deuteronomy 26:12.

219. Leviticus 23:22.

220. Deuteronomy 24:19.

221. Deuteronomy 24:20–21.

In sum, the allocation of property had inbuilt a set of limits that defined property as something less than the right to exclude—indeed, that right never existed in absolute terms in biblical law but was always subject to the right of certain categories of people to access the land and “reap where they had not sown.”

To the extent the public domain represents the full spectrum of limits on property rights, the stewardship model is unlikely to alter the character of the public domain. Instead, stewardship and its obligations embody another set of limits to IP rights. But if the public domain is constituted primarily by objects that are excluded from ownership, the stewardship framework offers quite distinct reasons for exclusion. Thus, the public domain would be constituted very differently under biblical law. Below, I briefly explore these two ideas and argue that the public domain serves a different purpose under biblical law than its secular counterpart.

The health of the public domain is dependent on vigilant oversight of these two things: (1) subject matter; and (2) scope and duration of rights. What is essential to the public domain is that it is a resource freely available to all. Replenishing the public domain is thus an important feature of the design of IP rules.

As a source of the raw materials of creativity, a rich, dynamic, diverse, and continuously nourished public domain is a vital part of the creative economy. Thus, any legislative or judicial adjustments—to the scope of protectable subject matter, to the term of protection, or to allowable exceptions and limitations to the exclusive rights afforded by the IP system—occasion intense consideration of the impact on the public domain. Especially in copyright law, the public domain is the policy lever of choice among scholars concerned about the law’s expansion in favor of elite cultural brokers in the traditional copyright industries of literature, art, photography, and music. The more heavily copyright is skewed in favor of current rightsholders, particularly with the possibility of serial extensions of copyright term,²²² the less hospitable the legal framework can be to future creators who rely on access to the existing ecosystem of creative goods to produce new ones. As such, how the public domain is shaped and accessed has important distributional and competitive effects.

As a leading justification for the copyright system, the public domain constitutes a reservoir of materials necessary for ongoing creativity. This consists of works in which copyright has expired, and ideas, facts, or other non-copyrightable subject matter. The public domain thus distinguishes between protected and unprotected material to assure access to the “building blocks” of creativity. In other words, the public domain is a primary resource. Biblical stewardship does not impose an oppositional relationship between the public domain and property; instead, it views both equally as resources subject to the same obligations.

But it is difficult to determine whether proposed changes to IP law that arguably jeopardize the public domain are, in fact, detrimental to human well-being. Scholars have repeatedly acknowledged the mutual dependency of IP and the public domain; the two are coextensive. As Jessica Litman once famously put it, the fact that every new work is based on works that preceded it “is a cliché, invoked but not

222. *Eldred v. Ashcroft*, 537 U.S. 186 (2003); The Sonny Bono Copyright Term Extension Act, Pub. L. 105-298, 112 Stat. 2827 (1998).

examined.”²²³ In its best form, the public domain enables access to the means of production of cultural assets. It is thus an important (but not the only) tool for promoting creativity and is a valuable source of the civic, cultural, and economic advantages that flow from societies constituted of productive citizen-stewards.

If property rights and the public domain must work together to achieve the best advancements in human well-being, amplifying one or the other in IP policy does not lead ineluctably to irrefutably bad outcomes for all of society; someone or some group will benefit from more of one or the other. Similarly, maintaining some mythical “balance” between rights and limitations is not unquestionably good for human well-being. The fact is, we do not really know what this optimal balance between IP rights and the public domain should be, nor whether achieving it will resolve concerns about access to needed public goods or other global justice concerns.²²⁴

A society could decide to combine a system of strong authorial or patent rights with government subsidies for poor families to ensure that citizens can afford the cost of essential medicines, books, and other cultural assets. Such a scheme might sufficiently address several distributional concerns raised in the literature, but it would not satisfy the demands of biblical stewardship. The duty to participate in cultural production, to exercise one’s own creative gifts *in reaction* to the present social realities, is an essential part of stewardship. Put in agrarian terms:

A wise farmer varies his work, observing the different moments of the agricultural task. These lines may also imply that the farmer matches his actions to the particular features of his own land—a necessity for all good farming. . . . A concern for scale in all uses of technology, for choosing scale small enough so that the work matches the place, is for the contemporary agrarians one of the marks of wisdom. Conversely, “[w]e identify arrogant ignorance by its willingness to work on too big a scale, and thus to put too much at risk.”²²⁵

As previously stated, the relationship between the creator and what is created lies at the heart of biblical stewardship, represented in the idea of God’s relationship with humanity. As Professor Margaret Jane Radin puts it:

223. Litman, *supra* note 64, at 966. She notes further that the public domain is “the law’s primary safeguard of the raw material that makes authorship possible.” *Id.* at 967.

