1 Introduction

1.1 Introduction
This is a book about the UPOV Convention. More specifically it is about the UPOV Convention’s history, key concepts and the practices that inform, sustain and sometimes challenge both the UPOV Convention and UPOV. There are numerous motives for this book. As the only international treaty concerned with intellectual property protection of new plant varieties, the UPOV Convention plays a key social, political and economic role in the development of new plant varieties. Encouraging the development of new plant varieties is important in order to overcome problems associated with food security, climate change and environmental degradation. The development of new plant varieties can help to deal with problems of food availability and affordability, as well as economic and social development. This is particularly important in light of growing populations, the scarcity of arable land and reduced genetic diversity. Generally speaking, by providing an exclusive right, granted to the plant breeder of a new plant variety, to control the exploitation of their plant variety the UPOV Convention provides a mechanism for national or regional legislators to offer incentives for those engaged in plant breeding. In doing so it sets out the conditions for grant, the plant material to be protected, uses to which protection applies and various exceptions to the rights granted.

Whilst the issue of food security is complicated, there is no denying the importance of producing modified, new or improved plants. In Feeding the World: An Economic History of Agriculture, 1800–2000, Giovanni Federico examines the factors that have affected the performance of

2 The International Union for the Protection of New Varieties of Plants ("UPOV") was established in 1961 and is based in Geneva, Switzerland. UPOV, and its legitimacy, is the topic of Chapter 3.
agriculture and the ability to produce food between 1800 and 2000. Federico identifies a broad range of factors including the development of new or modified plants as central to agricultural development, particularly where the development of new plants has largely been directed towards public goods such as food availability and affordability. As the central international treaty dealing with plant varieties, the UPOV Convention, and the UPOV system more generally, plays an important role in international policy aimed at promoting the development of new plants, and in the continued development of agriculture throughout the world.

Another reason why it is necessary to comprehensively examine the UPOV Convention is because member countries to the WTO have an obligation to provide some form of protection over plant varieties in their national laws. Article 27(3)(b) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) sets out an obligation to provide some form of protection for plant varieties. Specially, Article 27(3)(b) states that ‘members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof’. Article 27(3)(b) has the dual effect of bringing into question UPOV’s status as an ‘effective sui generis’ legal scheme, as well as intensifying the relationship between the UPOV Convention (as a possible ‘effective’ sui generis system), patent law and alternative sui generis plant variety protection schemes. Part of the difficulty for WTO members looking to meet their obligations is that Article 27(3)(b) adopted a compromise position in which the UPOV Convention is not explicitly referenced. So, while there are currently 74 members (72 Member States and 2 intergovernmental organisations, covering

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5 TRIPs, Art. 27(3)(b). Currently, least-developed countries are not required to provide any form of plant variety protection until 2021.
7 D. Gervais, The TRIPs Agreement: Drafting History and Analysis (Sweet and Maxwell, 1998).
93 States) to the UPOV Convention, there are a number of countries—
including Thailand, Nepal, Sri Lanka and Bangladesh—that have, for
the time being at least, chosen not to join UPOV. Instead, these countries
have decided to provide plant variety rights protection in ways that are
different to that prescribed by the UPOV Convention. India, for
example, chose to meet its obligations to protect plant varieties outside
the UPOV Convention with the Protection of Plant Varieties and
Farmers’ Rights Act 2001. That said, even those countries opting for a
sui generis form of plant variety protection base a large portion of their
national laws on the UPOV Convention; often UPOV 1978, which is felt
to be better suited (balanced) to the interests of farmers because it treats
farm-saved seed more liberally, and does not extend protection to har-
vested material, products derived from harvested material and essentially
derived varieties (EDVs).

While there is a degree of flexibility in TRIPS over how to ‘effectively’
protect plant varieties, increasingly trade and economic agreements are
removing this flexibility: requiring signatories to accede to, or ratify, the
UPOV Convention (specifically UPOV 1991). Signatories to trade
agreements that are not UPOV Members have been asked to join UPOV
or if countries are already Members to UPOV 1978, they may ‘agree’
to sign up to the stricter provisions of UPOV 1991. For example, while
the North American Free Trade Agreement (NAFTA) gave Mexico the
choice between UPOV 1978 and UPOV 1991, by signing up to the Trans
Pacific Partnership (TPP) in 2015, Mexico has ‘agreed’ to accede to
UPOV 1991 (within three years of the TPP coming into force) and will
need to implement stronger national plant variety protection laws that
are UPOV 1991 compliant, as opposed to UPOV 1978. In 2015, the
African Regional Intellectual Property Organisation (ARIPO) initiated
the procedure to become a member of UPOV, and has drafted plant
variety protection laws consistent with UPOV 1991. While this is an

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8 In 2002, India attempted to join UPOV, although the proposed national laws were deemed
to be incompatible with the UPOV Convention by the UPOV Council, particularly in
relation to farmers’ rights: see D. Matthews, Intellectual Property, Human Rights and


10 These topics are discussed in more detail in Chapter 10 (farm-saved seed), Chapter 8
(protected material) and Chapter 9 (EDVs).

