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Overview

Scope and aims

This book examines the social impact of intellectual property (IP) policies and laws. Addressing both current trends and future scenarios relating to IP and human development, it is aimed at the calibration of IP frameworks to better meet social needs in countries at different stages of economic development, according to local contexts and culture. While the priorities for human development may evolve with time and vary between communities, this volume addresses topics that are of concern to all: health, food security, access to education, opportunities and risks from new technologies, the protection of the environment and the preservation of bio-cultural heritage, as well as the promotion of contemporary expression in the arts. As highlighted in the various contributions to this volume, IP laws interact with all these areas of human endeavour in palpable ways, and a multidisciplinary approach is needed to assess their impact on human well-being. In particular, this study introduces and engages the concept of 'capabilities' (developed by Sen, Nussbaum, Fukuda-Parr and many others) in evaluating human welfare and links these ideas to the existing literature on IP and innovation. Since the choices and capabilities of individuals and communities relating to particular areas, such as health and education, inevitably affect other important capabilities – for example, free expression and political participation – the diverse areas of human development cannot be approached in isolation. It is hoped that their treatment side by side in one book may draw out inter-connections not only between areas or sectors, but also in the responses contemplated by policymakers and civil society towards more balanced solutions for the future. Concerns of human rights and social justice cut across all topics in this volume and are given particular emphasis. Other cross-cutting or related themes, such as gender equality and climate change, are addressed in particular sections within chapters.

This book begins by revisiting some of the basics in IP law including long-held assumptions in patent and copyright laws on the dynamics of innovation. In doing so, it considers whether these assumptions adequately account for the different cultural values and attitudes towards creativity, as well as the essential role of social networks in fuelling innovation. The chapters of this book look beyond the kind of innovation commonly associated with scientific laboratories or the R&D divisions of companies to consider, for example, the innovative practices of farmers, indigenous and other traditional communities bound by customary practices and the virtual or 'imagined communities' of cyberspace (Strathern 2005). Are the same assumptions on income incentives for innovation in high-tech laboratories and large-scale operations of equal meaning and relevance to innovators in other contexts and cultures? Going beyond Anglo-American analyses of IP (particularly copyright and patents) as mainly providing economic incentives for innovation, or the natural rights arguments for protecting IP as an extension of the 'personality' of creators (Fisher 2001), this book explores how different cultural values and contexts shape the motivations and capabilities of individuals and communities in their innovative endeavours.

The UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions of 2005 highlights in its Preamble that 'cultural diversity creates a rich and varied world, which increases the range of choices and nurtures human capacities and values, and therefore is a mainspring for sustainable development for communities, peoples and nations'.[1]

One question explored in this book is how IP protection, cultural diversity and human development link up in practice. Some answers may be found, for example, in the unfolding literature on the IP protection of traditional knowledge (TK). Indigenous peoples and local communities guided by customary practices have emphasized the pursuit of 'development with culture and identity' as central to their human rights and human development,[2] and the inter-generational transmission of their TK is part of this endeavour. Discussions on the IP protection of TK have taken place internationally at the World Intellectual Property Organization (WIPO), UNESCO and also within the context of the 1992 Convention on Biological Diversity, especially for TK relevant to the conservation of biodiversity. There is increasing awareness, however, that biodiversity is intrinsically linked to cultural diversity. For example, the TK of indigenous peoples weaves together elements of both, and there is a tendency now to speak of the protection of their bio-cultural heritage. How exactly does IP intersect with the protection of bio-cultural diversity? Do IP frameworks have a 'homogenizing' effect on agricultural practices and cultural products as some discern from trends of globalization (Tansey 2008, p. 216), or can they be adapted to strengthen the diversity of innovation systems and cultural expressions in the world? Some suggest that the notions of Western private property central to IP laws are simply incompatible with the social relations underpinning 'communal' forms of innovation (Leach 2005; Anderson 2009); others see hope for solutions within the diverse legal forms and regimes making up IP (e.g. trademarks and geographical indications serve different functions from patents and copyright). Yet others would emphasize the agency of individuals and communities in shaping public policies and coming up with unique, *sui generis* solutions. The aim of this book is to reflect these contrasting perspectives in nuanced ways, drawing literature from different regions and disciplines.

