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## Regulatory paradoxes – The case of agricultural innovation

Christine GODT\*

### 1. INTRODUCTION

Paradoxes have always been a welcome intellectual challenge since classical Greek times.<sup>1</sup> Generally, *true* and *false* paradoxes are to be distinguished. *False* paradoxes are those contradictions that not only demand resolution for reasons of logic, but can actually be resolved. Most legal contradictions are *false* due to the fact that they can be resolved by skilful legal interpretation. *True* paradoxes are the renowned dilemmas (thought experiments) discussed in philosophy and the sciences. The early twentieth century witnessed a new found attraction towards the same paradoxes in various disciplines, especially in mathematics, philosophy, and economics.<sup>2</sup> In the social sciences, the paradox usually served as a mechanism to articulate a critical analysis with regard to common wisdoms, logics in human behaviour or assumed causalities. It functioned as an incubator for the understanding of the complexities in modern industrial societies. Although Hanns Ullrich has never used the fashionable word 'paradox' in any one of the titles of his publications, he nevertheless seems to be influenced by the last line of thought, as indeed he has always been interested in colliding interests and competing rationales, therefore also in the *true* paradoxes which are reflected by fixed legal rules: such intricacies have always fascinated him. His main interest has been geared towards economic realities which are not necessarily logical and towards

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\* Prof. Dr. jur., University of Oldenburg and University of Bremen.

<sup>1</sup> Legendary are the four paradoxes of Eubulides (4<sup>th</sup> century BC), which can be found in any textbook about paradoxes: (1) 'The Liar', (2) 'The Hooded Man', (3) 'The Heap', (4) 'The Horned Man', cf. W. KNEALE & M. KNEALE, *The Development of Logic*, Clarendon Press, Oxford, 1996, p. 114.

<sup>2</sup> An overview is provided by 'Paradoxes and Contemporary Logic', Stanford Encyclopaedia of Philosophy, available at: <http://plato.stanford.edu/entries/paradoxes-contemporary-logic/>. An important one is the famous 'Prisoner's Dilemma', also known as the 'Three-Doors-Problem'.



technological change which is generally propelled by contradictions and tensions.

The central paradoxical phenomenon which has attracted Hanns Ullrich is competition. Although he has always been convinced that the ultimate function of competition is to secure freedom, he was particularly interested in the paradox that competition is often enhanced by restrictions. The significance of his work stems partly from his succinct identification of the tensions between micro and macroeconomic perspectives. This has allowed him to develop his own conception of a legal systematic that upholds conflicts of interests. Subsequently, he has not only provided important insights on the economic justification of restrictions on competition,<sup>3</sup> but in particular on the need to safeguard the process of competition against industrial policies.<sup>4</sup> His strong belief in individual freedom has made him an outspoken opponent of expanding property rights beyond economic necessities.<sup>5</sup> He has shown a special interest in research and development (R&D) contracts that have mitigated competing rationales of both research and commercial freedom.<sup>6</sup> One of the fields where this particularly bore fruit is at the interface of competition

<sup>3</sup> H. ULLRICH, 'European Competition Law, Community-wide Exhaustion and Compulsory Licenses – Disintegrating the Internal Market in the Public Interest', in Chr. GODT (ed.), *Differential Pricing of Pharmaceuticals*, Baden-Baden, Nomos, 2009 (forthcoming); H. ULLRICH, 'GRUR-Part A: Gewerblicher Rechtsschutz und Urheberrecht im Gemeinsamen Markt', and H. ULLRICH & A. HEINEMANN, 'GRUR-Part B: Die Anwendung der Wettbewerbsregeln auf die Verwertung von Schutzrechten und sonst geschützten Kenntnissen', in U. IMMENGA & E.-J. MESTMÄCKER (eds), *Wettbewerbsrecht*, Band 1: EG/Teil 2, Munich, C.H. Beck, 4<sup>th</sup> ed. 2007; H. ULLRICH, 'Patentgemeinschaften', in A. FUCHS, H.-P. SCHWINTOWSKI & D. ZIMMER (eds), *Wirtschafts- und Privatrecht im Spannungsfeld von Privatautonomie, Wettbewerb und Regulierung*, Munich, C.H. Beck, 2004, p. 403.

<sup>4</sup> H. ULLRICH, 'Die wettbewerbspolitische Behandlung gewerblicher Schutzrechte in der EWG', (1984) *GRUR Int.* 89; H. ULLRICH, 'Europäische Forschungs- und Technologiepolitik und Ordnung des Wettbewerbs im Gemeinsamen Markt', (1990) *Jahrbuch für neue politische Ökonomie* 169; H. ULLRICH, 'Technologieschutz nach TRIPS: Prinzipien und Probleme', (1995) *GRUR Int.* 623.

<sup>5</sup> H. ULLRICH, 'Grenzen des Rechtsschutzes, Technologieschutz zwischen Wettbewerbs- und Industriepolitik', in G. SCHRICKER, T. DREIER & A. KUR (eds), *Geistiges Eigentum im Dienst der Innovation*, Baden-Baden, Nomos, p. 83; H. ULLRICH, 'Traditional Knowledge, Biodiversity, Benefit-Sharing and the Patent System: Romantics v Economics?', EUI Working Paper LAW No. 2005/07.

<sup>6</sup> H. ULLRICH, *Privatrechtsfragen der Forschungsförderung in der Bundesrepublik Deutschland*, Weinheim, VCH Chemie, 1984; H. ULLRICH, 'Forschungs- und Technologiepolitik (Kap. N)', in M. DAUSES, *Handbuch des EU-Wirtschaftsrechts*, Munich, C.H. Beck, 2002; H. ULLRICH, 'Rules on Ownership and Allocation of Intellectual Property in R&D Collaboration Between Science and Industry – Some Principles and Comparisons', in L. YAKES-SCHÖDER & U. OPOLKA (eds), *European Research Structures – Changes and Challenges. The Role and*



and intellectual property which is, indeed, a field of special concern for Hanns Ullrich.<sup>7</sup> Therefore, in his honour, and in honour of his achievements in this area, this contribution aims to address a problem which lies at the very core of this interface.

The following analysis deals with the fostering of agricultural innovations which has traditionally been the domain of plant breeders' rights. Hanns Ullrich has served for several years on the board of the Community Plant Variety Office in Angers. This organisation actually deals with regulatory paradoxes stemming from competing interests in the agricultural innovation process, which have profoundly changed over the past few years. The *teff* dispute has drawn these tensions to the forefront.

## 2. THE *TEFF* CONTROVERSY

### 2.1. *TEFF* – The recent patent dispute

Haile Gebreselassie, the famous Ethiopian marathon athlete, is often quoted in saying: '*Teff* is everything for me. "*Teff*, injera", exercise in the mountains, then we go around the world and win.'<sup>8</sup> *Teff* is the flour extracted from the millet-related cereal plant *Eragrostis teff*. This is an Ethiopian domestic plant which yields the grain from which the flour is made and then used to bake the traditional bread called 'injera'. It has two major characteristics: first, contrary to wheat, *teff* is free from gluten which, in turn, makes the plant most interesting for the western world and its markets hosting approximately 80,000 people who suffer from gluten allergy, medically known as 'coeliac disease'. In addition, its high content of 'lysin', an amino acid, enables *teff*-based products to be

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*Function of Intellectual Property Rights*, Rosenheim, Format Druck, 1994, p. 138; H. ULLRICH, *Kooperative Forschung und Kartellrecht*, Heidelberg, Verlag Recht und Wirtschaft, 1988.

