

Introduction

1 Charting the Triple Interface of Public–Private Partnerships, Global Knowledge Governance, and Sustainable Development Goals

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In less than two decades, public–private partnerships (PPPs) have become an essential feature of the global development landscape and a fixation in development discourse and practice. The Sustainable Development Goals (SDGs) affirm their centrality in the implementation of the UN’s 2030 Sustainable Development Agenda (2030 Agenda).¹ However, it is only more recently that PPPs have emerged in intellectual property (IP) domains, primarily in relation to public health.

In this context, this book is the first attempt to have a closer look at PPPs and IP within a more capacious knowledge governance framework, not only in relation to public health but also in connection to other fields such as education, information and communications technologies (ICTs), libraries, agriculture, and climate change. Its chapters explore the relationship among three broad subjects: IP, PPPs, and the 2030 Agenda’s SDGs. Each area by itself would be a major undertaking. Analyzing all three simultaneously might be considered a long and possibly unmanageable reach. Yet it is the premise of this book that understanding the growing impacts at the interface of these three heretofore distinct areas is critically important. As argued recently:

[s]imilar to human rights, SDGs should be taken into account in shaping intellectual property rights, in the process of interpretation and compliance. SDGs today provide the most important contemporary standards of justice and equity in international economic law. . . . Many of their goals cannot be achieved without enhancing the effort, and new tools need to be developed, such as . . . framework rules for the operation of public–private partnerships (PPPs).²

To make the case for a thoughtful (and overdue) treatment of this triple interface, this chapter first canvasses relevant aspects of each of these three topics – IP, PPPs, and the SDGs – and the significance of their growing connections. It then examines more closely each of the “Ps” in PPPs, flagging the many unresolved issues and questions about these types of joint governance arrangements or collaborative partnerships, at the practical,

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¹ G.A. Res. 70/1, Transforming Our World: The 2030 Agenda for Sustainable Development (October 21, 2015; hereinafter 2030 Agenda) available at https://sustainabledevelopment.un.org/post2015/transforming_ourworld.

² Thomas Cottier, *Embedding Intellectual Property in International Law*, in CURRENT ALLIANCES IN INTERNATIONAL INTELLECTUAL PROPERTY LAWMAKING: THE EMERGENCE AND IMPACT OF MEGA-REGIONALS 33 (Pedro Roffe and Xavier Seuba eds. 2017).

policy, and conceptual levels. Finally, it situates each of the other chapters, providing brief synopses and locating their diverse perspectives within an emerging conceptual map of the triple interface.

I Unwinding the Triple Interface

IP systems and legal regimes are experiencing enormous challenges and change in a period that some are starting to call the fourth Industrial Revolution.³ Many converging factors are forming this proverbial perfect storm. These include the acceleration of technological development overall, the appearance of “disruptive” business models,⁴ the manifestation of wholly new technological realms such as artificial intelligence, block chain technology, the so-called Internet of things, nanotechnology, robotics, and analytics driven by “big data,” as well as digitally driven developments in biology and the life sciences. This current technological lunge is taking place parallel with the rapid and controversial expansion of core functions of IP, from incentive to commodity to asset,⁵ combined with numerous challenges to the multilateral IP legal regime by a burgeoning number of bilateral, mega-regional, and plurilateral treaties.⁶

In addition, IP must cope with the rapid emergence of hybrid forms of governance, which involve not only agreements and actions coordinated among states but also among multi-stakeholder partnerships within transnational legal frameworks. These partnerships among intergovernmental organizations and/or their member states with the private sector – whether nonprofit or for-profit – are now rampant and embedded within the global IP landscape. The historical and too often still prevailing attitude of IP’s “splendid isolation”⁷ seems increasingly obsolete in this era characterized by extreme technological development, rapid globalization, hybrid governance arrangements, and cross-cutting regime linkages.

³ See generally Klaus Schwab, *THE FOURTH INDUSTRIAL REVOLUTION* (2016), available at www.weforum.org/about/the-fourth-industrial-revolution-by-klaus-schwab.

⁴ The term “disruptive innovation” has evolved in different directions. See, e.g., Clayton M. Christensen & Derek van Bever, *The Capitalist’s Dilemma*, 92 HARV. BUS. REV. 61, 62 (Jun. 2014) (“The seminal concepts of *disruptive* and *sustaining* innovations were developed . . . studying competition among companies. They relate to the process by which innovations become dominant in established markets and new entrants challenge incumbents. The focus of this article, however, is the *outcome* of innovations – their impact on growth.”).