The United Nations Declaration on the Right to Development recognizes in its Preamble that 'development is *a comprehensive economic, social, cultural and political process*, which aims at the constant improvement of the well-being of the entire population and all individuals on the basis of their *active, free and meaningful participation* in development and in the *fair distribution of benefits* resulting therefrom' (emphasis added).[3] In relation to developing countries and economies in transition, the United Nations Millennium Declaration further calls for 'policies and measures, at the global level, which correspond to the needs of developing countries and economies in transition and are formulated and implemented with their effective participation' (para. I.5).[4] Do global and national IP rules adequately address the differentiated needs of developing countries, and those of marginalized stakeholders in all countries? Various chapters of this book examine whether patents and copyright currently incentivize the kind of innovations most needed by stakeholders in developing countries and elsewhere, whether in relation to health, food security, education or cultural participation. The chapters also examine whether IP frameworks enable *access* by stakeholders to those innovations and knowledge products most relevant to their needs, in ways that help to build their capabilities in these areas. As Sunder (2007, p. 122) notes: 'The traditional utilitarian understanding of intellectual property focuses on incentivizing the creation of more knowledge goods…But utilitarianism does not ask who makes the goods or whether the goods are fairly distributed to all who need them'.

There is certainly room for fine-tuning where and how IP laws currently draw the lines between protection of private rights and public access to 'knowledge, knowledge-creating tools and knowledge-embedded goods' (Balkin 2008, p. 2). Although theoretically protecting the

'intangible creations of the mind', IP laws in effect calibrate the flow of innumerable goods and resources relevant to advancing capabilities in all societies, including medicines, books, computers, seeds, radios and clean-energy turbines, just to name a few. While most policy-makers would be familiar with the challenges in balancing public and private interests at the domestic level, ideas of a 'global public' or 'publics' inevitably would demand different ways of drawing those lines. Such a change in mindset does not occur overnight, but is nevertheless crucial to deal with many pressing global and local challenges, such as the high incidence of neglected or resurgent diseases in the developing world, the persistent lack of textbooks and access to information and communication technologies (ICTs) in poor regions or sectors within rich countries and the plight of many farmers in accessing appropriate agricultural technology while maintaining local crop diversity. Many challenges, such as access to clean energy technology, affect stakeholders in all societies. In discussing fair access by individuals and communities to material potentially protected by IP, this book emphasizes the enhancement of their capabilities in cultural participation and innovation as in itself a goal for human development. As Sen (1999, p. 11) underlines, the human development approach regards the individual as an agent rather than a 'patient' or passive recipient of the benefits of development programmes.

Looking beyond current ways of organizing social relations around IP, this book furthermore highlights alternative modes of innovation and collaboration that are emerging to address diverse challenges for human development. Many hybrid innovation models and partnerships that have emerged to meet challenges in global health equity or food security involve combining traditional know-how and Western scientific approaches to research. An example is the research into HIV/AIDS and cancer cures derived from TK on the mamala plant in Samoa. 'Cooperation not compulsion' is needed to find the middle ground in these and other challenges such as climate change adaptation and mitigation (Shabalala 2009). Finding equitable arrangements that recognize the contributions of different participants in these endeavours – whether a national research institute, a local community, a private firm or a civil society group – is an ongoing challenge in which laws, codes of ethics, goodwill and creativity all have a place. Geller (1998) suggests that innovation depends on the 'feedback' into 'communication networks' of 'new' creations, many of which are based on prior works. Open source production, prize funds, patent pools and public-private partnerships all demonstrate the importance of social networks in finding creative solutions. These innovation models have been applied in an increasing number of fields including medical, agricultural and climate change–related R&D. While some of these 'alternatives' are licensing arrangements premised on the existence of IP, they represent a changing ethos on the role of IP in human development, and may inspire altogether new ways of approaching innovation.