<sup>7</sup> H. ULLRICH, 'Intellectual Property, Access to Information, and Antitrust: Harmony, Disharmony, and International Harmonization', in R. DREYFUSS, D.L. ZIMMERMANN & H. FIRST (ed.), *Expanding the Boundaries of Intellectual Property*, New York, Oxford University Press, 2001, p. 365; H. ULLRICH, 'Expansionist Intellectual Property Protection and Reductionist Competition Rules: A TRIPS Perspective', (2004) 7 *J. Int'l Econ. L.* 401; H. ULLRICH, 'Lizenzvertragsrecht auf dem Weg zur Mitte', (1996) *GRUR Int.* 555.

<sup>8</sup> Translation of the published German quote: 'Für mich bedeutet Teff alles. Teff, Injera, dann Höhenttraining, und wir gehen um die Welt und siegen!'; available at: <http://www.3sat.de/3sat.php?http://www.3sat.de/specials/106886/index.html>. The reason is its high nutritional value and the grain's property of improving the level of iron in blood.

marketed as 'health food' or 'sports food'. Secondly, it is a robust plant which can easily be cultivated on dry soils, making it a most interesting candidate for agriculture in times of global climate change. Worldwide, the food industry has invested in its cultivation and improvement of the plant itself and its processing. The Dutch company Health & Performance Food International B.V.<sup>9</sup> holds a European patent on the processing of *teff* flour (EP 1 646 287 B1) issued on 10 January 2007 by the European Patent Organisation<sup>10</sup> (published under PCT as WO2005/025319 A1 on 24 March 2005; and for the US under US 2006/0286240 A1 on 21 December 2006). The original idea grew out of a cooperation with the University of Wageningen.<sup>11</sup> The patent encompasses product claims which refer directly to the specific properties of the flour, the resulting dough and baked products, cosmetic and pharmaceutical products, and includes process claims in regard to the kneading of its dough. However, on 8 October 2007, based on the expertise of the Federal Agency for Nutrition and Food in Detmold, now part of the Max Rubner Institute, Germany, the Agricultural Chamber of Lower Saxony challenged the European patent on the grounds of insufficient disclosure<sup>12</sup> and lack of novelty on the following rationale: although the patent does not directly prevent German farmers from cultivating *teff*, it would stifle the economic interest of the German food industry. Hence, the cultivation of *teff* in Germany would not be economically profitable.

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<sup>9</sup> Health & Performance Food is a holding with two subsidiaries, both called Soil and Crop Improvement. The one is registered in the Netherlands, the other in the US. The application for the patent gave rise to the biopiracy debate for which *teff* is famous in the first place. In 2004, on the occasion of the CBD-Conference of Parties No. 7 in Kuala Lumpur, Malaysia, the company received the 'Captain Hook Award' from the NGO Coalition Against Biopiracy; see <http://captainhookawards.org>.

<sup>10</sup> Easy download at [http://www.abs-africa.info/uploads/media/Teff-Patent-EP\\_1\\_646\\_287\\_B1\\_01.pdf](http://www.abs-africa.info/uploads/media/Teff-Patent-EP_1_646_287_B1_01.pdf).

<sup>11</sup> J. TIELENS, 'Wageningen Researchers Involved in International Conflict over *teff*', available at: [http://www.resource-online.nl/wb\\_article.php?id=1448](http://www.resource-online.nl/wb_article.php?id=1448).

<sup>12</sup> This line of argumentation differs from the opposition against a preceding similar patent referring to improved baking qualities of the Indian Nap Hal wheat (EP 445 929 B1, issued on 21 May 2003), which focussed on 'biopiracy'. Upon opposition by various organisations, the European patent was revoked by the patentee on 23 September 2004 (the filings for the US and Australia were upheld). A comprehensive documentation of case documents is available at: [http://www.no-patents-on-seeds.org/index.php?option=com\\_content&task=view&id=28&Itemid=20](http://www.no-patents-on-seeds.org/index.php?option=com_content&task=view&id=28&Itemid=20).



## 2.2. *TEFF* – The exclusive ABS Agreement

The bare facts of the patent dispute reflect only the tip of the iceberg of a controversy which is entangled in the contradictions within the triangle of patent protection, the conventional rationale of plant breeding and the Convention on Biological Diversity (CBD).

A civil servant from the Agricultural Chamber of Lower Saxony saw a film at home on TV about Haile Gebreselassie and was immediately inspired by the miraculous properties attributed to *teff*.<sup>13</sup> Shortly afterwards, the Chamber contacted Health & Performance Food requesting grain samples and proposing joint research, but was turned down, without any showing of willingness to negotiate, by a ‘no interest’ response. The Chamber then decided to order the *teff* grain from a supplier in Idaho (US)<sup>14</sup> but was unsure if its cultivation and later industrial use in Germany would violate the patent.<sup>15</sup> The Chamber, therefore, contacted the regional State, the Federal Ministry of Agriculture as well as the Federal Agency of Plant Variety Protection and expressed doubts as to the validity of the patent, but to no avail. It then turned to the German Agency for International Technical Cooperation (Gesellschaft für Technische Zusammenarbeit, GTZ) in the hope that they might pick up the case and file a complaint against the existing patent. However, instead of receiving support, the GTZ responded surprisingly different: the agency accused the Chamber of an attempt at biopiracy.<sup>16</sup> Using the *teff* grain without proper authorisation, it was argued, would amount to a violation of the CBD. With the additional concern of violating an international treaty, the Chamber turned to the Ethiopian Embassy and discovered that under a bilateral Access and Benefit Sharing Agreement (in the following: ‘the ABS Agreement’),<sup>17</sup> concluded

<sup>13</sup> The following facts are taken from a report by R. ASENDORF, ‘TEFF - Eine Geschichte voller Überraschungen’, Briefing to the Agricultural Chamber of Lower Saxony, 3 September 2008, paper submitted to a workshop at the Akademie Klausenhof.

<sup>14</sup> The supplier was one of several US-breeders. For further information see R. ASENDORF, ‘Eragrostis tef – Ergebniszusammenfassung aus der Literatur’, Working paper of the Agricultural Chamber of Lower Saxony, 28 September 2006.

<sup>15</sup> Furthermore, seeds are stored in various gene banks, *inter alia* in the US (USDA Western Region Germplasm Center in Pullman, WA), Germany (Bundesinstitut für Pflanzengenetik und Kulturpflanzenforschung Gatersleben), Ethiopia (Plant Genetic Resources Center in Addis Abeba).

<sup>16</sup> At that time, the GTZ cooperated with the Norwegian government in designing a model ABS agreement for Ethiopia, see the final report by R. FEYISSA, ‘“Farmers” Rights in Ethiopia – A Case Study’, Fridtjof Nansen Institut & GTZ, FNI-Report 7/2006, available at: <http://www.fni.no/doc&pdf/FNI-R0706.pdf>.