⁵ Rochelle Cooper Dreyfuss & Susy Frankel, *From Incentive to Commodity to Asset: How International Law is Reconceptualizing Intellectual Property*, 36 MICH. J. INT’L L. 557, 560 (2015); see also Cottier, *supra* note 2, at 22 (“Despite legal justification by the needs of innovation and consumer welfare, intellectual property protection is in reality as much motivated by market segmentation and the promotion and protection of investment. These motives have increasingly influenced the application and interpretation of intellectual property rights.”).

⁶ See generally, Pedro Roffe & Xavier Seuba eds., *Current Alliances in International Intellectual Property Lawmaking: The Emergence and Impact of Mega-Regionals* 2017 (Int’l Ctr. for Trade & Sustainable Dev. (ICTSD) & Ctr. for Int’l Intell. Prop. Studies (CEIPI), Ser. No. 4).

⁷ Cottier, *supra* note 2, at 23 (“IPRs can no longer be dealt with in splendid isolation, but need to be construed and applied in the general context of law. . . . It is most difficult under the auspices of public international law – thus on the level where harnessing globalisation and effective checks and balances are most needed. The lack of a constitutional framework and the fragmentation of international law are major impediments in addressing balancing across different agreements.”); cf. Graeme B. Dinwoodie & Rochelle C. Dreyfuss, *A NEOFEDERALIST VISION OF TRIPS: THE RESILIENCE OF THE INTERNATIONAL INTELLECTUAL PROPERTY REGIME* (2012).

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More generally, the growing involvement of multiple stakeholders across public and private sectors in the form of PPPs and other multi-stakeholder partnerships illustrates the rise of more complex global governance dynamics⁸ where global governance is:

First, ... deliberately associated with globalization. ... Second, ... an ongoing conceptual and descriptive enterprise ... Third, ... enunciated against the backdrop of a perceived thinning of state sovereignty and *the emergence of multivalent non-state or sub-state entities and new networks of actors on the global stage that, together, have assumed the nature of disaggregated sovereignty*. ... Fourth, unfolds more in the sense of a concerted horizontal interaction of actors at the global level without the necessity of an overarching hierarchical authority.⁹

The discernible pivot toward PPPs in global governance generally can be traced to several factors. At a time when traditional sources of public funding are under strain, PPPs offer possible synergies among partners – leveraging their talents, technologies, resources, expertise, and convening power. These partnerships also respond to the current realities of the global development system, which has moved to frameworks “beyond aid” and is experiencing challenges in development funding, including overseas development assistance.¹⁰ In short, PPPs can provide significant means of implementation for addressing development challenges not adequately covered by existing institutional arrangements, which may be constrained by finances, mission, or reach.

The partners within these global governance arrangements in turn impact global *knowledge governance*, whether by encouraging innovation, building innovation capacity,

⁸ Gráinne de Búrca, *New Governance and Experimentalism: An Introduction*, 210 WISC. L. REV. 232 (2011); Benedict Kingsbury, Nico Krisch, & Richard B. Stewart, *The Emergence of Global Administrative Law*, 68 L. CONTEMP. PROB. 15, 20 (2005). These transnational legal orders or various forms of legal pluralism are characterized by “informal arrangements developed by ad hoc coalitions of powerful states and transnational governance networks [that] give rise to a new informality in governance.” A. Claire Cutler, *Legal Pluralism as the “Common Sense” of Transnational Capitalism*, 3 *Oñati Socio-legal Series* 719, 725 (2013), available at <http://ssrn.com/abstract=2327501>.

⁹ Chidi Oguamanam, *INTELLECTUAL PROPERTY IN GLOBAL GOVERNANCE: A DEVELOPMENT QUESTION* 27–28 (2012) (emphasis added) (“Fifth, of necessity and logic, the tensions ... implicated in globalization also unravel in global governance. Finally, like globalization, global governance cannot be wished away.”) More recently, global governance has been summarized as “increasingly characterized by flexible structures, greater tolerance for informality, and, most strikingly, an openness to public–private partnerships and an increasingly active role for a wide range of nonstate actors. While the embrace of nonstate actors is not uniform – the governance of global trade differs markedly on this score from the governance of the global environment, for instance – many international regimes now feature substantial participation by private actors. In short, traditional multilateralism remains alive and well[, but] multilateral governance is increasingly supplemented, and in some cases even supplanted, by *multi-stakeholder* governance.” Kal Raustiala, *Public Power and Private Stakeholders* (original emphasis), UCLA School of Law, Public Law Research Paper No. 17–26 (Aug. 21, 2017), available at <https://ssrn.com/abstract=3023598>.

