

“Regulatory Property Rights” – A Challenge to Property Theory

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C'est la propriété qui fait le citoyen

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1 “Regulatory Property Rights” – An Oxymoron?

The term “Regulatory Property Rights” defines a heterogeneous group of newly emerging forms of property rights which sit uncomfortably with traditional property principles.² While they share the central property characteristics of the *in rem* effect³ and, in most cases,⁴ transferability,⁵ they are apparently not in line with general property principles: They do not *only* serve private autonomy and preferences,⁶ but are driven by regulatory purposes. They neither

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- 1 Quoted according to J.G.A. Pocock, “The Mobility of Property and the Rise of Eighteenth-Century Sociology”, in: A. Parel/T. Flanagan (eds), *Theories of Property: Aristotle to the Present*, Waterloo/Ontario Can. 1979, 141–166 (p. 141).
 - 2 Such as the individual’s entitlement (individual property as base of private autonomy), *numerus clausus*, speciality, culturally embedded transfer rules (causal as opposed to abstract), and principles (civil law’s absoluteness versus common law’s fragmentation).
 - 3 The *in rem* effect means that a right is enforceable against anyone (also “third party effect”), A. Clarke/P. Kohler, *Property Law*, Cambridge: Cambridge University Press, 2005, p. 18; C. von Bar, *Gemeineuropäisches Sachenrecht*, Munich: H.C. Beck, 2015, p. 31.
 - 4 The discussion about transferability refers esp. to body parts. R.A. Posner, *Economic Analysis of Law*, New York: Wolters Kluwer, 2014 [9th edn], p. 42, argues that ownership does not imply transferability. However, S. Rose-Ackerman, *Inalienability and the Theory of Property Rights*, 85 *Columbia L. Rev.* 1985, 931, convincingly argues that property is respectively limited.
 - 5 They are created to be bought and sold, thus becoming a “commodity”. This function was traditionally not regarded as central for the qualification of property, but became essential to market economies; see G. Alexander, *Commodity and Property: Competing Visions of Property in American Legal Thought 1776–1970*, Chicago, IL: Chicago Univ Press, 2007.
 - 6 Central to all property definitions, France: Art. 544 Code Civil: “droit de disposer de la manière la plus absolue” (commentated by A. Bürge, *Das französische Privatrecht im 19. Jahrhundert*,

grant absolute power,⁷ nor revolve around material objects (“things”), nor are transfer rules stipulated in line with traditional conventions.

Usually, the term “property” is juxtaposed with “regulation”,⁸ which in turn renders the term “regulatory property” an oxymoron. Yet, the research interest in regulatory property rights is in detecting the changes undergone by contemporary property. The question is: Are these rights different from those relating to conventional property, or do they highlight the functional core of property instead? While a related article explores the multifaceted public/private nature of property,⁹ the present article focuses on the technical aspects of regulatory property. It first provides an overview of newly emerging property rights, submits a typology and describes the novel functions of these rights (II.). It then explores the frictions which regulatory property rights cause to the fundamental principles of property law as settled in national property law systems (III.). The next section identifies the drivers of change in the twenty-first century and juxtaposes the foundations of today’s property principles with the rationale of modern private law theory (IV.). The last section redeems some insights from systems theory in order to reformulate property principles for the twenty-first century (v.).

Frankfurt a.M.: Klostermann, 1991, p. 6); Germany: § 903 BGB “mit der Sache nach Belieben verfahren und andere von jeder Einwirkung ausschließen” (commentated by T. Regenfus, *Vorgaben des Grundgesetzes für die Lösung sachenrechtlicher Zuordnungs- und Nutzungskonflikte*, Berlin: Duncker & Humblot 2013, p. 70).

- 7 Instead, they revolve around more narrow entitlements to use or to sell – a notion rejected by many property scholars on the continent, cp. C. von Bar, „Eigentum – Europäische Betrachtungen zu einem unverzichtbaren Sachenrecht“, in: H.-J. Ahrens/C. Armbrüster/C. von Bar (eds), *Versicherungsrecht, Haftungs- und Schadensrecht: Festschrift für Egon Lorenz*, Karlsruhe: Verl. Versicherungswirtschaft, 2014, 741, who recommends a thinking of „burdens“ instead of fragmentation (p. 758), and a conceptualization of use rights as “freedoms”, not as property (p. 761) thus reflecting a continental (German style) tradition (p. 765: freedom as something opposed to regulation).
- 8 In particular, the term does not reiterate the distinction of property under public law versus private law; for this debate see T. Regenfus (2013, *supra* n. 6), p. 30 and p. 648 at fn. 1643; M. Ruffert, *Vorrang der Verfassung und Eigenständigkeit des Privatrechts*, Tübingen: Mohr Siebeck, 2001, p. 383.
- 9 Two closely connected articles were written during the author’s time at the Center of Excellence at the University of Constance (2015). The present one focuses on structures and principles, the other one on the public–private interface of property, its historic development, and its implications for modern takings law: C. Godt, “Regulatory Property Rights’: New Insights from Private Property Theory for the Takings Doctrine”, 2016 (forthcoming).

II Typology and Functions

Regulatory property rights have emerged in various fields of law from logistics to environmental law. They break up the juxtaposition of market and state as developed up to the mid-twentieth century,¹⁰ and sit uncomfortably with the conventional thing–person distinction. The public–private distinction has limited private actors to means under private law (private property) and state actors to public law, and legitimized the abolition of collectives in the late nineteenth century,¹¹ and of public property until the mid-twentieth century.¹² Behavioural regulation was assigned to public law. Private law came to be categorized in terms of bilateral claims or property in things, relegating all other types of immaterial rights from intellectual property through secured forms of payments to property in corporations to special areas of law.

Modern regulatory property rights represent the complexity of the public–private realm. This breach with the simple binary code can best be understood as departing from the four-fields scheme of public–private axes. It goes beyond the simple two-field scheme and captures the modern mix of public–private-governance arrangements, with private industry regulating itself and state regulation by privatization. In order to integrate all modern forms of proprietary assignment, the chart has to be expanded to collectives and collective decision-making as distinct from state regulation. The three categories on each axis consequently transform the four-fields scheme into a matrix of nine fields, combining the actors on the x-axis (private persons, collectives and the state) with the *modus operandum* on the y-axis (horizontal, collective, vertical).¹³

¹⁰ Ibid.

¹¹ Historians and sociologists have recently unearthed a rich variety of collective arrangements which persisted until the early twentieth century; see S. Brakensiek, *Agrarreform und ländliche Gesellschaft – Die Privatisierung der Marken in Nordwestdeutschland 1750–1850*, Paderborn: F. Schöningh, 1991; for the comparative collection for Germany and France see R. Prass/J. Schlumbohm, G. Béaur/C. Duhamelle (eds), *Ländliche Gemeinschaften in Deutschland und Frankreich, 18.–19. Jahrhundert*, Göttingen: Vandenhoeck&Ruprecht, 2003; focusing on the lower countries: R. van Weeren/M. De Moor, "Controlling the commoners – Methods to prevent, detect and sanction freeriding on the Dutch commons in the early modern period", *62 Agricultural history review* 2014, 256–277.

¹² In Germany, the category was rejected as a reaction to the systems conflict of the Cold War after WWII; and in other countries it was dropped in the course of the liberalization of the 1980s.