<sup>17</sup> The full text of the Agreement, including annexes, is available at: <http://www.abs-africo.info>. Extracts are published in R. FEYISSA, *supra* note 16, Annex 3.



between the State of Ethiopia (represented by the Institute of Biodiversity Conservation) and the Soil & Crop Improvement company<sup>18</sup> in 2004, the latter had already been granted an exclusive licence to use 12 different varieties of *teff*.<sup>19</sup> In return, the firm promised royalties and close research cooperation. The company had promised to pay €10 as compensation to Ethiopia for every hectare of *teff* sewn outside Ethiopia, and a further promise to deposit 5 % of all net profits into a fund which, in turn, would support Ethiopian farmers. In addition, it promised not to patent *teff* as a genetic resource, and that the plant breeders' rights shall be co-owned.<sup>20</sup> Until profits are generated through *teff*, the company also pledged to deposit €20,000 in the said fund each year.<sup>21</sup> According to this business model, royalties are primarily expected to be generated by sub-licences to farmers (5 % of all profits, and €10 per hectare of farmland).<sup>22</sup> This seems to imply direct marketing.<sup>23</sup> The envisioned products are health or sport foods baked with

<sup>18</sup> One of the subsidiaries of Health & Performance Food (*supra* note 9).

<sup>19</sup> Intricacies are obvious. Two examples: (1) The licence covers *worldwide* use of these 12 varieties. What about US programmes fostering the use of TEFF by black American farming communities? In 2005, a USD 200,000 project was approved in the US to start research and the farming of *teff* in an all-black farmers community in Kansas, see <http://friendsofethiopia.blogspot.com/2005/11/black-farmers-look-to-Ethiopian-Crop-for-Marketplace-Niche> of 19 November 2005. This situation shows that the stereotype of the conflict between '*developing country v multinational*' is over-simplistic. (2) Researchers from German Institutes of Agricultural Research, for example, based in Gatersleben and Groß Lüsewitz, have been denied access to the seeds of the licensed 12 *teff* varieties stored in the gene bank in Addis Abeba. This refusal was felt as an offense due to the fact that the gene bank was established with German financial development aid (R. Asendorf, telephone information, 20 February 2009). Disregarding the possibility that the material might be pre-CBD material and, therefore, theoretically, not subject to CBD access-and-benefit sharing rules, the problem is evident. There is not only a problem of redistributive justice since it was German tax payer's money which had financed the establishment of the gene bank in the first place. The more delicate problem is related to the freedom of research. For a recent account of the problems related to patents and agricultural research, see A. POLLACK, 'Crop Scientists say biotechnology seed companies are thwarting research', *New York Times* of 20 February 2009, [www.nytimes.com/2009/02/20/business/20crops.html](http://www.nytimes.com/2009/02/20/business/20crops.html).

<sup>20</sup> Article 4 of the ABS Agreement, *supra* note 17.

<sup>21</sup> Article 7.4 of the ABS Agreement, *ibid*.

<sup>22</sup> See <http://www.3sat.de/nano/cstuecke/98113/index.html>.

<sup>23</sup> In contrast to a more dispersed distribution which includes agricultural research institutions. This explains (a) the reluctance to negotiate with the Agricultural Chamber. This complies with Article 5 of the Agreement (*supra* note 17) that transfer to third parties requires explicit written consent of the provider. It also explains (b) that Health & Performance Food privately organised research on the improvement of *teff* seeds in Brandenburg (Germany) as well as in the US, thereby avoiding consultations with the public sector.



*teff* flour.<sup>24</sup> Whether use of *teff* as an additive in European beer production would actually be covered by this agreement is an open question.<sup>25</sup> In 2006, 15,000 loaves of health-bread ('sports bread') made with *teff* flour were sold in the Netherlands<sup>26</sup> per week, which mean a staggering success. The agreement is now being advertised by governments as an example of good practice in complying with the CBD Bonn Guidelines.<sup>27</sup> Since September 2008, an improved variety of seeds, developed by the same company, is now sown in Ethiopia;<sup>28</sup> though only in small quantities because an export permit for *teff* has not yet been granted by the Ethiopian authorities.

The case reflects the intricacies involved in modern agricultural innovation and colliding rationales of international Conventions. The CBD attributes a sovereign right on genetic plant resources to provider States, whereas patent law and plant breeders' right systems attribute private property to those who develop 'something new', be it in the improvement protected as a 'new' plant variety, or be it a technical ingenuity protected under a patent. These different rationales, which underlie different instruments of international law and which will be discussed in the following, are not necessarily 'mutually supportive'.<sup>29</sup> This discussion, however, will not consist in a purely legalistic analysis of the relationship between

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<sup>24</sup> See <http://www.soilandcrop.com/>, <<http://www.soilandcrop.com/PDF/Folder%20S&C%20DE%204A4.pdf> and <http://www.teff-flour.com/>.

<sup>25</sup> A patent with regard to malt brewing from *teff* is held by the Technical University of Munich (a project with brewery Weihenstephan); see M. ZARNKOW, C. ALMAGUER, F. BURBERG, W. BACK, E.K. ARENDT, S. KREISZ & M. GASTL, 'The Use of Response Surface Methodology to Optimise Malting Conditions of Teff (*Eragrostis tef*) as a Raw Material for Gluten-free Foods and Beverages', (2008) *Brewing Science* 94. Depending on the varieties used, any activity involving the 12 licensed TEFV varieties would be covered by the ABS Agreement (annex 3 encloses 'beer'). This would be consistent with the underlying CBD concept, see Chr. GODT, *Eigentum an Information*, Tübingen, Mohr Siebeck, 2007, p. 403.

<sup>26</sup> See <http://www.3sat.de/nano/cstuecke/98113/index.html>.

<sup>27</sup> Article 14 of the ABS Agreement ('applicable laws') refers to the CBD regime (including decisions, guidelines, and emanating laws), the IT-PGRFA, the Bonn Guidelines, CBD-COP decisions and UPOV. Politically, the agreement is a precedent for future cases. The ABS clauses are quite favourable to Ethiopia. Therefore, in spite of all remaining controversies, it is portrayed as a model; see <http://www.abs-africa.info>.

<sup>28</sup> See <http://www.3sat.de/nano/cstuecke/98113/index.html>.

<sup>29</sup> This is the diplomatic term employed. See the recent UPOV Report: J.C. MEDAGLIA, (Draft-)Comments of UPOV – on the Study of the relationship between the ABS International Regimen and other international instruments which govern the use of genetic resources: The World Trade Organisation (WTO), the World Intellectual Property Organisation (WIPO), and the International Union for the Protection of New Varieties of Plants (UPOV), 23 January 2009, available at: [http://www.upov.int/en/about/pdf/upov\\_comments\\_Medaglia\\_study\\_final.pdf](http://www.upov.int/en/about/pdf/upov_comments_Medaglia_study_final.pdf).



the various treaties involved, with particularly the TRIPS<sup>30</sup> and the CBD ranging prominently among them,<sup>31</sup> nor will the relationship of patents and breeders' rights be explored.<sup>32</sup> This article will also leave the general biopiracy debate aside. Instead, it will take the *teff* case as an example for conflicts that can arise in the context of agricultural innovation.