¹⁰ Jomo Kwame Sundaram, Anis Chowdhury, Krishnan Sharma, & Daniel Platz, *Public–Private Partnerships and the 2030 Agenda for Sustainable Development: Fit for Purpose?* 1 (UN Dept. of Econ. & Soc. Affairs, DESA Working Paper No. 148, ST/ESA/2016/DWP/148, February 2016) (“The Addis Ababa Action Agenda (AAAA) of the recently concluded Third International Conference on Financing for Development (Addis Ababa, 13–16 July 2015) recognizes that ‘both public and private investment have key roles to play in infrastructure financing, including through (...) public private partnerships’ ... However, the AAAA also highlights the need to ‘build capacity to enter into PPPs, including as regards planning, contract negotiation, management, accounting and budgeting for contingent liabilities.’ It further stresses the need to ‘share risks and reward fairly, include clear accountability mechanisms and meet social and environmental standards’”).

engaging in technology transfer, or otherwise ensuring dissemination and diffusion of the results of innovation across borders. Taken together, these important activities are referred to here as *knowledge governance* or *innovation activities*. PPPs often contend with the IP-intensive nature of these innovation activities.

Within knowledge economies, especially within IP-intensive industries, high uncertainty, risk, and cost are often associated with developing complex innovations, whether for industrialized or developing country sectors – thus PPPs may be a response to particular market failures, for example, in the area of poverty-related neglected diseases (PRNDs).¹¹ Moreover, the public sector may lack sufficient resources to provide full support for innovation activities – thus PPPs may also address insufficient government capacity and/or support for the production and dissemination of public goods, including many key innovation activities related to sustainable development.¹² Additionally, knowledge governance includes the growing participation of nonstate actors such as nongovernmental organizations (NGOs) or nonprofit organizations (NPOs), which may be primarily mission-driven rather than profit-driven. These newer stakeholders encourage innovation activities and knowledge governance goals traditionally associated with the public sector and the public interest. And the increasingly complex nature of knowledge production and sharing means that diverse partners in global collaborative networks can be essential to productive cross-border innovation activities.

But as part of a global innovation picture, IP-related partnerships are no longer narrowly confined to the research and development (R&D) of new technologies, nor to the development of national or local innovation capacities, nor even to technology transfer across borders. These partnerships also directly and indirectly impact myriad areas involved in the production and delivery of many global public goods¹³ crucial for human flourishing and global sustainable development,¹⁴ such as agriculture and food security, climate change adaptation and mitigation, knowledge provision through ICTs, and public health through the widespread dissemination of pharmaceuticals and vaccines. Thus, PPPs involved in innovation activities may address – while perhaps also simultaneously contributing to – the immense regulatory coordination issues inherent in the production and distribution of global public goods.¹⁵

The rise of cross-sector or multi-stakeholder partnerships such as PPPs is especially notable in the realm of global health, but these newer hybrid institutions have also

¹¹ Poverty-related neglected diseases are sometimes alternatively referred to as neglected diseases or neglected tropical diseases.

¹² For a succinct summary of the distinction in economic literature between public goods and private goods, see Brett M. Frischmann, *INFRASTRUCTURE: THE SOCIAL VALUE OF SHARED RESOURCES* 24–49 (2012).

¹³ See generally *GLOBAL PUBLIC GOODS: INTERNATIONAL COOPERATION IN THE 21ST CENTURY* (Inge Kaul et al. eds., 1999); *PROVIDING GLOBAL PUBLIC GOODS: MANAGING GLOBALIZATION* (Inge Kaul et al. eds. 2003).

¹⁴ The Brundtland Report defined sustainable development as “development that meets the needs of the present without compromising future generations to meet their own needs.” UN WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, *OUR COMMON FUTURE* (1987). In doing so, it emphasized a “much greater recognition of the interdependence of environmental, social and economic systems.” Norichika Kanie, Steven Bernstein, Frank Biermann, & Peter M. Haas, *Introduction: Global Governance Through Goal-Setting*, in *GOVERNING THROUGH GOALS: SUSTAINABLE DEVELOPMENT GOALS AS GOVERNANCE INNOVATION* 1, 9 (Norichika Kanie & Frank Biermann eds., 2017).