11 Although, the future of the TPP is now uncertain: on 24 January United States President,
Donald Trump, signed an Executive Order withdrawing the U.S. from the TPP.

12 Members of ARIPO adopted the Arusha Protocol for the Protection of New Varieties
of Plants ARIPO on 6 July 2015: see ARIPO, Protocol for the Protection of New Varieties
early step in the process of ARIPO members implementing national plant variety protection – and strictly speaking there is no obligation to sign, ratify or accede to the ARIPO’s draft law (the ‘Arusha Protocol’) – it is now likely that all members will need to implement national plant variety protection that is compliant with UPOV 1991. While Kenya is already a UPOV member, it is likely that more ARIPO member states will join UPOV. For example, on 22 October 2015, Tanzania acceded to UPOV, and on 22 November 2015 became the seventy-fourth member of UPOV. ARIPO argues that national laws consistent with UPOV 1991 will ‘provide Member States with a regional plant variety protection system that recognizes the need to provide growers and farmers with improved varieties of plants in order to ensure sustainable Agricultural production’. Many African countries are also likely to join UPOV and implement UPOV-based plant variety protection because of various trade and economic agreements with the United States, Europe and being part of the Southern African Development Community (SADC).

For the reasons outlined above it is important to examine both UPOV and the UPOV Convention thoroughly. While others have studied the UPOV Convention, this book is the first sustained investigation into UPOV and the UPOV Convention. As Helfer suggests, ‘The importance of food security to human survival and the widespread interest in intellectual property in genetic materials suggest that PVP [plant variety rights] should be the subject of widespread interest by scholars and policymakers. In fact, nothing could be further from the truth.’ Before I set out the approach and structure of this book, I want to outline some of the main concerns and controversies over the UPOV Convention.

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14 ARIPO, Protocol for the Protection of New Varieties of Plants.
1.2 Concerns and Controversies

Adopted in 1961, the UPOV Convention has been revised three times: in 1972 (UPOV 1972), 1978 (UPOV 1978) and 1991 (UPOV 1991). Currently, UPOV has 74 members, a further 16 States and one intergovernmental organisation have initiated the procedure for acceding to the UPOV Convention, and a further 24 States and one intergovernmental organisation have sought assistance with the development of laws based on the UPOV Convention. By joining UPOV, Member States agree to enact national plant variety protection laws that are UPOV-compliant. The purpose of the UPOV Convention is ‘to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society’.

The UPOV Convention has provided the legal framework used to protect new plant varieties for almost 50 years, yet it occupies a peculiar place in intellectual property law. Viewed as unimportant by some and too technical, outmoded or obsolete by others, the UPOV Convention seldom receives the kind of attention bestowed on intellectual property law heavyweights such as copyright and patents. In this way the UPOV Convention occupies a peculiar place in intellectual property law and is often given cursory treatment, or ignored altogether, in textbooks and legal journals. As Sherman puts it, ‘[Plant variety rights] have been treated as outsiders that are begrudgingly tolerated, but not liked.’ Part of the reason for the legal fraternity’s apparent aversion to the UPOV Convention is that it is *sui generis* and specifically targeted towards the needs of plant breeding. More specifically the technical nature of plant variety rights means that many plant variety rights schemes are managed by agricultural departments rather than intellectual property offices, and the assessment of the technical requirements of plant variety rights is carried out by plant breeders and scientists rather than lawyers or patent attorneys. As a consequence, and despite the fact that making a plant variety application is a (relatively) straightforward process, particularly for those people the scheme is intended for (i.e. plant breeders) and does
not need the skills of a lawyer or patent attorney, the plant variety rights scheme is viewed as an exclusive, selective ‘club’.  