Background and methodology

In 2007, the Ford Foundation commissioned a literature review by PIIPA of published trends and future scenarios relating to IP with a focus on implications for human development. An aim of the Ford International Intellectual Property Initiative (IIPI) was to contribute to the development of more balanced IP regimes which highlight the importance of the public interest, respect the right to development and support the voices of frequently neglected stakeholders. The remit of the commissioned study was to prepare a synthesis and review of gathered literature towards building 'an overall understanding on the future trends, challenges and opportunities in this

field'. The commissioned study focused on the overlapping areas of medicine, traditional knowledge, education, as well as culture and the arts. Following this remit, PIIPA formed a team of researchers, including both members of its pro bono network and the participation of partner institutions, to conduct a systematic search for literature relevant to this study by regions, substantive areas and a mapping of key organizations working in spheres relating to IP and public interest. The literature review covered the work of international and regional inter-governmental organizations, as well as academic institutions and other civil society organizations (CSOs) around the world. PIIPA issued a public call for literature, alongside direct invitations to more than 6000 individuals and entities working in IP-related areas around the world to share relevant literature towards the study. Several partner organizations, duly listed in the Acknowledgements, helped actively to extend the call for literature in particular regions through their networks.

The literature review uncovered a wealth of materials relating to IP and human development. The Ford Foundation provided further support from 2008 to mid-2010 towards the updating and extension of this study to cover other important areas of human development and to explore modes of dissemination to bring the results of the study readily to the public. As part of that dissemination process, this book features a series of articles by the research team and further participants covering key areas and concerns of IP and human development. While the chapters present ideas and options for reforms in the various areas, the intention is less on prescription – given that policy choices will need to cater to local contexts and culture – and more on encouraging new perspectives and fruitful exchange on these topics among policymakers, stakeholders, CSOs and academics from different disciplines. Further knowledge resources and options for civil society action are available on the PIIPA website for this research project (http://www.piipa.org/IP_and_Human_Development/).

In discussing options for the future, this book also explores literature relating to 'future scenarios' on IP and human development. Unlike forecasts or projections of the future, scenarios are 'stories designed to stimulate new ways of thinking about the future' (McNeely 2005, p. 62). Participants in 'scenario planning' explore the trends, driving forces and uncertainties of today to develop and describe a set of plausible, alternative future outcomes relating to a theme (ibid.). The idea is not to accurately predict a single outcome but to highlight a variety of plausible futures (Evans et al. 2006). In the process, stakeholders are invited to think beyond their existing stand-points or institutional agendas, in search of alternative solutions for the future. In engaging the device of 'stories' to broach the future, this book hopes to illustrate the variety of narrative forms that can be creatively engaged to enrich discussions relating to IP and human development. Stories will likely speak to different cultures, including those with oral traditions. Narrative methodologies can also add new information and perspectives to economic and legal writing and have inspired a whole genre of legal scholarship (see Brooks & Gewirtz 1996).

The remit of the Ford-commissioned study extends to a literature review of scenario plans relating to IP, as published by international and regional entities. The results of this literature review should not be confused with a full-scale scenario planning exercise with its particular methodologies. Examples of the latter can be seen in the Millennium Ecosystem Assessment and the 'AIDS in Africa' scenario planning spearheaded by the Joint United Nations Programme on HIV/AIDS (UNAIDS). An extensive process directly relating to IP was

completed by the European Patent Office (EPO) in 2007, and the resultant scenario plan is analysed in detail in Chapters 2 and 9 of this book. Scenario planning is not widespread in the IP field. To spur discussion and creative exchange on topics yet to be covered by institutional scenario plans, some alternative future options or scenarios in relation to particular sectors and themes are broached in chapters of this book. These are not meant to be exhaustive; they suggest, rather, some considerations and potential directions for future scenario thinking in these areas.