224. Mahdavi Sunder and Anupam Chander have made the analogous argument about the limits of the public domain to address distributional concerns. See Chander & Sunder, *supra* note 66, at 1334–35, 1357 (“[L]aw turns a blind eye to the fact that for centuries the public domain has been a source for exploiting the labor and bodies of the disempowered—namely, people of color, the poor, women, and people from the global South. . . . But romantic discourses of the public domain thwart the new claims for property emerging in the developing world and in Western indigenous communities. Focused more on form than function, the increasingly binary rhetoric of ‘intellectual property versus the public domain’ deafens us to new claims by individuals who seek to restructure social and economic relations through property-like rights.”); see also Munzer & Raustiala, *supra* note 10, at 41. At times, the claim that traditional knowledge is in the public domain is merely the outcome of influential definitional treatments. See, e.g., Boyle, *supra* note 64, at 38 (“The public domain is material that is not covered by intellectual property rights”); see also Chander & Sunder, *supra* note 66, at 1357.

225. DAVIS, *supra* note 73, at 36 (footnote omitted).

A person cannot be fully a person without a sense of continuity of self over time. To maintain that sense of continuity over time and to exercise one's liberty or autonomy, one must have an ongoing relationship with the external environment, consisting of both "things" and other people. . . . One's expectations crystallize around certain "things," the loss of which causes more disruption and disorientation than does a simple decrease in aggregate wealth. For example, if someone returns home to find her sofa has disappeared, that is more disorienting than to discover that her house has decreased in market value by 5%.²²⁶

Responding to the material and cultural environment is also a fundamental justification for the public domain. As Professor Jessica Litman notes:

[T]he very act of authorship in *any* medium is more akin to translation and recombination than it is to creating Aphrodite from the foam of the sea. Composers recombine sounds they have heard before; playwrights base their characters on bits and pieces drawn from real human beings and other playwrights' characters; novelists draw their plots from lives and other plots within their experience; software writers use the logic they find in other software; lawyers transform old arguments to fit new facts; cinematographers, actors, choreographers, architects, and sculptors all engage in the process of adapting, transforming, and recombining what is already "out there" in some other form. This is not parasitism: it is the essence of authorship. . . .²²⁷

State-sponsored access to end products would also likely be unsatisfying to most progressive IP scholars because such a scheme reproduces a society that elevates a class of citizens to control the tools necessary to foster equality and undermines the liberty interests fundamental to a stable democracy. As Professor Neil Netanel has argued, the drafters of the first U.S. copyright statute

took as self-evident that the diffusion of knowledge and exchange of view through a market for printed matter was a pillar of public liberty. . . . Part and parcel of this vision was an understanding that democratic governance requires not simply the diffusion of knowledge per se, but also an autonomous sphere of print-mediated citizen deliberation and public education. . . . It was only by maintaining their fiscal independence that authors and publishers could continue to guard public liberty. . . .²²⁸

Ensuring access only to *finished* knowledge assets blocks participation in culture, hinders freedom, and stymies personal development. Creative activity should be possible for all who desire it, not limited only to a select few. Taken seriously, stewardship duties mean that a state-sponsored scheme of purchasing finished cultural goods as a primary means of resolving the access problem caused by market-mediated transactions is as morally objectionable as the patronage system that led England to eliminate the Stationers' Company,²²⁹ and that was so odious to the

226. Radin, *supra* note 209, at 1004.

227. Litman, *supra* note 64, at 966–67.

228. Neil W. Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 356–58 (1996).

229. See Ian Gadd, *The Stationers' Company in England before 1710*, in RESEARCH HANDBOOK ON THE HISTORY OF COPYRIGHT LAW 88 (Isabella Alexander & H. Tomás Gómez-Arostegui eds., 2016) (“[I]ncorporation of the Stationers' Company in May 1557 granted it a near-exclusive national jurisdiction over printing. . . . [N]o one was allowed to set up or operate a printing press anywhere in England unless

Founders that from the very beginning they combined rights to authors and inventors with the advancement of progress.²³⁰ There is thus merit and moral satisfaction in getting the law “right”; the legitimacy of any law rests in part on the perception that lines have been fairly drawn between competing interests, and that the law demonstrably accomplishes its underlying purposes.

So, when large numbers of people die for inability to purchase patented drugs, when educational resources are priced beyond the reach of students, or the knowledge developed and used for generations by Indigenous groups is taken and appropriated by others without attribution or remuneration, there is reason for moral outrage, resistance to “expansive” IP rights, or outright condemnation of the IP system’s effect on human well-being. The optimal production of knowledge goods is an important aspect of human well-being, but so is its optimal consumption. A legal regime that produces one at the expense of the other works injustice and denigrates the value of people and the creation that nurtures life.