¹³ The scheme integrates privatized public utilities, labelled "regulatory property" by K. Gray, *Regulatory Property and the Jurisprudence of Quasi-Public Trust*, 32 *Sydney Law Review*

While not all quadrants can be discussed here, the following four conjunctions stick out:

- (1) The private actor/horizontal [private] *modus operandum* quadrant has enlarged and become differentiated. Three phenomena are particularly prominent. First, the pure exchange markets in products and services were supplemented by capital markets, adding a different rationale which is most notably represented by innovative “financial instruments”, like “derivatives”, “options” and “swaps”. In the form of commodity futures and freight forwards, they migrated to agricultural, energy and logistic markets.¹⁴ Second, proprietary effect is attributed to claims. A recent example is the attribution of an *in rem* effect to nonexclusive sub-licences serving as a means of protection. Third, property rights are claimed for interests intrinsically linked to the natural person, like body parts, bodily information, personal data and virtual property.
- (2) The private actor/public *modus operandum* quadrant expanded as well. Standardization, for example, has been well researched. Less research has been engaged in regulatory property rights which are employed by industry but which serve a public regulatory function, like airport slots or some novel forms of labelling as part of social responsibility policies. These rights serve different functions. They solve allocation problems between competitors or are employed to extend control beyond contracts.
- (3) In the quadrant of public actor/horizontal *modus operandum* two novel types of property rights have emerged. First, there are rights granted to firms like carbon or sulphur emission rights, fishing quota, or offsets for ecosystem services installed as land burdens (servitudes, easements¹⁵). Their models differ according to the purpose. Emission rights are modelled on publicly traded electricity, itself modelled on the trade in bonds. Their prerequisite is homogeneity, which comes with large assets and standardization. Fishing quotas may be transferred, but are not publicly

2010, 221–241, p. 241: “A significant contribution to modern democratization of property”, [Responding to] “civic values which are elevated by the ancient quasi-public trust tradition, which still lie barely concealed in our modern regulatory schemes”.

¹⁴ For a more in-depth discussion of freight forwards, see V. Heutger in this volume.

¹⁵ See C. Reid in this volume for an in-depth discussion of these proprietary instruments of environmental law.

traded. The second type is property claimed by states on genetic resources, cultural goods and minerals. These claims resemble sovereignty claims, and aim at control or revenues.

- (4) Novel types include cases of communities as actors raising proprietary claims, which are very different in nature. They can articulate an aggregate private interest, a public interest, or can absorb a public regulatory function in the form of contractual arrangements. Proprietary claims refer to water (irrigation, extraction, flood dams), traditional knowledge, collective genetic information or inner-city green spaces. They either build on the basic entitlement to exclude or, inversely, on proprietary access rights to property for a limited or unlimited group of people.

What all rights have in common is their immaterial character. This is why M. Colangelo speaks of a „metamorphosis“ of property rights,¹⁶ referring to French theory which focuses on the immaterial and virtual properties of „new property rights“, as opposed to land and commodities.¹⁷ Some such rights exist only digitally, like emission rights or digital objects. In line with traditional property, novel regulatory property rights fulfil the following two functions: First, they transform objects into something which can be bought and sold (a commodity). Early precedents are claims and electricity (the former usually regulated in special laws,¹⁸ the latter qualified by courts as a “thing”¹⁹); new rights refer to data, emission allowances, and financial instruments.²⁰ Second, commodification is driven by remedies: Often an injunction is sought,

16 M. Colangelo, *Creating Property Rights*, Leiden/Boston: Nijhoff, 2012, p. 181.

17 With reference to J.L. Bergel, Rapport Général, in: *La Propriété. Journées Vietnamiennes. Travaux de l'Association Henri Capitant des Amies de la Culture Juridique Française*, Tome LIII-2003, Paris: Société de législation comparée, 2006, 207, p. 215; E. Ramaekers, *European Union Property Law*, Cambridge: Intersentia, 2013, p. 250 observes that European law embraces all three categories (immovable, movables, intangibles) under the notion of property; similar to S. van Erp in this volume.

18 C. von Bar (2015, *supra* n. 3), p. 313 speaks of “normative objects” and deplors the difficulty to characterizing them for lack of language.

19 C-393/92, ECJ of 27.4.1994; ECR 1994 I-1477; C-158/94 ECR 1997 I, 5699; Boek 7 Art. 5 Sec. 1 Dutch Civil Code; Art. 529 French Civil Code, for a recent contested discussion in Germany see C. Modest, “Neues Widerrufsrecht für Strom-, Gas-, Wasser- und Wärmelieferverträge ab dem 13. Juni 2014”, *Energiepolitik* 2014, 121–124.

20 Some ‘new’ objects are deliberately put *extra commercium* by regulation, like (some) body substances (e.g. blood and organs), cp. *supra* n. 4.

sometimes damages, but not necessarily transfer.²¹ Sometimes the attribution is centre stage, as with virtual property, and body parts.²² In England, although rejected by courts, the rights to light, radio signals and wind are discussed.

These rights absorb new functions: First, they institute the distribution of risk,²³ and install a new rationale. "Financial instruments", like "derivatives", "options", "swaps" and "freight forwards" more closely resemble a bet than an exchange. They decouple trade and payment,²⁴ thus supplementing earlier forms of risk management like securitization (e.g. a bill of lading). They are modelled on earlier collective business models like company shares, bonds, and the "charter party".²⁵ Today, they have become standard transactions; "special purpose vehicles" are more recent business models.²⁶ Second, property has come to serve as defence, both for individuals and communities. While firms already trade in "digital data" for processing "big data", the status of the individual information provider and of the information user has remained weak. The rationale of claiming property is driven by the aspiration to enhance the individual's autonomy and legitimate expectations with regard to virtual property, software users or bodily information. The defence function embodies autonomy protection and the respect of use interests. Thus, the rights of collectives in traditional knowledge and genetic resources enhance their autonomy. The protection of collective decision-making in water boards and commonholds secures multiple use interests. All respond to existing property and industrial policies, accumulation of value along transnational production chains and commodification processes, e.g. in medicine. They are modelled on intellectual property, and in the IT sector mostly on copyright. The third

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- 21 For tracing the functional core of property to shed economic value, see Ramaekers (2013, *supra* n. 17), p. 250.
- 22 Especially with regard to human regenerative material (ova, sperms, zygotes) and individualized genetic information embodied in DNA, where concepts of property and person are intrinsically tied together.
- 23 For a sensible comparative account from a common lawyer's perspective see C. Bamford, *Principles of International Financial Law*, Oxford: Oxford University Press, 2nd ed. 2015, p. 98; for freight forwards, M. Stopford, *Marine Economics*, London/New York: Routledge, 3rd ed. 2009, pp. 193 et seq.
- 24 For freight forwards: They separate the finance of transportation capacity from the ownership of the ship or cargo.
- 25 U. Schüwer/S. Steffen, "Funktionen und Einsatz von Finanzderivaten (§ 1)", in: J.-C. Zerey, *Finanzderivate*, Baden-Baden/Wien/Zürich: Nomos/facultas/Schulthess, 3rd ed. 2013, pp. 43 ff.
- 26 In detail: U. Schüwer/S. Steffen (2013, *ibid*), p. 62.

function is instrumental. Public use rights are made proprietary in order complement or substitute traditional command-and-control means. They aim to mimic a market and set transborder price signals (emission rights, fishing quotas). Inversely, industry instrumentalizes property for regulatory purposes. It aims to raise domestic public standards above the national mandatory level, and in this way "imports" standards, while at the same time controls supply and distribution chains. These rights are conceptualized as incentives for a specific behaviour (e.g. to invent, to invest, to engage as an entrepreneur, to reduce emissions, to adopt higher social standards than mandatory).

The recognition of how different regulatory property rights are from conventional property begs the question of how common property principles are challenged.

III Challenges to Property Principles

1 *Lex rei sitae and the doctrine of "vested rights"*

The *lex rei sitae* rule (or *lex loci*) is the traditional general rule for determining the applicable law in property questions. While its conceptual foundations have changed over the last 500 years from "statute" to "seat",²⁷ the operative rule has remained the same.²⁸ Its core is national sovereignty, thus it is bound to territoriality. It was adapted for intellectual property, and re-enforced for all registered rights. But also the case law on security rights in movables reveals that countries strictly adhere to the territoriality principle, even to the point of the elimination of a security right (*effet de purge*);²⁹ the countervailing

27 Respecting a mosaic of questions governed by several jurisdiction; providing international private law with this novel openness is the central and longest-lasting heritage of Savigny.

28 B. Akkermans/E. Ramaekers, "Lex Rei Sitae in perspective: National Developments of a common rule?" *Maastricht European Private Law Institute Working Paper 2012/14* (download www.ssrn.com); R. Michaels, "Globalizing Savigny? The State in Savigny's Private International Law and the Challenge from Europeanization and Globalization", in: M. Stolleis/W. Streeck (eds), *Aktuelle Fragen zu politischer und rechtlicher Steuerung im Kontext der Globalisierung*, Nomos: Baden-Baden, 2007, 119–144.