### 2.3. The *TEFF* paradox

The fashionable key word 'access' leads us to the interesting *true* paradox of the case. The basic goal of the CBD has been to promote access by attributing exclusionary rights. The general instrumental paradox of promoting access *via* property rights – an antagonism inherent to modern thinking on dynamic competition – has become common ground, not least because of Hanns Ullrich's work, and therefore will not be further explained here. This article will instead focus on the agricultural sector. Traditionally, 'access' was conceived of as *the* central component of agricultural innovation, as distinct from industrial patent-driven innovation. It rested on two pillars: the former plant breeders' right system provided privileges for both farmers and breeders. Complementarily, public agricultural research institutions granted open access to its collections.

Therefore, the agricultural *teff* controversy appears paradoxical. If the CBD is an antipole to the TRIPS Agreement, and the agricultural innovation system is characterised by a cut-back on exclusivity in favour of access rights, it is then contradictory that the CBD gives rise to stronger exclusive rights than the agricultural innovation system itself. Common wisdom would place the agricultural innovation system, with regard to intellectual property rights, somewhere between the CBD and the TRIPS, meaning that it grants stronger property rights than the CBD, but yet weaker ones than patents.

For a practising lawyer, this contradiction would normally be a challenge in the sense that she would have to first understand 'the system'. The task at hand would be to skilfully dissolve the contradiction by bringing order to the rules through legal interpretation. In contrast, modern

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<sup>30</sup> Agreement on Trade Related Aspects of Intellectual Property Rights, which is, from a legal perspective, an annex to the Agreement on the World Trade Organisation.

<sup>31</sup> See, for example, Chr. GODT, 'International Economic and Environmental Law – Exercises in Untangling the Dogmatic Conundrum', in L. KRÄMER (ed.), *Recht und Um-Welt. Essays in Honour of Prof. Dr. Gerd Winter*, Groningen, Europa Law Publishing, 2003, p. 235.

<sup>32</sup> The core of the case would not be different had Health & Performance Food applied for a plant breeders' right. The farmer would be barred from access.



legal thinking conceives contradictions as a source for understanding the underlying conflicts of interests.

### 3. THE HERMENEUTICS OF THE PARADOX

In essence, the concept to conceive contradictions as a source of understanding is part of European intellectual heritage. Emmanuel Kant and Georg Wilhelm Friedrich Hegel are both strong proponents of this concept. According to both philosophers, reason in itself is contradictory. Based on this insight, Hegel developed his concept of dialectical thinking: thesis and antithesis create dynamic progress.<sup>33</sup> Even social scientists, like Gotthard Günther,<sup>34</sup> and natural scientists, like Nils Bohr<sup>35</sup> have adopted this very approach as a source of understanding. The American new legal realism cannot be understood without it.<sup>36</sup> However, in the 1960s, the philosophically oriented social sciences separated and went into two different directions. One school of thought fundamentally influenced by the French school, especially by Jacques Derrida,<sup>37</sup> and adopted by the German systems theory (Niklas Luhmann<sup>38</sup>, Gunther Teubner<sup>39</sup>) and by the US critical legal studies movement<sup>40</sup>, all of whom conceived

<sup>33</sup> G.W.F. HEGEL, *Phänomenologie des Geistes*, vol. 3/20, Frankfurt am Main, stw, 1986 (original version 1807), Introduction.

<sup>34</sup> Helping him to overcome the bi-polar logic of Aristotle and formulate the paradigm of a polycontextual logic, G. GÜNTHER, *Grundzüge einer neuen Theorie des Denkens in Hegels Logik*, Hamburg, Felix Meiner Verlag, 1<sup>st</sup> ed. 1933 (2<sup>nd</sup> ed. 1978).

<sup>35</sup> Helping him to understand quantum physics, as he is often quoted: *contraria sunt complementa*, see <http://de.wikipedia.org/wiki/Widerspruch> (Dialektik).

<sup>36</sup> K.N. LLEWELLYN, 'Some Realism about realism – Responding to Dean Pound', (1931) 44 *Harvard L Rev.* 1222.

<sup>37</sup> *Marges de la Philosophie*, Paris, Éd. de Minuit, 1972.

<sup>38</sup> N. LUHMANN, 'Die Paradoxie des Entscheidens', (1993) 84 *Verwaltungsarchiv* 287, 1993; N. LUHMANN, 'Das Paradox der Menschenrechte und drei Formen seiner Entfaltung', in N. LUHMANN, *Soziologische Aufklärung 6: Die Soziologie und der Mensch*, Opladen, Westdeutscher Verlag, 1995, p. 229.

<sup>39</sup> G. TEUBNER, 'Der Umgang mit Rechtsparadoxien: Derrida, Luhmann, Wiethölter', in Chr. JOERGES & G. TEUBNER (eds), *Rechtsverfassungsrecht*, Baden-Baden, Nomos, 2003, p. 25.

<sup>40</sup> Represented by Duncan Kennedy, David Kennedy, M. Koskenniemi, R.M. Unger; for a self-description see R.M. UNGER, 'The Critical Legal Studies Movement', (1983) 96 *Harvard Law Review* 563; for a description from the German perspective see G. FRANKENBERG, 'Partisanen der Rechtskritik: Critical Legal Studies', in S. BUCKEL, R. CHRISTENSEN & A. FISCHER-LESCANO (eds), *Neue*



the paradox as a reflection of societal contradictions.<sup>41</sup> For those, the paradox is a consequence of complexity which is impossible to decipher. As for the other school of thought, the phenomenon of the paradox became synonymous with a surprising observation. According to this line of thought, the paradox reflects competing underlying rationales which are well worth being understood.<sup>42</sup> Fuzziness of norms and ambiguities are understood as sources of compromise which allow for coalitions and a proceduralised, contingent approach to deal with societal conflicts. The interest lies in identifying these conflicts, and not in deciding which interest prevails according to the normative set-up. Hence the non-prevailing interest remains pertinent. Following this hermeneutic approach, deregulatory policies – portrayed as abolition of norms synonymous to reduced State influence – have been unveiled as re-regulation.<sup>43</sup> The discourse about ‘risk regulation’ and ‘precaution’ is understood as a policy instrument.<sup>44</sup> The legal discourse about the complexities of property rights became susceptible to a more dynamic economic thinking geared towards optimising outcomes.

Following the latter line of thought, Hanns Ullrich has clearly spelt out that competition is a precondition, and not the result, of any return on investment through intellectual property rights.<sup>45</sup> He adopted the idea of economic theory that property rights both ambiguously exclude *and* enhance access. His theories incorporate the complex institutional set-up of competition as a prerequisite of freedom, a mechanism prone to be instrumentalised by, but yet protected against industrial policies, and an institution under legitimacy constraints whenever it fails to deliver the

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*Theorien des Rechts*, Stuttgart, Lucius & Lucius, 2<sup>nd</sup> ed. 2009, p. 93, Chr. JOERGES & D.M. TRUBEK (eds), *Critical legal thought: An American-German Debate*, Baden-Baden, Nomos, 1989.