¹⁵ Oguamanam, *supra* note 9, at 133–35 (discussing interventions of PPPs in the context of agricultural development and food security).

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emerged decisively in other areas. Multilateral organizations have been increasingly relying on partnerships to tackle a number of issues and challenges they are facing. In the UN context, the World Health Organization (WHO) has been involved in the establishment of several PPPs to tackle communicable diseases such as malaria and tuberculosis (TB), for instance.¹⁶ The World Intellectual Property Organization (WIPO) is aligning some of its strategic goals and activities within the institutional frameworks of PPPs.¹⁷ And the UN Framework Convention on Climate Change has recognized the role of PPPs for purposes of encouraging technology transfer.¹⁸ Outside of the UN system, other intergovernmental organizations (INGOs) and individual member states have multiple initiatives involving PPPs for development.¹⁹ Additional stakeholders include philanthropic organizations, which also contribute to this trend by encouraging the formation of PPPs for purposes of product development as well as distribution of drugs for PRNDs and vaccines; in some cases, their budgets rival or even exceed those available in the public sector. As this book's chapters document and discuss, PPPs have a number of social purposes, including but not limited to capacity-building, technological learning, and technology sharing – and even the promotion of human rights – within global knowledge governance.²⁰

PPPs have become an important feature of global regimes shaping sustainable development goals set forth in the 2030 Agenda and its seventeen accompanying SDGs.²¹ As described in some chapters in this book, the role of partnerships had gained tremendous prominence from preparatory work undertaken in connection with the World Summit on Sustainable Development (WSSD), which took place in Johannesburg in 2002. At this conference, two hundred partnerships were launched as a so-called Type II outcome of this multilateral conference – a historic moment that is widely seen as ushering in the current era of development PPPs.²² Commentators observe that “[j]ust as the [1992 United Nations Conference on Environment and Development, also known as the] Rio Conference was as much about the legitimizing of NGOs in global governance as it was about the environment, Johannesburg was about the legitimacy of the role of business in development.”²³ Since then, the role of the private sector (whether for-profit or non-profit) in development-oriented activities has expanded enormously.

¹⁶ See Frederick H. Abbott, Chapter 2, *infra*; Estaban Burrone, Chapter 5, *infra*.

¹⁷ See Anatole Krattiger et al., Chapter 3, *infra*; Katy M. Graef et al., Chapter 4, *infra*; Jens Bammel, Chapter 7, *infra*; Sara Bannerman, Chapter 8, *infra*; Susan Isiko Štrba, Chapter 9, *infra*; and Ahmed Abdel-Latif, Chapter 11, *infra*.

¹⁸ See Joshua D. Sarnoff & Margaret Chon, Chapter 12, *infra*; Aysem Mert & Philipp Pattberg, Chapter 13, *infra*.

¹⁹ See Hilde Stevens & Isabelle Huys, Chapter 6, *infra*; Melissa Levine, Chapter 10, *infra*; Irene Calboli & Delphine Marie-Vivien, Chapter 14, *infra*; and David J. Maurrasse, Chapter 16, *infra*.

²⁰ See Padmashree Gehl Sampath, Chapter 15, *infra*; Chidi Oguamanam & Jeremy De Beer, Chapter 17, *infra*; and Peter K. Yu, Chapter 18, *infra*.

²¹ 2030 Agenda, *supra* note 1.

²² Kanie et al., *supra* note 14 at 9; Felix Dodds, David Donoghue, & Jimena Leiva Roesch, NEGOTIATING THE SUSTAINABLE DEVELOPMENT GOALS: A TRANSFORMATIONAL AGENDA FOR AN INSECURE WORLD 142–43 (2017); Benedicte Bull, *Public–Private Partnerships: The United Nations Experience* 480, in INTERNATIONAL HANDBOOK ON PUBLIC–PRIVATE PARTNERSHIPS (Graeme A. Hodge, Carsten Greve, & Anthony E. Boardman eds., 2010).

²³ Benedicte Bull & Desmond McNeill, DEVELOPMENT ISSUES IN GLOBAL GOVERNANCE: PUBLIC–PRIVATE PARTNERSHIPS AND MARKET MULTILATERALISM 10 (2007) (quoting Zadek).