In short, the proper design of IP requires us to know something about the substance of the goals that animate patent and copyright law and to make moral judgments about them. For example, it is uncontroversial that indiscriminate copyright term extensions do not provide incentives for authors of existing works to create. But whether the private benefit of longer copyright terms for current authors is detrimental to human well-being requires a more fundamental assessment of principles that facilitate human nurturing not just on individual terms but as a society. The author who lives on a deserted island does not need copyright’s protection. Copyright is first and foremost *a relational legal regime*; its purpose, value, and legitimacy are measured in consideration of a collective end. To gauge the efficacy of our leading justifications for property rights and for the public domain, we need a way to understand how each contributes to human well-being. But most people are not satisfied with just individual progress; several empirical studies suggest that “co-flourishing”²³¹ is a vital aspect of what makes their lives good.²³² We therefore need a richer understanding of *why* creativity is good individually and collectively.

In the biblical stewardship framework, the reward for one’s labor is not full ownership; labor does not transform one’s gifts into property for oneself as it does under the Lockean rationale.²³³ At least one implication from stewardship is the need to reconstitute the contours of the public domain. As I have argued, the public domains of IP should not in principle constitute a barrier to the protection of indigenous traditional knowledge. The two knowledge systems, and the values that

either they were a member of the Stationers’ Company or they held a privilege direct from the Crown. This near-monopolisation of printing in effect restricted printing to London for almost 140 years.”)

230. U.S. Const., Art. I, Sec. 8, cl. 8.

231. Co-flourishing is a condition in which the well-being of other created life—whether human, plant, animal, or some combination—contributes to and enhances the quality of your own.

232. ROBERT D. PUTNAM, *BOWLING ALONE: THE COLLAPSE AND REVIVAL OF AMERICAN COMMUNITY* (2000); Chaeyoon Lim & Robert D. Putnam, *Religion, Social Networks, and Life Satisfaction*, 75 *AM. SOCIO. REV.* 914 (2010) (identifying close social relationships as one of five domains in which one must do or be well to flourish in life); Tyler J. VanderWeele, *On the Promotion of Human Flourishing*, 114 *PROCEEDINGS OF THE NAT’L ACAD. OF SCIENCES* 8148 (2017).

233. See Gordon, *supra* note 208.

underlie them, are simply not the same. Indigenous knowledge systems have their own sense of the division between exclusive rights and access privileges, of what is subject to be owned and by whom, and what limits exist on property usage.

V. CONCLUSION

The absence of legal protection for TK and other assets created or safeguarded by Indigenous peoples and local communities is a profound moral problem in our global society. It is undoubtedly among the “clearly remediable injustices around us.”²³⁴ The intransigence of many developed countries on display at various international fora when issues regarding the protection of TK and genetic resources arise represents another instance of “the widespread diagnoses of injustice in the wider world in which we live.”²³⁵

Leading religious texts such as the Torah and the New Testament offer a way to rethink the current system, not from the starting point of what justifies property rights, but from recognition that creative and nourishing use of resources is inevitable and, indeed, required of all people. In addition, insights from these texts regarding the appropriate relationship of people to their talents and resources suggests that less than full authorial control of creative goods—including TK—is both morally necessary and justly required for human well-being, both at the level of the individual *and* for a collective of individuals who must live in meaningful social interaction. *Imago Dei* and the stewardship corollary developed in this Article elevate the importance of social ties and the sense of duty or obligation that should govern human activities and interaction.

Protecting TK and other Indigenous assets will require structural and substantive change in deeply entrenched narratives in IP discourse about Indigenous peoples and local communities. The exclusively secular approach to IP assumes an impoverished view of humans, and thus of the relationship between creators and the environment on which they depend for life. It presumes a unidirectional flow of creativity and consumption—from “authors” and “inventors” to society, with no return to the created world and those who nurture it. Further, it denies the responsibility owed to others, while also erecting artificial barriers between creative communities and producing disorder in spaces that should otherwise be relatively frictionless.

Finally, in its emphasis on the inventor or artist who is motivated only to serve her own interest, and in whom ultimate control over the fruit of her intellect resides, current IP law makes creating and living in community difficult. Worse, IP law’s authorial emphasis remains stagnant and self-referential, making transformative and just reform hard to conceive.

Biblical stewardship offers an alternative to the dialectics of author and user. It is a viable alternative to the framing offered by markets or politics and points us instead to consider values that can sustain relations in and across all living systems. These values and relationships with creation energize our yearning for a better world

234. SEN, THE IDEA OF JUSTICE, *supra* note 200, at vii.

235. *Id.*

with a vision for how we might rethink the cause of the disorder endemic in our IP regime.

Even if one rejects its theological assumptions, the biblical stewardship construct can be useful in providing coherence for the web of competing obligations most people encounter from their membership in multiple, overlapping communities. Stewardship suggests that the obligations of social membership—obligations that derive from the need for stability and cooperation without which, as the political philosopher John Rawls observes, “no one could have a satisfactory life”²³⁶—require a new conception of the public domain and a new vision for IP law that defends, not exploits, the least among us.

236. RAWLS, *A THEORY OF JUSTICE*, *supra* note 133, at 13.