One of the persistent concerns over the UPOV Convention is that it is, and perhaps has always been, unnecessary and obsolete. In this way, the UPOV Convention tends to be viewed unfavourably when compared with patent law and advancing science and technology. As early as the 1980s, Cornish argued that the changing nature of science and technology meant that plant breeders would attain more adequate and appropriate protection through patent law and ultimately questioned whether ‘the [UPOV] regime had a viable future’ because it obstructed the ‘logical framework of protection’, namely the use of patents for the protection of plant material.  

Often the claim that the UPOV Convention is obsolete and outmoded is expressed either explicitly or implicitly in the argument that the UPOV Convention is rooted to a particular technological paradigm. While this view is tied to the fact that the UPOV Convention is industry specific and *sui generis*, this ‘out-dated world-view’ argument also means that the UPOV Convention is seen to be ahistorical and immutable. Consequently, the UPOV Convention has been labelled outmoded, a Neanderthal and obsolete.  

The UPOV Convention, like other forms of intellectual property, suffers from the problem of proof. The purpose of the UPOV Convention is to ‘provide and promote’ effective plant variety protection and encourage the ‘development of new varieties of plants for the benefit of society’. However, not everyone believes that it does this. And over the years, a number of countries – including Thailand, Nepal, Sri Lanka and Bangladesh – have not joined UPOV or implemented UPOV-compliant national, plant variety protection. The fact that countries are willing to implement plant variety rights outside of the UPOV scheme is significant, as member countries to the WTO have an obligation to provide a minimum level of intellectual property protection in their national laws. As we have already seen, Article 27(3)(b) of TRIPS sets out an obligation to provide some form of protection for plant varieties: specially, ‘[m]embers shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination

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Concerns and Controversies

The question of whether the UPOV Convention is ‘effective’ is a vexed one. The language of ‘effective’ is used by both UPOV and TRIPS, although not necessarily used explicitly in the same context. The argument is that by providing intellectual property protection, in the form of a targeted and specific scheme such as the UPOV Convention, plant breeders will be encouraged to develop new plant varieties. Since 2000, UPOV has taken some initiatives to show the benefits of the UPOV Convention and the convenience of adopting a ready-made system of plant variety protection. In 2005, for example, UPOV published its Report on The Impact of Plant Variety Protection (‘Impact Report’). In its Impact Report, UPOV argues that the introduction of the UPOV system of plant variety protection and UPOV membership have a range of benefits. Specifically, UPOV argues that the introduction of the UPOV system of plant variety protection and UPOV membership increases breeding activities, availability of improved varieties, the number of new varieties and the number of foreign varieties, and diversifies the types of plant breeders (private breeders, researchers) and encourages competitiveness. On the basis of its study, UPOV confidently and unequivocally concluded that it had ‘demonstrated that in order to enjoy the full benefits which plant variety protection is able to generate, both implementation of the UPOV Convention and membership of UPOV are important’.

Not all of the evidence on UPOV-based plant variety protection is positive. For example: in a report commissioned by the World Bank, Louwaars et al. examined the effects of intellectual property rights, including plant variety protection, in developing countries by focusing on five countries: China, Colombia, Kenya, India and Uganda. The researchers questioned the need for UPOV-based plant variety protection and suggested that private seed industries owed relatively little to national plant variety rights protection. They also speculated that plant variety rights may in fact reduce the effectiveness of traditional rights and practices for farmers to save, exchange or sell saved seed.

References

26 TRIPs, Art. 27(3)(b).
30 Ibid.
A lack of evidence is a problem for both those looking to support and oppose UPOV-based schemes. Because plant variety rights schemes generally interact with other factors (such as other intellectual property and legal schemes, agricultural markets, increased globalisation and a reduction of public expenditure for agricultural research and seed production), it is difficult to confidently conclude on the possible contributions and concerns that plant variety rights protection might offer plant breeding. Therefore, many of the concerns about the UPOV Convention are largely theoretical and speculative as there is little or no ethnographic or empirical evidence to support them. It must be pointed out, however, that the problem of proof is not unique to the UPOV Convention. Evidence in support of intellectual property is notoriously difficult to measure, distil and substantiate. As Merges states,

Estimating costs and benefits, modeling them over time, projecting what would happen under counterfactuals (such as how many novels or pop songs really would be written in the absence of copyright protection, and who would benefit from such a situation) – these are all overwhelmingly complicated tasks. And this problem poses a major problem for utilitarian theory. The sheer practical difficulty of measuring or approximately all the variables involved means that the utilitarian program will always be at best aspirational.32