The UN also acknowledged and endorsed the importance of partnerships in its Millennium Development Goals (MDGs), in effect from 2000 to 2015.²⁴ Unlike the predecessor MDGs, which were formed rather quickly within a relatively closed process,²⁵ the current SDGs are the result of extensive input

[t]hroughout 2012 and 2013, [in which] the United Nations facilitated what seemed like the first exercise in global participatory democracy, organizing fifty-plus country consultations, multiple global thematic consultations, and a worldwide online citizen survey – all of which were accompanied by numerous parallel NGO, expert, and state initiatives. Likewise, the General Assembly took seriously its deliberative task . . .

The open nature of the process also permitted civil society organizations, UN agencies, and private corporations to engage at multiple points and stages in the drafting. A staggering range of diverse interests were promoted and defended by these actors.²⁶

The relatively participatory and open nature of this deliberative process has several consequences. One of these is the inclusion of international human rights measures, which is a significant evolution from the previous MDGs; another is the disruption of the MDG's distinction between developed and developing countries.²⁷ Broader stakeholder involvement also resulted in a proliferation of development metrics.²⁸ The end result is a surprisingly broad array of goals, targets, and indicators: 17 current goals (as opposed to 10 MDGs), 169 current targets (compared to 18, later expanded to 21, under the MDGs), and 232 current indicators (compared to 48, later expanded to 60, under the MDGs).²⁹

Thus, the SDGs encompass a much broader and certainly much more detailed set of activities related to sustainable development, including the production of key global public goods impacted by IP and knowledge governance. They give global governance considerably more content, albeit in the language of goal-setting rather than norm-setting.³⁰ This decisive turn toward goals, targets, and indicators as benchmarks of progress toward sustainable development in turn raises profound questions of measurement, monitoring, and evaluation – all major topics beyond the scope of this book.³¹ Many of the book's chapters do, however, seek to achieve a better understanding of

²⁴ MDG 8: Develop a Global Partnership for Development, UN Dep't of Econ. and Soc. Affairs, 2017, available at www.un.org/millenniumgoals/global.shtml.

²⁵ Ved P. Nanda, *The Journey from the Millennium Development Goals to the Sustainable Development Goals*, 44 DENV. J. INT'L L. & POL'Y 389, 398 (2016).

²⁶ Malcolm Langford, *Lost in Transformation? The Politics of the Sustainable Development Goals*, 30 ETHICS & INT'L AFF., 167, 170–71 (2016); Kanie, et al., *supra* note 16 at 3, 16–17.

²⁷ Stephen Browne, SUSTAINABLE DEVELOPMENT GOALS AND UN GOAL-SETTING 138–54 (2017) (“This larger movement away from a uni-directional transfer of development aid (from so-called ‘developed’ to ‘developing’ sectors) is also reflected in the emphasis on individual state accountability (of both developed and developing states) for the achievement of the SDGs”).

²⁸ *Id.* at 171.

²⁹ For MDGs, see *Millennium Indicators*, UN, available at <https://millenniumindicators.un.org/unsd/mi/pdf/mdglist.pdf>. The total number of SDG indicators is 244, but some of those are repeated under several targets. See *SDG Indicators*, UN DEP'T OF ECON. & SOC. AFF., available at <https://unstats.un.org/sdgs/indicators/indicators-list/>. See also UN, Sustainable Development Report 2017, available at <https://unstats.un.org/sdgs/files/report/2017/TheSustainableDevelopmentGoalsReport2017.pdf>.

³⁰ Kanie et al., *supra* note 16 at 1–2.

³¹ Browne, *supra* note 27, at 143–49; see generally POVERTY AND THE MILLENNIUM DEVELOPMENT GOALS (Alberto D. Cimaradmore, Gabriele Koehler, & Thomas Pogge eds., 2016).

Box 1.1. UN Sustainable Development Goal 17³²
Strengthen the means of implementation and revitalize the global partnership for sustainable development.

[TARGETS:] Multi-stakeholder partnerships

- 17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology, and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries
- 17.17 Encourage and promote effective public, public–private and civil society partnerships, building on the experience and resourcing strategies of partnerships

effective implementation, by discerning the characteristics of PPPs associated with constructive progress toward the goals.