29 The "internal harmony" is more important than international harmony, J. Basedow, *The Law of Open Societies – Private Ordering and Public Regulation of International Relations*, General Course on Private International Law, Académie de Droit International, Recueil des Cours 2012, Leiden/Boston: Brill/Nijhoff, 2013, at p. 477; he refers to Trevor Hartley,

doctrine of vested rights remained limited in effect.³⁰ Yet, some subtleties have sneaked in.

The most famous example is Art. 4 of the EU Successions Regulation No. 650/2012.³¹ Whereas formerly all European jurisdictions ordered the deceased's home country to rule on his/her succession, Art. 4 Succession Reg. No 650/2012 mandates the law of habitual residence to be the succession statute. Residuary national laws refer to this regulation.³² Interestingly, the "nature of rights *in rem*" is excluded from the regulation (Art. 1 Sec. 2 lit. k Reg. 650/2012).³³ Its rationale is the protection of vested rights, especially for beneficiaries under English trust law. How the courts will implement these rules remains to be seen.

The second example is the *lex originis* rule in cultural objects.³⁴ This way, export prohibitions or limitations to good faith acquisition on the part of the home country are respected.

For registered rights, questions related to the validity of the right are governed by the law governing the register. The shift towards registers has recently been strong. With the Eastern enlargement of the European Union, many countries adopted the French approach requiring non-possessory pledges to be registered. Since many regulatory property rights depend on registration, this shift was re-enforced, with a strong tendency towards European harmonization (though not uniformization). This means that, for example, all national laws transposing the EU greenhouse gas emissions trade scheme refer to Art. 19

who says 2006 about Savigny: „Legitimate policy considerations often ignored: This is the unwelcome legacy of Savigny“.

30 Vested rights theory: R. Michaels, "EU Law as Private International Law? Re-conceptualising the Country-of-Origin Principle as Vested Rights Theory", *ZERP Discussion Paper 5/2006* (download: <https://www.jura.uni-bremen.de/institute/zentrum-fuer-europaeische-rechtspolitik/publikationen/diskussionspapiere/?publ=2162&page=1>), last visited 12.4.2016.

31 Off. J. of 27.7.2012, L 201/107.

32 Art. 25 German Law of Conflicts (EGBGB) was changed 2015.

33 Recital 15 and 16 Reg 612/2012 explain. Rec. 15 is about the respect of the national numerus clausus. Rec. 16 fine-tunes this: "However, in order to allow the beneficiaries to enjoy in another Member State the rights which have been created or transferred to them by succession, *this Regulation should provide for the adaptation of an unknown right in rem to the closest equivalent right in rem under the law of that other Member State. [...] [The] existing networks in the area of judicial cooperation in civil and commercial matters could be used, as well as any other available means facilitating the understanding of foreign law*". (Emphasis added by the author).

34 J. Basedow (2013, *supra* n. 29), p. 456 and p. 465.

Sec. 3 Dir. 2003/87/EC (the EU register) and EU implementing regulations (currently: Reg. No. 2216/2004). While member states deliberately renounced any legal qualification,³⁵ the question of whether these rights are to be qualified as (monetarized) property rights or (unmonetarized) use licences re-emerges, for example in damage cases, for which the *lex loci damni* rule under Art. 4 Sec. 1 Reg. 864/2007 privileges the country where the damage occurred over the country in which the event happened that caused the damage. The competent courts then qualify the right along the lines of national preconceptions, disregarding the qualification of the register law.³⁶ An English High Court judge, for instance, qualified emission rights, which were originally registered under a German register, as proprietary, disregarding the rejection of this qualification by the majority of German commentators.³⁷ Likewise, English courts qualify fish quota as proprietary.³⁸ These examples highlight the pragmatic approach of English law to systematic qualifications. Whether or not damages are finally attributed by a court depends on the facts of the case. The considerations may integrate reasonings essential to continental systematic thinking (like in the fish-quota case) or which are much more pragmatic (like in the *Armstrong v Winnington* case, a case revolving around a computer betrayal and the search for legal redress). These cases beg the question of whether a property right can to be qualified differently depending on the context, be it tax law, insolvency, environmental law (resp. sectoral areas of environmental law³⁹) or

35 S. Clò, *European Emissions Trading in Practice: an economic analysis*, Cheltenham: Edward Elgar, 2011, p. 61.

36 Although the *lex register* was precisely the original intent of contracting states, M. Wemare/C. Streck/T. Chagas, "Legal Ownership and Nature of Kyoto Units and EU Allowances", in: D. Freestone/C. Streck (eds), *Legal Aspects of Carbon Trading : Kyoto, Copenhagen, and beyond*, Oxford: Oxford University Press, 2009, 35–58 (p. 43).

37 High Court, Dec. of 17 October 2011 [2012] EWHC 10 (Ch) – *Armstrong v. Winnington*.

38 English High Court Judge Cranston on 10 July 2013 in *UK Association of Fish Producer Organisation v Secretary of the State for Environment, Food and Rural Affairs*, [2013] EWHC 19959 (Admin), para. 113. In this case, the damage claim was finally rejected. With regard to the "financial damage", Cranston's reasoning is similar to the arguments of the European Union Court of Justice in C-611/12 P, *Giordano v European Commission* (2005) EBL Rev 511, which is also revolving around fish quota; for a comment on the EUCJ-case see G. Brügge-meier, "Revocation of Fishing Quotas, 'Positive Discrimination', and Loss of a Chance – A Comment on ECJ, *Giordano v Commission* 20 March 2014", *Journal of European Tort Law* 2015, 304.

39 Often, a distinction between emission rights and quotas is suggested (like Judge Cranston in *UK Association of Fish Producer Organisation* 2013, *supra* n. 38, para. 113) or between emission rights and land burdens for nature conservation (see C. Reid in this volume).

expropriation.⁴⁰ While this question is not challenging at all in the English legal context,⁴¹ since English law acknowledges that the nature of a right is dependent on the contractual setting, it is certainly a challenge for continental lawyers.

The fourth example is Art. 8 Sec. 1 Reg. 864/2007 (Rom II), which stipulates the conflict rule for non-contractual obligations emerging from IP infringement. It installs “the country of protection”, rather than merely “the law of the country for which protection is claimed”. For rights based on EU law (design, plant varieties, trade marks) or for which a unitary EU-wide effect is mandated (future patent regulation), Art. 8 Sec. 2 Reg. 864/2007 (Rom II) stipulates the applicability of the law of the state where the right was infringed. These formulations reflect the fact that practical managerial considerations have become more important than sovereignty.

A last example of an attenuation of the *lex rei sitae* is Art. 4 Reg. 511/2014, which transposes the Nagoya Protocol to European law and installs a regime on so-called “Access and Benefit Sharing” (ABS). It mandates that “users shall exercise due diligence to ascertain that genetic resources and traditional knowledge associated with genetic resources which they utilise have been accessed in accordance with applicable access and benefit-sharing legislation or regulatory requirements [...]”. The duty as such is of public nature, and its violation gives rise to administrative sanctions. Yet, this (European) duty requires the respect, in the language of the Nagoya Protocol, of the so-called “provider state” law. This norm also applies to proprietary entitlements not acknowledged by Western states, like public state property and collective entitlements to genetic resources and traditional knowledge (*infra* III. 2). If the *lex rei sitae* were applied to resources brought to the EU, those rights would only be acknowledged in countries which apply the inverse doctrine of mandatory law. This rule demands respect for a foreign regulation and requires the applicable statute to recede, like Art. 19 of the Swiss International Private Law Code. The due diligence-standard, however, is not a conflict of law rule, but only demands

40 The quality of “property” depends on the legal surroundings as evidenced for the definition of “immobile” property by E. Ramaekers, “Classification of Objects by the European Court of Justice: Movable Immovables and Tangible Intangibles”, 39 *European Law Review* 2014, 447–468; for a context-dependent interpretation of emission rights, distinguishing torts and takings, see C. Godt (2016 forthcoming, *supra* n. 9).