<sup>41</sup> For comments *see* two recent articles: M. BLECHER, ‘Paradoxontology, Critical Law and Social Movement’, and A. FISCHER-LESCANO, ‘Kritische Systemtheorie’, both in G. Chr. CALLIESS, A. FISCHER-LESCANO, D. WIELSCH & P. ZUMBANSEN (eds), *Soziologische Jurisprudenz*, Berlin, de Gruyter, 2009.

<sup>42</sup> *See* T. ADORNO, *Negative Dialektik*, Frankfurt, Suhrkamp, 1966, p. 303: ‘Recht ist das Urphänomen irrationaler Rationalität.’

<sup>43</sup> Chr. JOERGES, ‘Paradoxes of Deregulatory Strategies at Community Level – The Example of Product Safety Policy’, in G. MAJONE, *Deregulation or Reregulation? Regulatory Reform in Europe and the United States*, London and New York, St. Martin’s Press, 1990, p. 176; C. SUNSTEIN, ‘Paradoxes of the Regulatory State’, (1990) 57 *U. Chi. L. Rev.* 407.

<sup>44</sup> G. BECHMANN, ‘The Paradox of Precaution’ (manuscript 2009); *see also* G. BECHMANN, ‘Risiko als Schlüsselkategorie der Gesellschaftstheorie’, in G. BECHMANN (ed.), *Risiko und Gesellschaft. Grundlagen und Ergebnisse interdisziplinärer Risikoforschung*, Opladen, Westdeutscher Verlag, 2<sup>nd</sup> ed. 1997, p. 237.

<sup>45</sup> H. ULLRICH, ‘GRUR Part A’, *supra* note 3, para. 38.



welfare goods it is supposed to bring about. He has defended competition as a means and a goal for the right equilibrium between stimulating property rights and innovation propelling access rights.<sup>46</sup> He has spelt this idea out for horizontal competition, for example, with regard to sequential innovation, and for vertical competition, for example, with regard to parallel trade. According to Hanns Ullrich, competitors are essential to the process of free competition. These insights help toward the better understanding of the *teff* case.

#### 4. MAKING SENSE OF THE *TEFF* PARADOX

In applying the ‘methodological paradox approach’ to the *teff* controversy, the focus of interest shifts to the conflicts in agricultural innovation which propelled the recent dispute.

##### 4.1. The international framework of Conventions

In general, the classical *fora* for disputes on agricultural innovation policy has been the Geneva-based UPOV (Union internationale pour la protection des obtentions végétales) and the United Nations Food and Agriculture Organisation (FAO), based in Rome. The UPOV Treaty – signed in 1961, in force since 1968, and revised three times – is an independent agreement which harmonises the laws of Member States regarding plant breeders’ rights. It is conceived of as *lex specialis* to TRIPS (cf. Article 27(3)(b) TRIPS). The FAO is a UN Organisation, whose mission is to coordinate the agricultural policies of its Member States. Its operative tasks consist *inter alia* in steering the Consultative Group on International Agricultural Research (CGIAR), established in 1971, whose 64 Member States support 15 international germcenters (*ex situ* collections<sup>47</sup>), and to administer the International Treaty on Plant Genetic Resources for Food and Agriculture (IT-PGRFA), adopted in 2001 and in force since 2004. The IT-PGRFA incorporates a ‘multilateral system’ comprised of 64 different crops and forages accounting for 80% of the food and feed derived from plants worldwide; it has become operational in October 2007.<sup>48</sup> With reference to these 64 varieties, Member States notify gene banks which they make available to all those who comply

<sup>46</sup> H. ULLRICH, ‘GRUR Part A’, *supra* note 3, para. 22.

<sup>47</sup> See <http://www.cgiar.org/centers/index.html>, the gene bank which holds *teff* in Addis Abeba is not part of the network.

<sup>48</sup> T. KONGOLO, *Unsettled International Intellectual Property Issues*, Alphen-aan-Rijn, Wolters Kluwer, 2008, p. 79.



with a standardised benefit-sharing agreement.<sup>49</sup> The filing for property rights on these varieties is excluded.<sup>50</sup> The IT-PGRFA is conceived of as *lex specialis* to the CBD. Therefore, according to the aim of each agreement, the underlying rationales follow very different agendas which are hard to reconcile. They range from broad access (IT-PGRFA), over bound sovereignty to facilitate access (CBD) and conditioned property (UPOV) to unrestricted exclusivity (TRIPS patent protection as a basis for model property rights). These systems are conceived of as co-existing, without inter-linkages foreseen.

#### 4.2. The rationale of agricultural innovation & the CBD

The traditional inclination of agricultural innovation towards the more open spectrum has two reasons. One reason is historical, and the other reason relates to the characteristics inherent in plants. Historically, the agricultural innovation system was firmly rooted in open access to genetic resources as public domain. Governments operated gene banks which stored, exchanged and cultivated the respective resources.<sup>51</sup> The inherent reason being natural self-reproduction. This feature does not only limit proprietary control along distribution lines. The improvement of seeds is necessarily built on the stock of already existing ones. Plants, as such, are not (yet) newly 'invented'. Therefore, the system was forced to keep dependencies contained.<sup>52</sup> In the 1930s, when the seed industry started to develop, these specific reasons conditioned the decision in favour of the 'small coin' of plant breeders' property rights.<sup>53</sup> It was much later that the system moved towards more exclusivity until it was finally supplemented

<sup>49</sup> Articles 10-13 IT-PGRFA. For a practical example see press release of the IT-PGRFA Secretariat of 4 December 2008, available at: [http://ftp.fao.org/ag/agp/planttreaty/news/news0007\\_en.pdf](http://ftp.fao.org/ag/agp/planttreaty/news/news0007_en.pdf).

<sup>50</sup> Article 12(d) IT-PGRFA – notwithstanding the unresolved disputes about how much improvement is needed in order to draw the line between the 'material in the form received' and an 'inventive step'. See Chr. GODT, *supra* note 25, at 375.

<sup>51</sup> For the US well documented by J. KLOPPENBURG, *First the Seed*, Cambridge, Cambridge University Press, 1990. For the rich German scene of governmental agricultural research centers see <http://www.bmelv-forschung.de> and <http://www.mri.de> (Max-Rubner-Institut).

<sup>52</sup> J. STRAUS, 'The Principle of "Dependence" under Patents and Plant Breeders' Rights', (1987) 26 *Industrial Property* (Suppl. to No. 12) 433. For a general analysis of dependency as a functional prerequisite of the patent system see Chr. GODT, *supra* note 25, pp. 98 *et seq.*

<sup>53</sup> G. WINTER, 'Patent Law Policy in Biotechnology', (1992) 4 *J. Environmental L.* 167, at 170.



by patent availability in the 1980s.<sup>54</sup> Herewith, the scope of protection was expanded<sup>55</sup> to what nowadays largely substitutes the plant breeders' right system.<sup>56</sup> The drift towards the privatisation in the multinational seeds' business has been both constant and strong. It has not, however, substituted the residual public system holding large gene banks and controlling the marketing of seeds.<sup>57</sup> Medium-sized farmers and breeders are still supported in having access to the collections; thus a certain spirit of open innovation is upheld. The drift towards privatisation by exclusive patent rights however was aligned with the quest of the countries of origin to have a fair share in the profits generated from 'their' natural resources. Article 15 CBD recognises the sovereign right of States with regard to the genetic resources on their territory.<sup>58</sup> Prior to 1992, genetic resources were conceived of as a common good,<sup>59</sup> a heritage of all mankind.<sup>60</sup> It is Article 15 CBD that demarcates the fundamental reorientation which the CBD brought about in 1992. In reaction to those two developments, the States negotiated the IT-PGRFA in an effort to safeguard open access to the worlds *ex situ* seed collections which were in danger of being secluded due to privatisation through patenting on the one hand, and sovereignty claims under the CBD on the other. Since then, agricultural research in general is submitted to the CBD which requires both prior informed consent and an agreement on benefit sharing. Research as such is not exempt. Both developments have contributed to a fundamental change in agri-

<sup>54</sup> J. STRAUS, 'Pflanzenpatente und Sortenschutz – Friedliche Koexistenz', (1993) *GRUR* 794.