Yet other concerns are directed at UPOV (or ‘the Union’) rather than the UPOV Convention. More specifically some commentators, policy makers and advocates have accused UPOV of lacking transparency, being unaccountable and, in its relationships with developing countries, misusing its influence and power.33 UPOV has also been criticised for being self-serving and biased, with some civil society organisations and governments urging developing and least developed countries to avoid UPOV.34 During the late 1990s, for example, GRAIN argued that UPOV was biased towards industrial agriculture and, even though it was not in their interests, had pressured many developing countries into not joining UPOV.35 More recently, UPOV has been accused of ignoring its own Convention by approving ARIPO’s Draft Protocol for the

33 In 2011, for example, Graham Dutfield likened UPOV to an exclusive, selective ‘club’ and emphasised concerns over transparency, democratic accountability and lack of public debate: Dutfield, Food, Biological Diversity and Intellectual Property, pp. 12–14.
35 See GRAIN, ‘UPOV on the warpath’, Seedling (June 1999), www.grain.org/es/article/entries/257-upov-on-the-war-path; GRAIN/GAIA, ‘Ten reasons not to join UPOV’.

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Concerns and Controversies

Protection of New Varieties of Plants on 11 April 2014.

At times, these criticisms of and challenges to UPOV have manifested in public protest: for example, farmers, indigenous communities and civil society groups have protested against UPOV and the UPOV Convention in Thailand (2013), Costa Rica (2014), Ghana (2014) and Chile (2014).

Finally, there are a range of concerns over the UPOV Convention that can be broadly construed as relating to farmers’ rights, conservation and biodiversity. The proliferation of forums and institutions dealing with plants and plant genetic resources has meant that there are differing interests related to plants, plant genetic resources and people. For example, the Convention on Biological Diversity (CBD) and the 2010 Nagoya Protocol on Access to Genetic Resources and Equitable Sharing of Benefits Arising from their Utilization (Nagoya Protocol) impose an obligation to equitably share the benefits of genetic resources. And the International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty) aims to guarantee food security through the conservation, exchange and sustainable use of the world’s plant genetic resources for food and agriculture and has in so doing recognised farmers’ rights. A large part of civil society groups’ opposition to UPOV and the UPOV Convention is based on the view that the UPOV Convention prohibits the rights of farmers to save, exchange or sell farm-saved seed.

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38 Convention on Biological Diversity (1992) 1760 UNTS 79 (‘CBD’).


Juliana Santilli considers the loss of biodiversity by analysing the impacts that international and national legal instruments have on farming systems and on the local small-scale farmers who conserve and manage them. In so doing, Santilli suggests that the exchange of seeds through local networks (e.g. farmer exchanges) is an essential component of agrobiodiversity, and that the implementation of UPOV 1991 by developing countries ‘should be considered only after the implementation of the [Plant Treaty] … which recognises farmers’ rights, so that inconsistencies between these two instruments are avoided’. By linking the UPOV Convention to farmers’ rights, conservation and biodiversity commentators have raised a number of questions: Do plant variety rights encourage or hinder biodiversity and agrobiodiversity? Do plant variety rights recognise the work of farmers? Do plant variety rights recognise the relationship between ‘conventional’ breeders and farmers? Can plant variety rights meet the needs of developing countries?

### 1.3 Overmining and Undermining

Before I outline the structure of this book, it is worth chronicling the tone of many of the concerns and controversies over the UPOV Convention. In doing so, I will also say something about my own approach. One of the shortcomings of many of the accusations levelled at UPOV and the UPOV Convention is that the complexity and context of plant variety protection is conflated and subordinated to other agendas. Those opposed to the UPOV Convention tend to mobilise and use the label of intellectual property or UPOV’s association with the WTO to rationalise and evoke the idea that the UPOV Convention is part of a grand plan to monopolise plants and farming and facilitate large-scale commercial farming and food production practices at the expense of poor or small-scale farmers. While such portrayals are, on some level at least, justified and worth making, they tend to reduce UPOV and the UPOV Convention to a caricature of itself. They tend to be made from a theoretical or philosophical position. This problem was acknowledged at the Diplomatic Conference of 1991, where the then President of the Council of UPOV lamented:

> We sometimes hear it suggested that the interests of plant breeders and of agriculturists are fundamentally opposed; that the protection of plant varieties only benefits the plant breeders and is always contrary to the interests of the persons who must pay to purchase the seed or propagating material of their

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