41 Bamford (2015, *supra* n. 23), pp. 107 et seq.; Fishing rights were first acknowledged as property rights in the UK under insolvency, *Re Rae* (1995) BCC 102.

an investigation into the "provider state" s regulation.⁴² The "duty to comply" demands the respect of a vested right, unless it violates our *ordre public*. The legislative technique of Art. 4 Reg. 511/2014 goes beyond the current state of conflict of law rules. Its rationale is to strengthen the vested-rights principle. Its result is the importation of external law under certain conditions.⁴³ It is based on an idea that property entitlements have become universal, following the conceptualization of modern human rights.

2 *Individual Entitlement*

Most capitalist countries acknowledge private, individual property only. Even if held by the state, property is still an "individual entitlement". The rationale is twofold: Property does not derive from state sovereignty, it is therefore "private". Only individuals can be the assignees of a title, not groups.

Some novel regulatory property titles, however, aspire to be recognized as group entitlement. Rights in genetic resources and traditional knowledge ("ABS rights") under the Biodiversity Convention and its Nagoya Protocol as implemented in Europe under Reg. 511/2004/EU, demand respect for the entitlements of "providers". Depending on the domestic law of where the resource was accessed, this can be the state, a community or/and an individual. Although the implementation process has translated the ABS claim into a duty with an administrative enforcement mechanism, the actual claim of the provider against the user is difficult to enforce in continental courts due to the collective concept of these rights.⁴⁴ In Asian legislation, group rights like "farmer's rights" may limit the claim to information rights, or be the legal foundation of access rights, such as stipulated in the Indian Plant Varieties Act.⁴⁵

42 For an analysis prior to the transposition of the Nagoya-Protocol by the EU, see C. Godt, "Enforcement of Benefit Sharing Duties in User Countries Courts", in: E. Kamau/G. Winter (eds), *Genetic Resources, Traditional Knowledge & the Law – Solutions for Access & Benefit Sharing*, London/Lifting v.A.: Earthcsan, 2009, pp. 419–438.

43 Being part of a broader change, see L. Viellechner, „Responsive Legal Pluralism: The Emergence of Transnational Conflicts Law“, 6 *Transnational Legal Theory* 2015, 312–332; *ibid.*, „Berücksichtigungspflicht als Kollisionsregel: Zu den innerstaatlichen Wirkungen von völkerrechtlichen Verträgen und Entscheidungen internationaler Gerichte, insbesondere bei der Auslegung und Anwendung von Grundrechten“, in: N. Matz-Lück/M. Hong (eds), *Grundrechte und Grundfreiheiten im Mehrebenensystem: Konkurrenzen und Interferenzen*, Heidelberg et al.: Springer, 2012, 109–159.

44 In detail C. Godt (2009, *supra* n. 42), pp. 419–438.

45 A. Ramanna, *India's Plant Variety and Farmers' Rights Legislation: Potential Impacts on Stakeholder Access to Genetic Resources*, International Food Policy Research Institute,

While on the continent, prior existing collective rights (commons) and governance schemes were either abolished⁴⁶ or transformed,⁴⁷ they survived in England. Recent legislation on commonhold has brought to light the fact that collective use rights are still present in the legal sentiment in England.⁴⁸

As much as these novel regulations challenge the idea of private property “only”, they unearth the collective embeddedness of property as an institution, esp. land. They shed light on the double foundation of property as both a control right (exclusion of others; contractual binding of others, reach through to others), and a right to [private] autonomy. In cases concerning local water boards, it is delegation of control to a body representing the property owners self-interests. In ABS, the rationale of rights differs depending on genetic resources or traditional knowledge. With regard to genetic resources, the emphasis is on control, in contrast to traditional knowledge, where the emphasis is on autonomy.

With regard to rights which are negotiated on the international level, nation states have become exposed to a mixture of ideas from various jurisdictional traditions. As with collective rights under the Nagoya Protocol (ABS), it is not evident whether the transposition into an administrative concept fully captures the rationale of the convention. It guaranteed entitlements which should be enforceable transnationally. It remains to be seen how Western courts adjudicate the “mutually agreed terms” based on collective positions. German lawyers criticize their lack of distinction between the private and the public sphere. In England, the prevailing criticism against such rights rests on the proprietary argument that the distinction between the person and the thing (the information) is not clear enough.

EPTD (Environment and Production Technology Devision), Discussion Paper No. 96, Washington, DC, 2003, p. 15.

46 Esp. use rights to agricultural land and forests; see Godt (2016 forthcoming, *supra* n. 9) with special reference to works by S. Brakensiek und H.-J. Kühne.

47 Collective water management schemes have been transformed into administrative collectives; see the works of the economist K. Grecksch for German Water Boards (German: “Wasserverbände”), “Adaptive capacity and regional water governance in north-western Germany”, 15 *Water Policy* 2013, 79. A very similar legal form survived in the Netherlands.

48 A. Clarke, “Land Titling and Communal Property”, in: W. Barr (ed.), *Modern Studies in Property Law*, Bloomsbury: Hart, 2015, 215–231; A. Clarke/C. Godt, “Comparative Property Law: Collective Rights within Common law and Civil Law Systems”, in: C. Godt (ed.), *Cross Border Teaching and Transnational Teaching under the Treaty of Lisbon*, Hanse Law School Series, Vol. 1, 2013, pp. 61–82.

3 *Absoluteness versus Fragmentation*

On the surface, the most important difference between common law and civil law property is the set of principles of "unity", "absoluteness" and "system" in civil law countries⁴⁹ versus "fragmentation" and case evolution in common law countries.⁵⁰ The principles seem to be opposites, yet, from a bird's-eye perspective, they are complementary historic artefacts.⁵¹ Under the principle of absolute unity, "fragmented" rights are rejected. The underlying idea is that the free will of the enlightened individual is the expression of his/her absolute dominium over him-/herself and all his/her belongings.⁵² In cases where property rights are actually split, continental theory reconceptualizes them as contractual-like expectation rights (*Anwartschaftsrechte*),⁵³ while their complementary security positions (non-possessory pledge; retention of property title) enjoy "full" property protection.⁵⁴ Use rights like hunting and fishing rights are understood in continental law as exceptions to the rule, historic artefacts. The anchor norms in civil codes (e.g. §§ 903 und 905 German BGB) make strong statements on unity, but are prone to mislead the common law lawyer. While § 905 BGB essentially transposes the English cone doctrine into (German) black-letter law, this principle was never a legal reality

49 Defended by von Bar (2014, *supra* n. 7), pp. 757–763.

50 On fragmentation: Clarke/Kohler (2005, *supra* n. 3), pp. 297 et seq.; comparatively: S. van Erp/B. Akkermans, *Property Law*, Oxford/Portland Or.: Hart Publ., 2012, p. 64; the modern prime example is the trust: G. Moffat, *Trust Law*, Cambridge: Cambridge University Press, 5th ed. 2009.

51 M. Xifaras, "Propriété Sociale", in: M. Cornu/F. Orsi/J. Rochfeld (eds), *Dictionnaire des Communs*, RUF 2016 (forthcoming): "L'idéologie d'une propriété absolue et exclusive n'ait jamais été qu'une idéologie."

52 In France driven by the Revolution 1789, in Germany by idealism going back to Kant, and as absorbed by F. C. v. Savigny, *System des heutigen Römischen Rechts*, Band 1, 1840 (Darmstadt: Wiss. Buchgesellschaft 1956), p. 338 f: "Eigentum ist Willensmacht 'über ein begränktes Stück der unfreyen Natur", opposed to an obligation, which is will over the single acts of another person. This is the difference between *actio in rem* and *actio in personam*: R. Michaels, 'Introduction to § 241 ("Vor")', in: M. Schmoeckel/J. Rückert/R. Zimmermann (eds), *Historisch-kritischer Kommentar zum BGB*, Tübingen: Mohr Siebeck, 2007, No. 38.

53 Retention of title of the seller; non-possessory pledges for the creditor, registered security for the land buyer.

54 Although this is nuanced when it comes to protection. A standard example in German teaching is the distinct treatment of the non-possessory security right in seizure on the one hand (§ 771 ZPO, the owner can ask for vindication), and in bankruptcy on the other hand (§§ 49–51 InsO, the owner cannot ask vindication, only the equivalent value sum after sale, up-front).

on the continent. Minerals and metals have always been separable from the surface and were never considered part of land ownership, but were bound to the feudal right to coinage. Formally assigned to emperors and kings, the right to mining is today element of the sovereign state power.