<sup>55</sup> Incorporating 'essentially derived of' varieties, Article 14, Section 5 UPOV 1991, in Germany para. 10 (2), Plant Varieties Act (*Sortenschutzgesetz*).

<sup>56</sup> For a general account, see H. ULLRICH, *GRUR-Part A*, *supra* note 3, para. 10. For a more concrete discussion around the patentability of 'mere biological procedures' (Article 52 European Patent Convention, Article 4(1)(b) Directive 94/44/EC) see the discussion about the opposition procedure pending at the Enlarged Board of Appeal with regard to the so-called broccoli patent (G2/07), [http://www.no-patents-on-seeds.org/index.php?option=com\\_content&task=view&id=20&Itemid=20](http://www.no-patents-on-seeds.org/index.php?option=com_content&task=view&id=20&Itemid=20).

<sup>57</sup> In Germany, regulated under the so-called *Saatgutverkehrsgesetz*.

<sup>58</sup> Article 15(1) CBD: 'Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.'

<sup>59</sup> P.G. SAMPATH, *Regulating Bioprospecting: Institutions for Drug Research, Access and Benefit-Sharing*, Tokyo, New York and Paris, United Nations University Press, 2005, p. 127.

<sup>60</sup> E. CHEGE KAMAU, 'Sovereignty over Genetic Resources: Right to Regulate Access in a Balance. The Case of Kenya', *Revista Internacional Direito e Cidadania*, January 2009, available at: <http://www.iedc.org.br/REID/?CONT=00000080>.



cultural innovation which, in the meantime, has largely substituted open access by a system of bilateral agreements.

#### 4.3. The exclusive ABS Agreement under Article 15 CBD

With regard to 'the sovereignty turn', which the CBD has brought about, it is still unclear as to what exactly it involves: does it only restate the right of States to regulate resources located in their own territory?<sup>61</sup> Or does it imply that States may regulate only internally, but not the activities of other States in their territories?<sup>62</sup> More importantly, does 'sovereignty' under Article 15 CBD imply discretionary exclusion or exclusive licences similar to the situation for private property? What is the definitive status of *teff* in this system?

Although millet is included in the multilateral IT-PGRFA system,<sup>63</sup> *teff* (*eragrostis tef*) is not. Thus, even if the public gene bank in Addis Abeba was notified to the Secretary of the IT-PGRFA, Ethiopian and government-owned gene banks would not be obliged to deliver *teff* seeds on request (unless pre-CBD material is requested). Under the rationale of the CBD, *teff* falls under the sovereignty of Ethiopia (Article 15 CBD).<sup>64</sup> This is the direct source of unease which the *teff* paradox reveals. The CBD obstructs habitual access rules of the agricultural innovation system. It adds an additional layer of proprietary rights, instead of enhancing access as originally propagated being the goal of the CBD. The unease stems from the fact that the traditional characteristics of the plant breeders' rights system have tamed proprietary enclosure while respecting proprietary allocation. The CBD, instead, established barriers where classical proprietary rights are not yet even in sight. It is this conflict of different concepts of the proper access rules for agricultural innovation which is at the heart of the *teff* case.

Under this reflection, the question if exclusive ABS agreements are in line with the CBD becomes central. Can the newly obtained sovereignty under the CBD serve as its legal base? The interpretation has to recognise that the sovereignty clause of Article 15(1) CBD is accompanied by a second paragraph, which, in turn, obliges Member States to 'facilitate access'. Hence, the right of States to control access is not an absolute

<sup>61</sup> M. RUIZ MULLER, *The International Treaty on Plant Genetic Resources and Decision 391 of the Andean Community of Nations: Peru, the Andean Region and the International Agricultural Research Centers*, Lima, CIP/SPDA, 2003, <http://www.cipotato.org/library/pdfdocs/AN65154.pdf>.

<sup>62</sup> CHEGE KAMAU, *supra* note 60, at 2.

<sup>63</sup> IT-PGRFA, Annex 1 lists pearl millet (*pennisetum*) and finger millet (*eleusine*).

<sup>64</sup> Unless it is pre-CBD material.



right.<sup>65</sup> The provider states may not block access completely. Their regulatory regimes have to include ‘facilitative’ conditions. But what exactly does this mean? Does the CBD thereby outlaw ‘exclusive licences’?

Due to the lack of any ‘higher’ laws or principles, the interpretation needs to resort to the rationale of the CBD. However, the CBD has created a novel legal set-up built upon political compromise. In order to approach these compromises, any legal interpretation of Article 15 CBD still needs to depart from earlier ‘ideal models’. There are two such models that need to be distinguished from one another. On the one hand, there is the ‘open access’ model as shared by the more classical vision of agricultural innovation. In Article 15(2) CBD, ‘facilitation’ would be interpreted as a monitoring regulation which, however, may not overly restrict access. From this perspective, exclusive licences as equivalents to the absolute and unrestricted rights of the owner would not comply with Article 15(2) CBD. On the other hand, the competing ‘ideal model’ is private property. Hereby, ‘facilitation’ would be enhanced through ‘exclusion’. The mere possibility of granting access would suffice: exclusive licences being one mode of granting access. Third party access would not be an issue. From this perspective, the incentive for bilateral exchange arrangements is enhanced, if exclusive licensing is possible. In this case, the contract would be modelled on the historical precedent of natural resource concessions like, for example, in the fields of petroleum and mining. In fact, both approaches would be in line with the wording of Article 15 CBD. This is the first lesson to be learnt from analysing the ‘teff paradox’. The ambiguous, yet compromising character of the wording encroaches on any legal interpretation of a specific CBD rule which takes resort to residual ‘ideal models’ of innovation.