Of key importance to this book, SDG 17 proposes to “[s]trengthen the means of implementation and revitalize the global partnership for sustainable development.” (See Box 1.1 for the key relevant target and accompanying indicators.) This seventeenth goal is viewed as a cross-cutting goal, which encourages partnerships as a primary if not exclusive approach toward implementation of all the other sixteen goals. Several of SDG 17’s targets are grouped under the rubric of “Technology,” including a target to “[e]nhance North-South, South-South and triangular regional and international cooperation on and *access to science, technology and innovation and enhance knowledge sharing* on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.”³³

The dynamics underlying the simultaneous emergence of partnerships for sustainable development and for knowledge governance can be attributed in part to the powerful need for linkages across different domains to effectuate development goals, and particularly innovation-related development goals. This is very apparent in the global fight against communicable diseases, which do not recognize borders. Partnerships could be described as “regime-straddling” because they cut across distinct development policy areas with their accompanying and typically siloed legal regimes, as well as across public and private sectors.³⁴

Rather than treating each development issue (e.g., global health) as a self-contained problem, PPPs and other forms of multi-stakeholder governance anticipate that more inclusive collaboration, interdisciplinary cooperation, and multifaceted approaches are necessary to tackle complex, cross-border issues. The emphasis in the SDGs on the interdependence and interconnectedness of problems – that is, “how systems are coupled

³² SDG 17, *supra* note 34.
³³ SDG 17: Revitalize the global partnership for sustainable development (emphasis added), UN, *available at* www.un.org/sustainabledevelopment/globalpartnerships/.
³⁴ Margaret Chon, *PPPs in Global IP (Public–Private Partnerships in Global Intellectual Property)*, in *METHODS AND PERSPECTIVES IN INTELLECTUAL PROPERTY* 296 (Graeme B. Dinwoodie ed., 2013). Cf. Laurence R. Helfer, *Regime Shifting: The TRIPS Agreement and New Dynamics of International Intellectual Property Lawmaking*, 29 *YALE J. INT’L L.* 1 (2004).

and the need for integrative policies”³⁵ – is another key difference between the prior MDGs and the current SDGs.³⁶ PPPs are situated across different disciplines, sectors, and regimes, including IP legal regimes. Regime straddling requires new and possibly out-of-the-box forms of governance disciplines and mechanisms, whether through management choices (in the private sector) or regulatory policies (in the public sector). This is all the more critical because the new benchmarks for progress on the SDGs are accompanied by very few binding commitments, not to mention “specific responsibilities, obligations, or associated compliance mechanisms.”³⁷

The relationship of PPPs to global governance, whether or not in the context of the SDGs, can be viewed along two or even three different dimensions: partnerships require some type of effective internal governance or management to coordinate the differing approaches of partners internally, and they also require mechanisms to interface with any external stakeholders within their immediate networks. Finally, individual PPPs are stakeholders themselves within decentralized governance models; as such, they necessarily contend with both national and multilateral funding and regulatory institutions. The interactions of the various actors, whether partners or stakeholders, are expected to result in specified outcomes, or goals, in the case of the SDGs.

Especially relevant to knowledge governance activities, the partnerships envisioned through SDG 17 are tied to the promise of greater innovation for sustainable development. SDG 9 directly addresses this linkage (“Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”) with its accompanying targets.³⁸ As noted earlier, the early harbingers of this connection between sustainable development and IP were apparent in the global health policy space, which had been highly polarized because of differential access to treatment for global communicable diseases such as HIV/AIDs. Partners within public health-oriented PPPs are in the position to act instrumentally through their deployment of tangible and intangible proprietary rights for non-commercial ends.³⁹ These partners (often NGOs or NPOs) sometimes leverage IP for social mission either defensively (“to preclude commercial use of protected materials”) or offensively (“to promote non-commercial creative exchange and adaptation”), as Antony Taubman observes, and “this is the essence of IP management in public-private partnerships.”⁴⁰ A few of the SDGs reflect explicit affiliations

³⁵ *Id.* at 14.

³⁶ Kanie et al., *supra* note 16 at 10–11.

³⁷ Kanie et al., *supra* note 16 at 18; *see also* Oran R. Young, Conceptualization: Goal-Setting as a Strategy for Earth System Governance, in *GOVERNING THROUGH GOALS: SUSTAINABLE DEVELOPMENT GOALS AS GOVERNANCE INNOVATION* 31, 35–37 (Norichika Kanie and Frank Biermann eds., 2017) (describing pitfalls of a goal-setting approach to governance).