The continental idea of unity was first modelled on the “dominance” of the early modern age.⁵⁵ In the time of the Enlightenment, it became a *topos* for the rejection of feudal fragmentation, a means of protecting the emerging *bourgeois* (“Bürger”, citizen), encapsulated in the idea of a code.⁵⁶ The idea of unitary control links hermetically one person, one right, one thing. It provides the individual with a right against anyone in the world, thus immunizes the owner against prior or conflicting rights. Later, industrialization carried on the notion.⁵⁷ The principle of specificity is a consequence of this conceptual reasoning. It no longer secures full dominium over people, but over “things”. Inversely, without a revolutionary turnaround, the common law developed its own principles which limit the control of superior over inferior property. Considering that time limitations are central to common property law and are feudal in origin, two important limiting concepts are the rule against perpetuities⁵⁸ and the appurtenant rule in servitudes.⁵⁹ Thus, the ideas of unity and fragmentation emerge as default rules only.

Modern regulatory property rights transcend the confines of civil law’s unity and common law’s fragmentation, and dismantle these principles as historic mirror images. Two issues deserve closer attention: power and third-party rights. First, we will examine the rule of power and its limitations. In the literature, it is argued that under common law principles, the appurtenant rule would limit the applicability of environmental offsets,⁶⁰ as stipulated

55 Bartolus da Saxoferrato, *Commentarius ad primam partes Digesti novi*, Venedig 1570, ad D.41,2,17 no. 4: “dominium es ius de re corporali perfecte disponendi nisi lege prohibeatur”.

56 See e.g. Ortfried Höffe arguing that codification is superior to case law evolution, „Die Alte Welt im Recht“, Frankfurter Allgemeine Zeitung (FAZ) of 18.5.2009.

57 For example, on grid-dependent energy see P. Büsch, „Recht und leitungsgebundene Energie: Die langfristigen Auswirkungen des sachenrechtlichen Einflusses auf die Errichtung elektrischer Netze zu Beginn des 20. Jh.“, in: M. Maetschke/D. v. Mayenburg/M. Schmoedel (eds), *Das Recht der Industriellen Revolution*, Tübingen: Mohr Siebeck, 2013, 161–174.

58 Although today the rule against perpetuities has lost importance, and has been abolished in many US states, R.A. Posner (2014, *supra* n. 4), p. 84.

59 K. Gray/S.F. Gray, *Land Law*, Oxford: Oxford University Press, 7th ed., 2011, pp. 236 et seq.

60 The appurtenant rule as a hurdle to modern conservation easements and biobanking is discussed by C.T. Reid, “Conservation Burdens and Covenants”, *Scottish Planning and*

e.g. under the EU framework water regulation.⁶¹ The regulatory EU framework, however, demands an autonomous interpretation in the light of the ‘European legislative will’. It cannot be re-interpreted by recourse to *national* principles which counter the legislative purpose. The recourse to historic principles has to be handled with caution. Likewise, the continental unity principle has shrunk to a residual principle. It did not stay the recognition of security rights. Neither did it hold back recent developments in the financial sector such as financial instruments, derivatives and freight forwards, nor the recognition of “emission certificates” and tradable quotas (use rights), nor the corporate models of overlapping control rights along the production chain (CSR labels). Unity or fragmentation today do not accurately describe what is essential to exercise control. In contrast, limited rights, like CSR labels, may reach far. They make possible a subtle control of the supply chain across borders by optic signals without owning the signal.

Similar to the pooling of risks in “special purpose vehicle” in the banking sector, industry “pools” the ownership in the organization holding the CSR-label, and licenses signal the adherence to the standard.

Freight forwards are another example of a powerful fragmented right. The shipping industry has early adopted to the fragmentation discourse. It calls a service contract a sale of “sea transport”,⁶² or sale of “three-dimensional air-space in a ship”.⁶³ Emission rights followed the existing trading schemes of electricity sector on the wholesale market (the triple structure of private and public exchange in forms of options and spot, and “over the counter” [OTC]).⁶⁴

Second, the purpose of absoluteness and unity is to immunize the owner against the rights of third parties. Coupled with the principles of *traditio* and the *Numerus Clausus*, they controlled against unexpected claims. I submit

Environmental Law 2014, pp. 108–109. In Germany, project bound environmental offsets (eco-accounts) or environmental obligations as part of climate change programmes providing preferential credit are not implemented by servitudes between neighbouring lands under § 1018 BGB (which include the appurtenant rule in § 1019 BGB), but under § 1090 et seq German Civil Code (BGB) as burdens privileging a (legal) person, here the state. The discussions about problem of appurtenance has precedents, e.g. in France when Paris was rebuilt based on the Haussman-Plan, A. Bürge (1991, *supra* n. 6), p. 388.

61 Art. 4 EU Dir. 2000/60/EU, OJ L 327, 1 of 22 Dec. 2000.

62 M. Stopford (2009, *supra* n. 23), p. 180.

63 For a more detailed discussion of freight forwards, see V. Heutger in this volume.

64 S. Konar, *Wettbewerbskonforme Stromgroßhandelspreise*, München: Beck, 2015, p. 6; pp. 267 et seq.

that these functions can no longer be fulfilled by formal property principles. Propertization and acceleration will not and should not overrule other people's freedoms and rights. Accelerated digital transfer comes with augmented risks *vis-à-vis* third-party claims. The situation is similar to that of genetic information. In both cases, the commercial value of the data is outweighed by personal interests of individuals. I argue that the proprietary model does not discard the individual rights of individual third parties. These rights will "travel with" the aggregated data unless the legislation changes its status.

Regulatory property rights shed light on modern fragmentation as the contemporary standard. The propertization of something immaterial has become "normal", be it information, a claim or an authorization. These proprietary forms absorb a different rationale other than exchange or dominance. They provide a basis for managerial strategies. The traditional preoccupations with alienation and perfect enjoyment have obscured the fact that property is in essence a behavioural institution. On the continent as much as in the common law world, property has always been a base from which to unfold an entrepreneurial activity. In the twenty-first century, these entrepreneurial activities have expanded towards information and finance. These new activities, on principle, depend on similar safety nets which have traditionally been provided by property law, namely security and stability. Yet today, these functions are provided directly by the design of the legal environment. Traders have to be accredited, rights are registered, and trading rules are supervised by specialized agencies. The actual fine-tuning takes place in adjacent areas of law such as insolvency⁶⁵ and competition law.⁶⁶ These laws sector-specifically balance flexibility on the one hand, and credibility, stability and security on the other.

65 It is in insolvency when a true conflict emerges between stability expectations and business models which are crafted around business failure. For a long time this model was reserved to insurance, but later moved to the banking sector with derivatives, culminating in "sub-prime securities". This conceptual conflict seems to be at the heart of the contested issue of "netting" arrangements in insolvency, cp. Fried, "Insolvenzrechtliche Grenzen von *Netting*-Vereinbarungen (§ 18)", in: Zerey (2013, *supra* n. 25), pp. 389 et seq; Bamford (2015, *supra* n. 23), 54 f (on a note of comparative law n. 3.17).

66 The scope of information rights is not defined by the description of a claim to an invention or by the drawing of design and labels, but by a mixture of principles and limits defined and developing under competition law. Most important of these are the Block Exemptions Regulations under Art. 101 Sec. 3 TFEU; for an overview, see J. Hoffmann, "Chap. H (Competition)", in: M.A. Dausen (ed.), *Handbuch des EU Wirtschaftsrechts*, Munich: H.C. Beck, Vol. 1, 2015 (37. edn).