However, this is not to say that one of these interpretations does actually comply with the rationale of the CBD, and the compromise which made the CBD possible in the first place. On the one hand, the unconditioned open access version – in not acknowledging exclusive agreements – does not give proper credit to the sovereignty concept of Article 15(1) CBD: sovereign national discretion must be respected. Article 15(1) CBD remains the base for transparent regulation which provides for access and benefit sharing rules under reasonable conditions. On the other hand, the ‘ownership’ version seems to neglect modern limits to sovereignty and ownership, as well as persisting differences between sovereignty and ownership. In today’s modern world, neither sovereignty nor property is

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<sup>65</sup> Explicitly Doc. UNEP/CBD/COP 2/13, of 5 October 1995, No. 9; J. STRAUS, ‘Biodiversity and Intellectual Property’, (2000/2001) 6 *CASRIP Symposium Series* 141, available at: <http://www.law.washington.edu/CASRIP/Symposium/Number6/Straus.pdf>.



absolute. This seems to be a widespread misunderstanding among the Parties of the CBD. States and private parties are both bound by agreements, laws and general legal principles. In addition, State sovereignty, including public property<sup>66</sup> and private ownership are still two distinct concepts. A State is bound by concepts of good governance, fairness and proportionality, in exercising its sovereignty. The private property owner enjoys comparatively wide discretion within the limits set by the law, and by the legitimate interests of 'the private other'. Even when boundaries between the private and the public sphere become blurred, especially in bilateral contracts between States and private companies with different state affiliations, differences do still persist.

In addition, the notion that Ethiopia 'owns' *eragrostis tef* is highly questionable. The plant is not endemic to Ethiopia, but is also cultivated, for instance, in Kenya. This raises doubts as to whether Ethiopia can legitimately grant an exclusive license on 12 *teff* varieties,<sup>67</sup> in the hope of generating exclusive profits, without having to consult with its neighbours.<sup>68</sup>

The notion of absolute ownership does not respect the quest for 'access facilitation' under Article 15(2) CBD. The rule puts constraints on the transfer of sovereign exclusionary rights to private parties. The norm is not only binding on provider States,<sup>69</sup> but equally requires respect by user States and private companies settled in the territories of such States. Therefore, even when the possibility to enter into an exclusive agreement is acknowledged, limits under Article 15(2) CBD are still to be respected. These limits do not purge through the process of acquisition, namely in the transformation of a State sovereignty right into a private property right which should not be compared to the purg-

<sup>66</sup> A concept alien to most Western European countries, yet widely used in Africa, see C. GODT & V.N DE FRUE, 'Access and Benefit Sharing zwischen Westafrika & Deutschland: Eine Annäherung an einen grundlegenden Eigentumskonflikt', in K.-H. ERDMANN, J. LÖFFLER & S. ROSCHER (eds), *Naturschutz im Kontext einer nachhaltigen Entwicklung – Ansätze, Konzepte, Strategien*, Bundesamt für Naturschutz, Bonn, 2008, p. 59, at 61.

<sup>67</sup> A perspective which Hanns Ullrich will share. See H. ULLRICH, 'Traditional Knowledge', *supra* note 5, at 26.

<sup>68</sup> P. DRAHOS, 'Indigenous Knowledge, Intellectual Property and Biopiracy: Is a Global Bio-Collecting Society the Answer?', (2000) 22 *E.I.P.R.* 245, proposed the creation of resource pools. A respective duty to negotiate could be argued in parallel to the ruling of the WTO Appellate Body in the *shrimps* case (WT/DS58/AB/R, 12 October 1998). Especially when policies are pursued in the name of environmental protection, duties to negotiate non-discriminatorily arise (*chapeau* of Article XX GATT).

<sup>69</sup> However, the provision was once pushed for in the drafting of negotiations by industrialised countries.



ing effect that territorial border transits can have on security rights in movables. The instrumental essence of granting rights in the first place is to foster bilateral exchange and not to foreclose access. Therefore, an agreement which would comply with the CBD would also fix conditions under which the refusal of access would be legitimate. ‘No economic interest’ as such, which was the reason given on request by the Chamber, would not qualify.

The CBD was not meant to be an agreement restricting the access of small and medium size farmers to seeds. The idea was that the IT-PGRFA would provide for a special preceding arrangement regarding food and feed. However, this scheme cannot be interpreted in such a way that, where the special treaty is not applicable, the patent rationale as the ‘general’ or ‘residuary’ one is to be applied. Instead, the residuary special rationale of agricultural innovation has to be taken into account. Therefore, I argue that in these cases, the access rights of farmers persist as a matter of national agricultural policies. For Germany the measure would be the rationale of Article 10 Plant Breeder’s Rights Law (Sortenschutzgesetz).

Similarly, the way in which a sovereignty right is exercised must take competing interests of competition and research into account. It is not acceptable that a licensed sovereignty right could be used to by-pass the limits on property rights set by competition law.<sup>70</sup> Nor is it in the public interest to foreclose access for research purposes.<sup>71</sup>

I therefore argue that an *unconditioned* exclusive arrangement, regarding the use of genetic resources, violates Article 15(1) and (2) CBD. It is not the formal set-up of an exclusive license which makes the agreement violate the CBD. It is the essence that matters. The essence is the underlying concept of ‘sovereignty’, and the duty to ‘facilitate access’. An exclusive licence can be in compliance with Article 15 CBD, if the licensor enjoys unrestricted sovereignty, and if the licensee submits to the duty of non-discriminatorily negotiated access in compliance with sector specific conditions. The *teff*-related ABS agreement between Ethiopia and Health

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<sup>70</sup> In this regard, an in-depth analysis is required as to whether the rationale of the so-called *Magill* case-law of the European Court of Justice can be transposed to the ABS Agreement, cf. H. ULLRICH, ‘Intellectual Property, Access to Information’, *supra* note 7; I. HARACOGLU, *Competition Law and Patents – A Follow-on Innovation Perspective in the Biopharmaceutical Industry*, Cheltenham, UK and Northampton, MA, Edward Elgar, 2008.

<sup>71</sup> A nuanced approach to injunctive relief is needed; see Chr. GODT, ‘Research Tools – Patents and the Information Market in the Knowledge Based Economy’, in I. GOVAERE & H. ULLRICH (eds), *Intellectual Property, Market Power and the Public Interest*, Brussels *et al.*, P.I.E. Lang, 2008, p. 275, at 292 *et seq.*



& Performance Food does not meet these conditions,<sup>72</sup> and therefore does not comply with the CBD.

## 5. CONCLUSION

Re-considering the ABS Agreement between Ethiopia and the Dutch company Health & Performance Food reveals the *teff* paradox as a variant of the classical paradox of exclusion and access at the interface of competition and property rights. Competing rationalities of agricultural innovation have become interwoven by various arrangements, thereby creating contradictory results. Agricultural policies anticipate industrial patent strategies by challenging a bakery patent. The intent is not to get direct access to the claimed technology, but to keep the future market for agricultural products open for competition. The ABS Agreement, as negotiated between Ethiopia and Health & Performance Food, re-enforces the