A recurring topic in the book relates to how ICTs have transformed options for producing and disseminating creative works. Modern publishing is on the move with such developments and increasingly multi-media in nature. The design of this study likewise engages both 'traditional' and electronic methods of making materials as accessible as possible to the public. Through Ford Foundation support, copies of this book have been sent directly to policymaking institutions and a cross-section of stakeholders, particularly in developing countries. Copies will also be made available to public interest organizations, including libraries, and disseminated at public events hosted by PIIPA and partner institutions on themes relating to IP and human development. To promote open access, an electronic version of this study will also be placed on various online repositories in addition to dissemination through PIIPA's website (http://www.piipa.org). The content of the e-version will be shared with the public under a Creative Commons licence.

Structure of the book

Participants from different fields and regions have contributed ideas and literature to the various topics addressed in this volume. While those directly involved in writing or co-authoring the chapters are acknowledged within our list of contributors, many other individuals have contributed comments and case studies to fine-tune and illustrate the material (see Acknowledgements). This section provides a synopsis of each chapter, as well as some commentary on how the different chapters connect together.

Chapter 1 introduces basic notions in IP law, along with some tools of analysis for approaching IP from a human development perspective. It first highlights the expanding range of intangible creations and legal regimes that fall within the umbrella term 'intellectual property'. The chapter explores common justifications and assumptions behind IPRs such as copyright and patents. Along with natural law arguments, it discusses the utilitarian arguments that shape current economic approaches to these forms of IPRs. Within a utilitarian framework, IP is basically seen as providing an income incentive for innovation, which in turn is meant to contribute towards overall welfare through the maximization of incentivized works. This approach is said to obscure concerns of distribution (Sunder 2007). It also does not guarantee that IP frameworks (combined with market dynamics) ultimately incentivize the kind of innovation needed by a broad range of stakeholders, including those with less purchasing power, for human development. Exploring alternative paradigms for development which could enrich the current discussions on IP, the chapter looks particularly at the capability approach to human development pioneered by Nobel Laureate Amartya Sen and others. The capability approach suggests that the ends of development should be conceptualized 'in terms of people's capabilities to function, that is, their effective opportunities to undertake the actions and activities that they want to engage in, and be whom they want to be' (Robeyns 2005, p. 95; see further Appendix A). The chapter explores how this capability approach might be applied to the context of IP and

innovation and suggests areas for future research. It also considers how further studies on the dynamics of IP and innovation might equally enrich future work on the capability approach. For example, studies on social networks as drivers of innovation highlight the relevance of understanding 'group' and 'collective' capabilities alongside 'individual' capabilities for human development. The chapter then addresses other important approaches to social justice and human development, especially the implications of human rights for IP law. It concludes by posing some questions for the reader, for example on how the usual 'trade-offs' in IP and public interest might be re-visualized to address the interests of a global public.

Chapter 2 traces the complex overlap between IP and medicine, drawing from the joint perspectives of a researcher with the Brazilian Ministry of Health, a programme officer with the National Cancer Institute (US) and an associate professor at DePaul University College of Law, Chicago. Since the TRIPS Agreement requires WTO members to extend patentability to all technological fields, member states that formerly did not grant patents for pharmaceutical products or processes had to alter their legislation within implementation deadlines provided by the Agreement. While least developed countries (LDCs) received time extensions for implementation (see the Doha Declaration on the TRIPS Agreement and Public Health), many countries have not made full use of their grace period in customizing legal reforms according to their local needs. As discussed in the chapter, the TRIPS Agreement and TRIPS-plus provisions in free trade agreements (FTAs) significantly impact on global R&D, as well as on the distribution and pricing of both innovative and generic medicines. The chapter examines, among other things, flexibilities within the TRIPS regime for patent exemptions, compulsory licences, parallel imports and price controls to facilitate access to essential medicines in developing countries. The experiences of generic drug producing countries such as Brazil and India are highlighted. The chapter also looks at trends in pharmaceutical innovation in developed countries, including changes to the test of 'obviousness' under patent regimes, the discernible emphasis on life-style drugs in wealthier countries and the proliferation of secondary inventions in patent applications. It then explores recent initiatives at the World Health Organization (WHO) to address the well-documented innovation gap for neglected and resurgent diseases in developing countries. Appendix B provides a summary of alternative, collaborative models of medical innovation that have emerged to address this gap, including public-private partnerships, advanced market commitments, prizes, open source solutions and patent pools. In the last section of the chapter, some future scenarios published by international and regional entities in relation to IP and health are described and analysed. The chapter ends by highlighting the need not only for legal reforms on IP and capacity building in developing countries, but also for improved corporate governance and social responsibility of pharmaceutical companies.