4 *Publicity versus Claims, Rights and Immaterial Things*

Publicness (syn. "publicity principle") is considered to be an essential property principle on the continent. It encompasses the *numerus clausus* principle, the *traditio* principle, the specificity principle and registers for property and security rights. Of all these, the *numerus clausus* is considered the central building block. It exempts the scope of property rights from private autonomy.⁶⁷ As far as the *numerus clausus*⁶⁸ and the specificity principle⁶⁹ are concerned, English courts have judicially implemented the respective protection of legitimate expectations to shield the liberal individual from third-party claims. The *traditio* principle, as a means of providing evidence for a title transfer, is credited to Savigny, who considered possession a central institution of Roman law.⁷⁰ In essence, it was instrumental to install a bifurcate scheme of claims and things. While on the continent, the evidence function of possession has evolved with different implications for the transfer of the property title⁷¹ and third-party protection with regard to security rights,⁷² the efficiency of registries has become acknowledged in England. Thus, there is European convergence around a transparency standard which matters today.⁷³

The focal point of the debate is the proprietary or obligatory nature of claims and rights in immaterial things. From the continental perspective, it seems self-explanatory that claims cannot be proprietary since they are not

67 See B. Akkermans, *The Principle of numerus clausus in European Property Law*, Intersentia: Antwerp, 2008, p. 402, in which the author also discusses a "filter" to distinguish between those rights which qualify as property rights and those that do not; see also E. Ramaekers (2014, *supra* n. 40), p. 449.

68 Clarke/Kohler (2005, *supra* n. 3), p. 160; S. van Erp/B. Akkermans (2012, *supra* n. 50), pp. 65 et seq.

69 The famous Goldcorp case is a prime example; see S. van Erp/B. Akkermans (2012, *supra* n. 50), pp. 75 et seq.

70 Savigny conceptualizes the Roman *res nec mancipi* as the rule; see F.C. v. Savigny, *Das Recht des Besitzes*, Gießen: Heyer, 1803.

71 Under the German *traditio* principle, it was criticized as fictitious; C. Godt/D. Susnjar, "Besitzkonstruktion im Finanzierungsdreieck", *Juristische Ausbildung (JURA)* 2008, 542–548.

72 Other than in Germany, non-possessory pledges have lost acceptance; see U. Drobnig/O. Böger, *Proprietary security in movables assets*, Munich: Sellier, 2015.

73 For a brilliant technical reconstruction of four reformulated principles, see S. van Erp, "European and National Property Law: Osmosis or Growing Antagonism?" (2006) reprinted in: S. van Erp/B. Akkermans (2012, *supra* n. 50), p. 93.

“public”.⁷⁴ As a matter of principle, for information to be proprietary it needs to be registered, with copyrights (which do not require registration) as an exception to the rule. With data and information claimed as proprietary, the underlying issue grows in importance and the legal profession is struggling to catch up.⁷⁵ In the interest of the party’s protection, the conveyance of a claim is in principle contractual, since the debtor keeps his/her defence rights. Commodified claims are therefore a matter of specialized legislation (involving certification, securitization or registration). This is the basis for the continental equation of property and things, and the distinction between property law and corporate law. In England, the situation is fundamentally different.⁷⁶ The distinction between obligations and property exists, but the distinction is not a matter of principle; instead, it is for one of the parties to decide which legal arrangement suits best (personal versus property rights).⁷⁷ Only in cases where the legislator identifies an overwhelming public policy interest does it intervene, e.g. by requiring charges to be registered.⁷⁸ Therefore, whether a claim under a charge is proprietary or obligatory depends on the set-up. The same thinking is mirrored in *choses in action*.⁷⁹ This flexibility also allows rights to change their nature depending on the remedy sought.⁸⁰

The central point here is that all “regulatory property rights” considered under (II.) are immaterial, thus not “things”. Sometimes legislation is in place, sometimes not. The fundamental change has been that we have become used to immaterial assets. This habituation has three sources. First, it has been brought about by Anglo-Saxon influence. We have become accustomed to the

74 The German § 903 is often cited as a basis for the argument that under German law, property rights to non-corporeal objects “cannot exist”, E. Ramaekers (2014, *supra* n. 40), p. 449.

75 Discussed as “secrecy” protection under unfair competition law; data protection laws, medical, insurance and consumer laws, market dominance misuse regulation, banking laws etc.

76 C. Bamford (2015, *supra* n. 23), p. 113, n. 4.83: “[...] in common law systems, in contrast to Roman law systems, the question of whether an interest or right is personal or proprietary depends on the nature of the remedy available for its enforcement”.

77 This is well explained by C. Bramford (2015, *supra* n. 23), pp. 91 et seq.

78 For reasons of transparency under Sec. 95 Companies Act 1948 (this registration requirement was discarded with the Companies Act 2006); book debts, however, have to be registered, Sec. 874 Companies Act 2006; illustrated by the BCCI (No. 8) case as discussed by C. Bramford (2015, *supra* n. 23), p. 114.

79 C. Bamford (2015, *supra* n. 23), pp. 122 et seq.

80 English High Court judgment in *Armstrong v. Winnington* (*supra* n. 37).

"re-bundling" of securities in "special purpose vehicles", a means of risk distribution which was heavily criticized after the financial crisis for obscuring risks, for those who gave security and those who bought it. As a textbook on banking law rightfully states: "[...] the flexible approach of equity [...] is one of the principle reasons for the dominance of common law systems as the governing regimes for International trade and finance".⁸¹ Second, this habituation has come with the ubiquitous immaterial assets that now form part of our daily life. Fifty years ago, goods still dominated GNP. Today, life is strongly impacted by IP, especially non-registered copyright,⁸² and commodified (standardized) services. Thus, immaterial assets have become "real", and a discourse in property terms has become "normal". This can be attributed to the fact that broader phenomena such as social change, dematerialization and financialization (*infra*) brought us closer to accepting what English law calls "personal property"⁸³ and "choses in action",⁸⁴ two concepts alien to the continental lawyer.⁸⁵ Third, the use of the English language as a contemporary *lingua franca* might have contributed to this habituation. International negotiations are conducted in English, causing negotiators, who are not always lawyers, and the media to adopt terms ("property") while obliterating their technical meaning.

The rights which have emerged largely follow the regulatory schemes of immaterial assets with or without registration, with or without a close link to the financial market as such. The regime for these rights depends on a legislative decision.⁸⁶ The fundamental idea driving the framing of proprietary interests is the possibility of reciprocal transfer and defence against third

81 C. Bamford (2015, *supra* n. 23), p. 118, para. 4.100.

82 And with a much wider scope. IP rights do not only give rise to remedies as described in formulated claims and drawings. The "scope" as distinct from the claim of an IP right is usually much wider due to various doctrines, like "equivalence" and "product protection".

83 C. Bamford (2015, *supra* n. 23), Chap. 4 ("Personal and Property Rights"), a distinction which is different in common law, explained (again) using the Goldcorp case (p. 93).

84 C. Bamford (2015, *supra* n. 23), Chap. 5.

85 C. Bamford (2015, *supra* n. 23), Chaps. 4 and 5 aims to describe the difference from a common law's perspective.

86 An example is § 7 Sec. 5 German Greenhouse Gas Emission Trading Act (TEHG). It defines emission rights as not being „financial instruments“ under two laws governing the finance sector: "(5) Berechtigungen sind keine Finanzinstrumente im Sinne des § 1 Absatz 11 des Kreditwesengesetzes oder des § 2 Absatz 2b des Wertpapierhandelsgesetzes". That does not imply that emissions are not to be qualified as „financial instruments“, but that the supervision of the emission rights market is not governed by those which regulate all other financial instruments.

parties, regardless of the customary limits of legal traditions. The details of the creation, transfer and supervision are sector-specific.

5 *Transfer Rules*

a) The Three Dividing Principles

Transfer rules are conceived of as culturally embedded in each jurisdiction. Since they evolved differently in European nation states, they are perceived as a part of national heritage, often with a sense of superiority *vis-à-vis* the opposing principle of a neighbouring state. The three central dividing differences in transfer principles are: first, the distinction between consensual⁸⁷ versus *traditio* regimes;⁸⁸ second, abstract⁸⁹ versus causal;⁹⁰ and third, the *nemo-dat* rule⁹¹ versus the good faith principle.⁹² Regulatory property rights render these national property principles less fundamental as they are often portrayed to be. Legislators simply introduce sectorial laws which fit the regulatory goal, whilst courts adjust to the necessities of global collaboration.