³⁸ SDG 9: Build Resilient Infrastructure, Promote Inclusive and Sustainable Industrialization and Foster Innovation, UN, *available at* <https://sustainabledevelopment.un.org/sdg9>.

³⁹ Chon, *supra* note 35, at 284; *see also* Steiner Andreson & Masahiko Iguchi, *Lessons from the Health-Related Millennium Development Goals*, in *GOVERNING THROUGH GOALS: SUSTAINABLE DEVELOPMENT GOALS AS GOVERNANCE INNOVATION* 165, 175–78 (Norichika Kanie & Frank Biermann eds., 2017) (outlining the achievements and criticisms of the GAVI Alliance).

⁴⁰ Antony Taubman, *A Typology of Intellectual Property Management for Public Health Innovation and Access: Design Considerations for Policymakers*, 4 *THE OPEN AIDS J.* 1, 12 (2010) (also discussing open innovation, open source, commons-based peer production and distributed innovation in drug development).

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between IP and sustainable development;⁴¹ many more of the connections between IP and the SDGs, however, are implicit.

While the SDGs have been sparsely analyzed so far, the rise of development partnerships has not gone unnoticed. Various critiques of what has been called “market multilateralism”⁴² have articulated concerns about the financing of PPPs – whether the concern is with the defunding of public sector development, the lack of national capacity to effectively oversee transparent and efficient financing of PPPs, or the possibly self-interested priorities of the private sector.⁴³ Within multilateral institutions tasked with global knowledge governance, these add to long-standing concerns about possible multi-lateral priority-setting through funding influences by the private sector⁴⁴ as well as over-reliance on market mechanisms to optimize social welfare through innovation.⁴⁵ Observers of collaborative innovation state that while:

increasing numbers of ‘wicked problems,’ which cannot be solved by standard solutions or by spending more money, call[] for innovative solutions. . . . [including] multi-actor collaboration in spurring innovation relating to public policies, organizations[,] and services . . . [,] many things can go wrong in the contingent process of networking, collaboration[,] and innovation and the precarious links between them. As such, some kind of innovation management is required in order to remove barriers, enhance drivers[,] and keep the process of collaborative innovation on track.⁴⁶

Some observers voice skepticism about the ability of the SDGs to overcome deepening structural inequalities both within and across countries.⁴⁷ However, the current reality is that the SDGs represent part of a shift in the approach to development and development assistance, to emphasize greater private sector involvement (both nonprofit and

⁴¹ SDG Target 3b, for example, states: “Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.” See generally INTELLECTUAL PROPERTY AND INTERNATIONAL TRADE: THE TRIPS AGREEMENT (Carlos M. Correa & Abdulqawi A. Yusuf, eds., 2016).

⁴² Bull & McNeill, *supra* note 25.

⁴³ See Sundaram et al., *supra* note 12, at 12–19; María José Romero, WHAT LIES BENEATH? A CRITICAL ASSESSMENT OF PPPs AND THEIR IMPACT ON SUSTAINABLE DEVELOPMENT (2016); Manuel F. Montes, *Public-Private Partnerships as the Answer . . . What was the Question?*, Inter Press Service 4 (Sep. 26 2017); Civil Society Reflection Group, *Spotlight on Sustainable Development 2017: Reclaiming Policies for the Public* (Report of the Reflection Group on the 2030 Agenda for Sustainable Development 2017) available at www.2030spotlight.org/sites/default/files/download/spotlight_170626_final_web.pdf.

⁴⁴ Cf. Carolyn Deere Birkbeck, THE WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO): A REFERENCE GUIDE 184–85 (2016); cf. Carolyn Deere, *The Politics of Intellectual Property Reform in Developing Countries: The Relevance of the World Intellectual Property Organization*, in THE DEVELOPMENT AGENDA: GLOBAL INTELLECTUAL PROPERTY AND DEVELOPING COUNTRIES 111, 121–22 (Neil Netanel ed., 2008).

⁴⁵ Keith E. Maskus & Jerome H. Reichman, *The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods*, in INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME 3 (2005).

⁴⁶ Jacob Torfing, *Collaborative Innovation in the Public Sector*, in HANDBOOK OF INNOVATION IN THE PUBLIC SERVICES 301 (2013) (emphasis added).

⁴⁷ Gillian MacNaughton, *Vertical Inequalities: Are the SDGs and Human Rights up to the Challenges?*, 8 INT’L J. HUM. RTS., 1050 (2017); see also Cimadamore, et al., *supra* note 33.