Chapter 3 addresses the intersection between IP, biodiversity and food security. It combines the inputs of a Norwegian specialist on IP and human rights, a Peruvian director of research on IP and biodiversity, and a South Asian consultant on IP and trade with the United Nations Development Programme (UNDP). The affluence and over-consumption in some parts and by some populations of the world contrast with the glaring incidence of hunger elsewhere: The Food and Agriculture Organization of the United Nations (FAO) estimated in June 2009 that 1.02 billion persons suffered from hunger, an increase of more than 150 million people in just two years.[5] Chapter 3 first addresses the nature of the right to food under international human rights instruments and how IP laws may affect that right. It then discusses the interface between

IPRs and recent agricultural trends, focusing on how the increasing reliance on the private sector for agricultural research in many contexts – and on IPRs such as patents and plant variety protection (PVP) to incentivize such research – affects farming communities in developing countries. Exploring the social and environmental effects of IPRs in transgenic technology and biological resources, the chapter contrasts the highly mechanized agriculture system in most developed countries with the traditional farming practices still found in many parts of the world. These traditional practices (which usually include seed saving, reuse and exchange) are increasingly being displaced by industrial farming models based, for example, on a reliance on patented transgenic seeds. This is despite the fact that local agro-biodiversity is essential for food security. Of course, higher yields are likely, at least in the short term. But this does not always mean farmers will be better off. If farmers become dependent on a few dominant global firms holding patents on most of the seeds they sow, the increased cost of seed and, in some cases, of other inputs like pesticides, may actually make them more vulnerable. The chapter suggests that developing countries should make full use of the flexibilities under the TRIPS Agreement in customizing their PVP according to local contexts and needs. Some examples are drawn from recent legislation in Thailand, Malaysia and India. The chapter then looks at other trends of 'enclosure' on the genetic commons, including the affirmation of sovereign rights over genetic resources under the CBD,[6] and some countervailing implications of the FAO International Treaty for Plant Genetic Resources for Food and Agriculture (ITPGRFA). The chapter ends by emphasizing R&D strategies in developing countries which prioritize the development of national and community-based seed banks, the stimulation of collective participatory breeding, the implementation of farmers' rights (under ITPGRFA) and the appropriate protection of the TK of indigenous communities. Open source or cross-licensing structures that may create a defined technological commons to address food security are also explored, along with R&D strategies which combine new research techniques and the inputs of local farmer-innovators.

Chapter 4 discusses present trends and future options in the legal protection of traditional knowledge (TK). It brings together perspectives from an IP law professor at the Washington University in St. Louis and a post-graduate researcher in ethno-museology who is herself a representative from the Kichwa Indigenous People in Ecuador. The chapter suggests the need not only for multidisciplinary research in this area, but also for the direct involvement of local community members as co-researchers and scholars in their own right. The protection of TK is integral to the cultural and physical survival of indigenous peoples, as well as to other non-indigenous communities guided by customary practices including many local farming communities. Barsh (1999, pp. 74–75) observes that: '[W]hat is "traditional" about traditional knowledge is not its antiquity, but *the way it is acquired and used*. In other words, the social process of learning and sharing knowledge, which is unique to each indigenous culture, lies at the very heart of its "traditionality"'. Māori representative Aroha Te Pareake Mead has said that: 'Traditional knowledge defines who we are, what makes us unique, what breathes integrity into our existence and relationship with our natural and cultural landscapes' (Mead 2005, p. 18). Exploring concepts of TK, Chapter 4 qualifies that 'contrary to popular belief, TK is not static and unchanging, but rather develops and changes over time, albeit by means of traditional or customary practices'. Issues concerning the IP protection of TK have come to the fore in international frameworks especially in cases of misappropriation of TK (or plant genetic materials which embody TK) by third parties. The chapter highlights existing means of legal protection for TK, the development of *sui generis* means for protecting TK within countries and