<sup>72</sup> It is remarkable that the issue did not come up earlier. However, precedents differed in important details. Not only did they concentrate on the pharmaceutical sector, which is accustomed to (patent-dominated) exclusivity. The background situation was different (even when the institutional set-up seems similar, namely a bilateral agreement between a government body and a foreign bioprospecting company). *E.g.*, in the renowned *Hoodia* case, the property right in question was a patent and not, as in the *teff* case, the sovereignty right itself. The patent was attributed to a governmental research institution (South African Council for Scientific and Industrial Research, CSIR). Researchers had isolated the active component of a plant called *Hoodia gordonii* in 1996, a domestic plant of South Africa, which the San tribe used in order to suppress appetite. The CSIR licensed the patent to the English company Phytopharm which later, in 2001, sold the rights to the US-company Pfizer for USD 32 million. The case became famous because a coalition of NGOs, including the Working Group of Indigenous Minorities in Southern Africa (WIMSA), a partner of *Terre des hommes*, reached a contractual agreement on sharing (small) benefits with the San tribe; see C. LASÉN DÍAZ, 'Intellectual Property and Biological Resources', Wuppertal Paper No. 151, 2005, p. 19, available at: [http://www.wupperinst.org/uploads/tx\\_wibeitrag/WP151.pdf](http://www.wupperinst.org/uploads/tx_wibeitrag/WP151.pdf). Further famous precedents are the INBIO agreements, including the most famous one with Merck, signed in 1991. INBio is a private non-profit organisation established in 1989 by the Ministry of Environment and Energy of Costa Rica. For an early self-description see R. GÁMEZ, A. PIVA, A. SITTFELD, E. LEON, J. JIMENEZ & G. MIRABELLI, 'Costa Rica's Conservation Program and National Biodiversity Institute (INBio)', in W.V. REID *et al.* (eds), *Biodiversity Prospecting*, World Resources Institute, Washington, 1993, p. 53. K. ten Kate reports that the agreements enclose property arrangements. However, in contrast to the *teff* ABS Agreement, INBio retains the right to distribute DNA material to third parties. Depending on the bioprospecting agreement, it additionally retains rights to isolated sequences, *e.g.*, micro-organisms in the case of the agreement with Diversa; see K. TEN KATE & S.A. LAIRD, *The Commercial Use of Biodiversity*, Earthscan, London, 2000, p. 255.



overall transformation of the agricultural innovation system towards proprietary structures, and thus undercuts access to resources and a future competitive agricultural market.

The legal constellation, however, is peculiarly complex: first of all, it is an agreement between a developing country and a private company residing in a different, industrialised country.<sup>73</sup> Although this is the typical situation envisioned by the drafters of the CBD,<sup>74</sup> it is particularly complicated in legal terms. Formerly, these agreements were conceived to be ‘international’, but not ‘intergovernmental’, and parties tended to choose international frameworks as terms of reference in cases of dispute, as is in this case with the CBD. However, this decision does not say anything about the law which applies to third party opposition. In this regard, the present constellation differs from the classical concession model. The exclusive license has a directly restrictive impact on legitimate interests of parties in a third country. What about the general guarantee of judicial review?<sup>75</sup> Which national law will apply? Which court enjoys jurisdiction? In addition, the legal nature of the agreement is unclear. Is it a simple bilateral contract to which the general private law rules apply, *i.e.* the principles of freedom of contract, voidness in case of violation of fundamental principles,<sup>76</sup> and limits to injunction?<sup>77</sup> Or is it a concession where a sovereign right is transferred to a private party?<sup>78</sup> Or is it a privilege granted by the State that exempts from competition similar to the historical concept of patents? In both cases, the principles of competition law come into play. Or is it a sort of an investment protec-

<sup>73</sup> See M. HERDEGEN, *Internationales Wirtschaftsrecht*, 3<sup>rd</sup> ed. 2003, p. 70: ‘Agreements dominated by international law’ (German: ‘völkerrechtlich überlagerte Verträge’).

<sup>74</sup> This is one of the main reasons why the CBD Bonn Guidelines were negotiated, *see* Chr. GODT, ‘Von der Biopiraterie zum Biodiversitätsregime – Die sog. Bonner Leitlinien als Zwischenschritt zu einem CBD-Regime über Zugang und Vorteilsausgleich’, (2004) *Zeitschrift für Umweltrecht (ZUR)* 202, at 204.

<sup>75</sup> This is a question familiar to Hanns Ullrich, since he has always asked for judicial review of organisational arrangements between a State and a private party, H. ULLRICH, *Rechtsschutz gegen überbetriebliche Normen der Technik*, (1971) *Zeitschrift für das Gesamte Handels- und Wirtschaftsrecht (ZHR)*, Beiheft 1; H. ULLRICH, ‘Patente, Wettbewerb und technische Normen: Rechts- und ordnungspolitische Fragestellungen’, (2007) *GRUR* 817.

<sup>76</sup> For Germany, *see* paras 134, 138 Civil Code (BGB).

<sup>77</sup> Chr. GODT, *supra* note 71.

<sup>78</sup> M. HERDEGEN, ‘Rechtsprobleme des internationalen Konzessionswesens’, in J.F. BAUR & S. HOBE (eds), *Rechtsprobleme von Auslandsinvestitionen*, Baden-Baden, Nomos, 2003, p. 14; a complicated area already in the contained national/European realm, *cf.* H. ULLRICH, ‘Dienstleistungskonzessionen und Europäisches Vergaberecht’, (2000) *Zeitschrift für deutsches und internationales Vergaberecht* 85.



tion treaty where the financial engagement of a private firm is secured by a set of guarantees? Or is it a transnational tax bill – similar to the Tobin tax on international financial transactions? Or is it a combination thereof, a concession, or perhaps a privilege allowing taxes to be raised abroad? Or is it just a simple permit with a few auxiliary conditions?

All of these questions remain open, the answers to which lie beyond the scope of this article. Yet they do teach us a further lesson on the *teff* paradox: it sheds light on a newly emerging body of laws, which borrows elements from the various areas of law. Their nature is private, international, yet ‘transnational’, all at the same time. Due to the many legal uncertainties involved, there are many possible ways to proceed – instead of using the usual intergovernmental pathways. Depending on the arguments, the agreement might either be brought to a civil or to an administrative court, in either Ethiopia or in the Netherlands, requesting clarification of the fact that the contract is void. One may also approach the public gene bank in Addis Abeba requesting seeds, either one of ‘the 12’ varieties licensed to the Dutch firm, or others than those 12, depending on ones intentions.<sup>79</sup> Another option for the Agricultural Chamber is to simply go ahead, sew the seed, and in waiting for an injunction from Health & Performance Food and then using the ‘void contract’ argument or respectively the ‘tamed injunction’ argument as a defence against the claim under the exclusive ABS Agreement. On the other hand, the patent held by Health & Performance Food cannot be used against farmers and agricultural researchers. It is, however, threatening future industrial customers (in this particular case, the European baking industry and others than contractors of Health & Performance Food) generally, thereby foreclosing future agricultural markets. This is the third lesson to be learnt from the *teff* paradox: agricultural policies have fundamentally been transformed over the last fifteen years. Nowadays, patent rights do not only undercut the rationale of the traditional and more open agricultural system. In addition, agricultural policy makers must also incorporate industrial (patent-driven) policies into their reasoning. In a surprising manner, the CBD rights can form an alliance with the patent exclusivity which, in turn, gives a ‘double holdout’ to the lucky right holder. This should be a concern for all policies involved, including competition policies. It opens a new chapter on how competition is in need to be safeguarded against well-intended governmental politics. Paradoxes, evidently, can be quite helpful in understanding the complexities in modern industrial societies.

<sup>79</sup> If one should wish to take the ‘safe route’, one should request access to pre-CBD-material, and when turned down, one should go to an administrative court.