An excellent example of this is the transposition of the carbon trading scheme⁹³ as negotiated under the UN-Framework Convention on Climate Change of 1992 and its Kyoto Protocol 1997/2005.⁹⁴ Member states and the EU implemented the scheme in parallel, while most member state laws came into

87 F. Terré/Ph. Simler, *Droit Civil – Les Biens*, Paris: Dalloz, 6. ed. 2002, pp. 243; no. 384: „Le principe de l’instantanéité du transfert“, no. 387: “une grande innovation”, no. 388: “la puissance des volontés individuelles et la rapidité de leur actions conjointe”; ausführlich dazu: A. Bürge (1991, *supra* n. 6), pp. 4 and 77.

88 For a comparative overview see S. van Erp/B. Akkermans (2012, *supra* n. 50), pp. 787 et seq.

89 Discussed by T. Regenfus (2013, *supra* n. 6), pp. 313: „Das Abstraktionsprinzip dient in erster Linie dem Verkehrsschutz“; A. Stadler, *Gestaltungsfreiheit und Verkehrsschutz durch Abstraktion*, Mohr Siebeck, 1996.

90 For a comparative overview see S. van Erp/B. Akkermans (2012, *supra* n. 50), pp. 823 et seq.

91 For English law: Clarke/Kohler (2005, *supra* n. 3), ‘*nemo dat*’ as a rule (pp. 393 et seq) and ‘*bona fide*’ as exception (pp. 400 et seq.).

92 Being a central principle of free trade protection under German law (“Verkehrsschutz”): Regenfus (2013, *supra* n. 6), pp. 647 ff; F. Peters, *Der Entzug des Eigentums an beweglichen Sachen durch gutgläubigen Erwerb*, Tübingen: Mohr Siebeck, 1991.

93 To be more precise: this does not just refer to the trading of “carbon”, but also of five other greenhouse gases.

94 A potentially global scheme with the two mechanisms “Clean Development Mechanism” (implemented with CER [certified emission reductions]) and ‘Joint Implementation’ (implemented with “ERU” [emission reduction units]), P.-M. Dupuy, *International Environmental Law*, Cambridge: Cambridge University Press, 2015, pp. 151 et seq.; D. Freestone/C. Streeck, *Legal Aspects of Carbon Trading*, Oxford: Oxford University Press, 2009.

effect in 2004, and the EU Directive only in 2005.⁹⁵ As a consequence, differences emerged. Germany and the UK passed separate laws,⁹⁶ whilst the Netherlands and France introduced a special section into their Environmental Codes. France qualifies emission rights as *bien meubles*,⁹⁷ Germany follows the model of land title registries⁹⁸ and the Netherlands builds on the model of intangible objects.⁹⁹ Significant controversy revolved around the judicial nature of these rights as being either public or private. In Germany, the qualification of these rights as public prevailed,¹⁰⁰ while the characterizations as private¹⁰¹ or hybrid¹⁰² remained minority positions. In most other countries such as the Netherlands, Italy, France and the UK, emission rights were qualified as corporate property with differences as to a qualification as asset or financial instrument.¹⁰³ Note however, that the Netherlands categorizes rights and

- 95 Dir. 2003/87, Off J. 2003 L 275/32; concisely described by M. Colangelo (2012, *supra* n. 16), pp. 130 et seq.; for a more normative focus on the function market conditions ("trust") and the EU-process as a process of "second order", see M. Hartmann, *Europäisierung und Verbundvertrauen – Die Verwaltungspraxis des Emissionshandelssystems der EU*, Tübingen: Mohr Siebeck, 2015; J. Jans/H. Vedder, *European Environmental Law*, Groningen: Europa Law Publ., 4. ed. 2012, pp. 385 et seq.; L. Krämer, *EU Environmental Law*, London: Sweet & Maxwell, 7. ed. 2011, pp. 317 et seq.
- 96 Germany: Treibhausgas-Emissions-Handels-Gesetz 2004 (TEHG); UK: Greenhouse Gas Emissions Trading Scheme Regulation 2005.
- 97 Art. 229-15 Code de l'Environnement.
- 98 Stipulating public faith of the register, now § 7 Sec. 4 TEHG.
- 99 Art. 16.41 Wet Milieubeheer mirrors Titel 4 boek 3 Dutch Civil Code, E. Ramaekers (2014, *supra* n. 40), p. 450.
- 100 For a qualification as public: J. Bauer, *Der Emissionshandelsmarkt – Rechtsfragen des börslichen und außerbörslichen Handels mit Emissionsberechtigungen*, Hamburg: Kovač 2008, p. 37 and A. Pardon, *Die Rechtsinhaberschaft an Emissionsberechtigungen und ihre Übertragung*, Berlin: Duncker & Humblot, 2012, p. 75; U. Mutschler, „Rechtsnatur und Funktionsweise von Berechtigungen nach § 7 TEHG“, in: A. Klees (ed.), *Energie, Wirtschaft, Recht – Festschrift für Peter Salje*, Cologne: Heymanns, 2013, 317 (p. 324); W. Frenz, *Emissionshandelsrecht: Kommentar zu TEHG und ZuV 2020*, Springer: Berlin, 2012.
- 101 A. Büttner, *Zivilrechtliche Aspekte des Handels mit Emissionsberechtigungen*, Göttingen: Sierke Verlag, 2011, p. 45/p. 50, focusing on the question of whether the financial supervision law (KWG) applies.
- 102 W.F. Spieth/Hamer speak of „civil elements“ in: F.-J. Säcker (ed.), *Berliner Kommentar zum Energierecht*, Vol. 2, Fachmedien Recht und Wirtschaft: Frankfurt, 3. ed. 2014, § 7, No. 15; G. Wagner called them „hybrids“: „Handel mit Emissionsrechten: Die privatrechtliche Dimension“, ZBB 2003, 409, p. 412.
- 103 In the UK the legal discussion departed of a text language of "licences" in Sec. 15 UK Greenhouse Gas Emissions Trading Scheme Regulation 2005, while the revised text of 2012 uses the term "permit"; for a discussion see UK Financial Market Law Committee

claims as “patrimony”, as distinguished from pure contractual obligations (Art. 3:6 Nieuwe Burgerlijk Wetboek). German authors who have qualified emission rights as commodities focus on their commercial value, and distinguish emission rights from milk quotas and assigned quantities of nuclear energy. Since EU law has submitted emissions trading to financial market regulation,¹⁰⁴ and all member states moved to a straightforward reference to the transfer rules of the EU register, the discussion has been shifted to courts discussing compensation.¹⁰⁵

For the present context it is of interest how member states accommodated the novel transfer system for greenhouse gas emissions with their traditional principles. The Dutch and French legislators stipulated an abstract transfer for emissions,¹⁰⁶ thus modifying their traditional principle of causal property transfer. Germany modified its leading principle of good faith acquisition, stipulating broad public trust for the register, with the consequence that bad faith does not impede property acquisition.¹⁰⁷ Some argued that the essence of the good faith principle is thus undermined.¹⁰⁸ Commentators of the law

(Working Group), *Emission Allowances: Creating Legal Certainty*, Issue Paper No. 16, London (2009), p. 11 (discussing the qualification as „property right“ versus „financial instrument“). For Italy: F.L. Gambaro, *Il recepimento della direttiva Emissions Trading, Contratto e Impresa/Europa 1* (2007), 521–546 (discussing, in parallel to the different traditions of land registers, if the entry to the register is constitutive or declaratory, p. 545); For the Netherlands: R. Teuben, *Verhandelbare Emissierechten: Juridische aspecten van emissiehandel voor CO₂ in Nederland en de Europese Unie*, Deventer: Kluwer, 2005, pp. 63 et seq.; For France: B. Le Bars, *La nature juridique des quotas d’émission de gaz à effet de serre après l’ordonnance du 15 avril 2004. Reflexions sur l’adaptivité du droit des biens*, JCP éd. G I (2004), p. 148; P. Devolvé, “La patrimonialité des actes administratifs: rapport de synthèse”, 25 *Revue Française de Droit Administratif* 2006, 44 (p. 47).