regions, as well as the evolution of internationally harmonized approaches to the protection of TK. Appendix C discusses some international and regional strategies in relation to the promotion of traditional medicinal knowledge, and includes a case study of the *sui generis* law in Thailand to promote such knowledge. Under the CBD, significant work is taking place towards the elaboration of an international regime for access and benefit-sharing of genetic resources, with implications for the protection of associated TK. Chapter 4 highlights some priorities for capacity building and legal support to enable indigenous peoples' full participation in such forums to define the future contours of their TK protection and resource rights. The chapter calls for a holistic (rather than piecemeal) approach to preserving bio-cultural heritage which recognizes the intrinsic links of TK to the cultural identity, land rights and customary laws of indigenous peoples and local communities.

Chapter 5 addresses challenges faced by indigenous peoples and non-indigenous local communities in the legal protection of their traditional cultural expressions (TCEs). It highlights considerations for governments, public institutions and non-profit organizations in promoting TCEs to support these peoples and communities in their cultural, economic and social development. Written by a Peruvian IP lawyer and a contributing editor, it incorporates comments from indigenous representatives, anthropologists and legal scholars. Surveying relevant literature from different disciplines, it poses questions relating to the 'commodification' of TCEs, a process that can transform the social relations underpinning creative processes in indigenous communities. At the same time, the making and marketing of some forms of TCEs present potential sources of livelihoods to many indigenous communities currently marginalized in the socio-economic order. Given a global environment where the TCEs of indigenous peoples are increasingly copied and commercially mass-produced by third parties, some potentials and limitations in relation to IP protection of TCEs are discussed. The chapter draws a distinction, especially, between forms of IP such as patents and copyright, which historically emphasize the protection of individual creators, and those forms of IPRs which support to some extent concepts of 'communal' innovation and 'authenticity' relevant to TCE custodians. It notes how labelling devices such as geographical indications, trademarks, collective marks and certification marks can potentially be used by local communities to distinguish their TCEs from mass-produced copies. The chapter then explores developments in *sui generis* protection at the national, regional and international levels for TCEs. It questions the extent to which the 'unique' or hybrid measures being developed really depart from conventional IP concepts and embrace principles of relevance to TCE custodians. Some of these principles and customs are reflected in indigenous protocols and standards being developed to govern third-party access to and use of TCEs, including within the context of the Internet. Exploring some future scenarios, the chapter reiterates the need for the legal protection of TCEs to be approached within integrated solutions to protect bio-cultural heritage. The legal protection of TCEs also needs to be understood in relation to human rights and other international norms relevant to promoting cultural rights and cultural diversity.

A note may be helpful here on how various chapters connect in the book. The discussion on IP and human rights in Chapter 1, for example, is taken up further in different chapters. The right to health discussed in Chapter 2 is connected to the right to food addressed in Chapter 3. Cultural rights as human rights are discussed further in Chapter 8 on cultural diversity and the arts (see synopsis below); these rights are also relevant to the discussions on traditional

knowledge and cultural expressions in Chapters 4 and 5. The latter chapters are closely connected. Although TCEs are embraced within the broad, holistic definition of TK adopted in Chapter 4, the particular legal developments in relation to TCEs called for a separate chapter on the topic. Chapter 5 on TCEs also complements Chapter 8, and these two chapters were conceived as part of a larger inquiry on the relation between IPRs and cultural diversity. While Chapter 8 explores themes including the intersection between copyright protection and the contemporary arts, clean-cut lines cannot always be drawn between 'traditional' and 'contemporary' expressions, and innovation occurs in all realms. In discussing traditional livelihoods, it is also important to account for the multiple priorities and aspirations of human development among individuals within communities. The right to education, for example, is integral to human development in all societies. Two chapters (Chapters 6 and 7) in this book address the important nexus between copyright laws and access to knowledge and education. As seen in the rest of the summary, they approach the topic from different angles.

Chapter 6 examines the implications of global IP regimes and national copyright policies on capabilities for education, particularly in developing countries. Contributed by a law professor from the Seattle University School of Law, it describes the top-down bias in global IP regulation and its particular impact on education as a global public good. To tackle this bias, the author proposes an 'IP from below' approach linking IP to human development and distributive justice. The chapter explores how such an approach might be applied towards building capabilities for basic education in countries lacking adequate access to textbooks and other educational materials. It poses the question whether access to hard copies for educational purposes could be re-imagined, just as the digitizing of books is allowing us to re-imagine our global digital informational universe. For many countries, both developed and developing, books remain an appropriate and useful 'technology', especially for primary and secondary education. The chapter focuses on Article 10(2) of the Berne Convention for the Protection of Literary and Artistic Works[7] – the so-called illustration for teaching exception – as a potential policy space for signatory nations of either the Berne Convention or the TRIPS Agreement to mandate access to educational materials for development needs. Article 10(2) endorses national exceptions to copyright for purposes of access to education. Emphasizing the need for a substantive equality principle in global IP norm setting and interpretation, the author explores how this principle might be applied to educational exceptions to copyright so as to justify an increase in national policy space. Appendix D provides a comparison of educational use exceptions in different jurisdictions, including developing countries (or economies in transition) such as Argentina, China, Czech Republic, India, Jordan and Nigeria; it also surveys the relevant exceptions in developed countries including France, Japan, the United States and the UK. Importantly, Chapter 6 situates the challenge of access to educational materials within a larger problem of fragmented policymaking for global public goods including education. It argues that an approach to IP 'from below' can help to link IP, beyond the dynamics of trade, to human development.

Chapter 7 explores the impact of copyright on public access to information products, focusing on issues and recent developments relating to information and communication technologies (ICTs). The chapter is contributed by a lecturer in International Economic Law at the University of Maastricht, Netherlands, formerly a project director at the Center for International Environmental Law (CIEL). The chapter considers, in particular, how ICTs have significantly altered the power relations between creators, intermediaries and users of

information products. It surveys the potentials unleashed by the Internet and digitization for the creation and dissemination of a wide range of information resources, noting the encouraging trends towards open source production, e-journals and open access repositories. These technology-led trends empower both creators and users of information in many ways. The chapter highlights, at the same time, the current tendency towards a strengthening of IP protection internationally, as reflected in trade-related instruments and the WIPO Internet Treaties. It calls for a closer examination of the impact of IP enforcement policies and techniques on human development concerns including access to educational materials in developing countries, looking especially at the increasing availability and use of criminal sanctions to enforce copyright. The negotiation led by developed countries (including the United States, Canada, Japan and members of the EU) of an Anti-Counterfeiting Trade Agreement (ACTA), outside of WIPO, has also emerged as an area for further scrutiny. The chapter suggests some developing country options and civil society actions towards achieving an effective balance between copyright protection and access to information products for human development. Some reforms being discussed in this much-debated area include the elaboration of an international instrument to govern copyright exceptions and limitations, whether through mandatory provisions or soft law. Noting that the legal boundaries and exceptions to copyright are ambiguous, especially in the context of the digitization of works, the chapter highlights some useful resources for policymakers, civil society actors, educators (including media educators) and librarians to broach these issues.

Chapter 8 explores the relationship between cultural diversity and copyright protection. It combines perspectives from a researcher in IP and contemporary arts, a Peruvian lawyer and a contributing editor. Exploring different interpretations of culture and cultural diversity, the chapter poses a basic question: Does copyright in its current forms incentivize a wide range of cultural endeavours? To address this question, it highlights not only the activities of professionals in the cultural sector (e.g. writers, musicians, visual artists, performers and filmmakers) but also the creative efforts of other individuals and communities. Looking first at the situation of professional creators, the chapter discusses some discernible trends in the corporate ownership of copyright, especially in the music and film industries. Among other things, it notes how statutory provisions on 'works for hire' and contractual arrangements such as copyright assignment and licensing contour the rights of creators, especially in common law jurisdictions. Making further comparisons between sectors within the arts as well as among some world regions, the chapter shows how the incentive function of copyright may be relevant only to a subset of creative sectors and communities. More studies are needed on the pecuniary factors and non-pecuniary motivations driving creativity in other sectors. As a case study, the chapter examines the position of contemporary artists ('contemporary art' defined here as post–World War II visual or multimedia art) in relation to copyright (see Appendix E). Whether in terms of their potential claims to copyright as creators or as avid users of copyright-protected works, contemporary artists have an ambiguous position under copyright laws. The examples of 'appropriation art' or parodies illustrate that the line between creators and users – or between free expression and copying – may be a fine one. The chapter further explores how concepts of authorship and originality are changing rapidly, not least with the advent of digital technology and new forms of 'remixing' or 'retelling'. It argues that our understanding of 'public access' to cultural works needs to be broadened to consider not only access to cultural goods, but also the promotion of cultural participation. Where copyright law draws the boundaries for defences or

exceptions to infringement, such as fair use or fair dealing, influences the capabilities of individuals and communities to use and transform copyright-protected works as a form of creative expression.

Chapter 9 casts the spotlight on the future of IP and human development. Combining inputs from PIIPA's chair, the Director of International Policy at the Electronic Frontier Foundation, and a contributing editor, it first reviews scenario plans published by international organizations and CSOs on the future of IP. The chapter explores the results of the three-year scenario planning process at the European Patent Office (EPO) on how IP regimes might evolve by the year 2025 (see EPO 2007). It also looks at scenario planning conducted elsewhere on particular themes relating to IP, such as the future of the public domain or the future of digital media (scenarios on IP and public health are explored in detail in Chapter 2). Scenario planning remains a relatively new approach for exploring IP-related reforms. The authors suggest that further attention might be placed on scenario planning in areas of particular relevance to developing countries, such as food security, the protection of TK, access to textbooks and ICTs, as well as the impact of IP enforcement on informal sectors and livelihoods. The implications of IPRs for clean technology innovation and transfer present another emergent area where scenario planning might be useful. Many of these themes (explored in the various chapters of this book) are collected and woven together within the evolving Development Agenda at WIPO. Describing the background as well as recent initiatives concerning the Development Agenda, the chapter explores whether scenario planning might be a helpful option in advancing a human development agenda. Given both the politicized and multi-faceted nature of the WIPO Development Agenda, scenario planning may help to clarify alternative models and measurements of development (beyond economic indicators) to emphasize the social and cultural priorities of development. Scenario planning can also highlight solutions developed in one sector (such as open source production in information technology or public-private partnerships in health research) as potential lessons for other sectors (such as education, agriculture or climate change adaptation and mitigation). The chapter further reminds us that WIPO is not the only forum in which priorities for IP and development are being elaborated. Pointing to the CBD framework and the increasing involvement of many other UN organizations, governments and CSOs in formulating international and national strategies relevant to IP and human development, the chapter argues that the Development Agenda at WIPO needs to link constructively with these other initiatives.

As seen from this summary, the chapters in this book cover the full gamut of IP and development-related issues. Despite their thematic differences, all of these chapters emphasize that policy reform on IP, whether at international, regional or local levels, must transcend economic cost-benefit analysis so as to give appropriate weight to the social and cultural aspects of development. But this is not all. Reform must also give attention to the ways that IP can, or cannot, promote innovation, and this requires evidence derived from sound analysis and experience. The challenge ahead lies in integrating the many dimensions and concerns of human development not only into IP-related policies, but also into the very assumptions about incentives and innovation in IP law.

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