- 104 The qualification as financial instrument has already been valid for derivatives on emission rights, and become valid with the EU Market Abuse Regulation No 596/2014; for the legislative background see European Commission, MEMO/13/774 of 10. Sept. 2013; also earlier MEMO/11/716 vom 21. Okt. 2011.
- 105 Both under torts and expropriations, see C. Godt, “Regulatory Property Rights’: New Insights from Private Property Theory for the Takings Doctrine” (2016, forthcoming, *supra* n. 9).
- 106 Art. 16:42 sentence 1 of the Dutch Environmental Code; Art. L.229-15 French Code of the Environment, cp. S. van Erp/B. Akkermans (2012, *supra* n. 50), p. 1046.
- 107 Art. 7 Sec. 3 and 4 Greenhouse Gas Emissions Trading Act (TEHG) 2011 (formerly Art. 16 Sec. 2 TEHG) 2004.
- 108 A. Büttner (2011, *supra* n. 101), pp. 129–133 argued that the central idea of the principle was discarded and that therefore emission rights can only be qualified as “sachenrechtliches Sonderrecht”; similar C. Stewing, “Gutgläubensschutz und andere zivilrechtliche Aspekte bei der Übertragung von CO₂-Emissionszertifikaten”, Klees (2013, *supra* n. 100), p. 419.

have settled on an interpretation that the rule only modified the principle for this limited sector.¹⁰⁹ Beyond this question, the language of all member states law¹¹⁰ refers to the transfer rules of the EU register.¹¹¹

From a property law standpoint, the legislative activity is interesting. While the allocation plans (with exceptions for energy-intensive industries¹¹²) and the public-private nature of rights raised a high level of public attention, these more subtle modifications to the foundations of European property schemes passed without public debate and met very little resistance from academia. Courts have equally modified property principles, such as the good faith principle.¹¹³ These developments reveal the fading importance of national traditions in property law. What was formerly considered a "national building block" turns out to be functional, historic thus changeable.

b) Transfer: Bilateral, Public, Replicative

The transfer of regulatory property rights takes three forms: bilateral transfer, public exchange and replicative exchange by licences. Emission certificates, freight forwards and derivatives follow the earlier structures of public trading in bonds and financial papers. While transfer rules for many regulatory property rights simply followed the existing corporate law rationales in order to reduce transaction costs, the fundamental change to property law went unnoticed for a long time. From a bird's-eye perspective, "regulatory property rights" reveal that bilateral transfer is just one mode of title transfer which has been supplemented by multilateral trading and licensing. Multilateral trade based on exchange platforms and auctions has become the standard for speedy and voluminous trade in standardized commodities, squeezing out bilateral transfers in number and in importance. Recent mergers of specialized stock exchanges¹¹⁴ do not signal a decline, but a shift to ever larger, standardized markets, in finance, commodities and services.

109 W.F. Spieth/Hamer in: F.-J. Säcker (2014, *supra* n. 102), § 7, No. 15.

110 Now § 17 TEGH 2011; Art. L.229-16 French Code of the Environment.

111 They refer to Art. 19 Sec. 3 Dir. 2003/87/EC (the EU register) and EU implementing regulations (currently: Reg. No. 2216/2004, Off.J 386/1 v. 20.12.2007).

112 Pars to toto: C-127/04, ECJ of 16.12.2008, *Arcelor*, ECR 2008 I, 9895.

113 Valuable cultural objects and used cars cannot be acquired simply by trusting that the seller holds the title. Instead, the buyer has to take safeguards (ask for papers, check the public lists).

114 The cotton exchange in London (the national exchange in Bremen closed in 2007); electricity exchange EPEX for the energy markets in France, Germany, Austria and Switzerland seated in Paris (merger of the French Powermex SA and the German EEX exchange in 2008).

~~IV~~ Drivers of change
omitted

v Property [Principles] Redefined

If we now understand regulatory property rights as *normal* property in modern regulatory private law,¹³⁹ the founding property principles embedded in the

- 134 On regulation by corporations: S. Sassen, 2008, who criticizes the „inverse states fixation“ („umgekehrte Staatsfixiertheit“) of public international law; M. Herberg 2005, 112: „Weltrecht bildet sich in einer Anschlussbewegung an das Recht der Nationalstaaten aus“.
- 135 Standard examples are certification schemes, like the Kimberley Regime fighting “blood diamonds”, A. van Aaken, 2008, pp. 16–20; and standard-setting, see Basedow (2013, *supra* n. 29), p. 140 and H. Schepel, *The Constitution of Private Governance – Product Standards in the Regulation of Integrating Markets*. Oxford: Hart, 2005; For a theory driven description see P.F. Kjaer, Transnational Normative Orders: The Constitutionalism of Intra- and Trans-Normative Law, *Indiana Journal of Global Legal Studies*, Vol. 20 (2013) 777; P.F. Kjaer, The Concept of the Political in the Concept of Transnational Constitutionalism, in: C. Joerges/T. Ralli (eds): *After Globalization – New Patterns of Conflict and their Sociological and Legal Reconstruction*, pp. 285–321; P.F. Kjaer, “The Structural Transformation of Embeddedness”, in: C. Joerges/J. Falke (2011, *supra* n. 118), 85–104.
- 136 Robé 2009, p. 866: “[The network as modus operandi] is based on the constitutional structure of liberal States but led to a mode of operation of the global economy in total contradiction with it”.
- 137 Robé 2009; also Rajan/Zingales, *The Firm as a Dedicated Hierarchy: A Theory of the Origin and Growth of Firms*, NBER Working Paper No. 7546, 2000.
- 138 On the importance of the capacity for systematic communication see Wielsch (2009, *supra* n. 131), at 412.
- 139 F. Caffaggi/H. Muir Watts (eds), *The Regulatory Function of Private Law*, Cheltenham/Northampton: Elgar, 2009.

eighteenth–nineteenth-century conception of property are to be redefined. When Hans Micklitz described the transformation of modern private law as one “from autonomy to functionalism”,¹⁴⁰ he referred to the concept of autonomy of that time,¹⁴¹ and meant with functionalism the sectorial differentiation which has brought about hybrid forms of law.¹⁴²

For property as a modern market institution, this implies that property is not a distinct order of private autonomy separate from public regulation. Property is *instrumentalized* by companies and states alike. Its functions are measured against its results for competition and regulation. The importance of the property regime as a nationally defined order embedded in different European legal cultures is fading. In its basic functions of assignment, *in rem* exclusivity and transferability, property has come to be understood as universal (Art.17 European Charter of Human Rights; Art. 17 UN-Universal Declaration of Human Rights); the understanding of basic functions has converged,¹⁴³ and the continental distinction between control rights and use rights has become less persuasive.¹⁴⁴ Where public policy issues are at stake, property is regulated sector-wise. Therefore, the emerging rights will not be uniform and homogenous,¹⁴⁵ but will be the object of contingent and overlapping state regulation at an international, European and national level.

In conclusion, we will embark on an exercise to formulate modern European property principles beyond the “civil” and “common law”. I argue that the following five principles are better equipped to capture the essence of modern property. Since modern “regulatory property rights” are not politically

140 The term became the research agenda of the large scale EU1-European Regulatory Private Law Project (2011–2016) under the leadership of H.-W. Micklitz, project description <<https://blogs.eu1.eu/erc-erpl/project-description/>>, last visited: 18.2.2016.

141 Even at the time, this was criticized by Otto von Gierke und Roesler; see T. Repken, *Die soziale Aufgabe des Privatrechts*, Tübingen: Mohr Siebeck, 2001, p. 13.

142 G.T. Teubner, “In the Blind Spot, The Hybridization of Contracts”, *Theoretical Inquires of Law*, 2006, p. 10.

143 Compare the historic European rationales in freedom of contract as reconstructed by H.-W. Micklitz, *On the Intellectual History of Freedom of Contract and Regulation*, EU1 Working Paper 2015/09, p. 8, download: <http://cadmus.eu1.eu/bitstream/handle/1814/35178/LAW_2015_09.pdf?sequence=1&isAllowed=y>, last visited 12.4.2016.

144 The proposition of von Bar (2014, *supra* n. 7) that limiting rights should be conceived as “burdens” to the primary property right, in opposition to fragmentation, points us in the opposite direction.

145 Requiring continental lawyers to engage in more flexible reasoning, something they are not trained in. For a critical analysis see M. Reimann, “The American Advantage in Global Lawyering”, 78 *Rabels Zeitschrift für ausländisches und internationales Privatrecht* 2014, pp. 1–36.

conceived by the European legislator,¹⁴⁶ it will not suffice to conceptualize a European amalgam, even if the European legislator pushes a reflection about the meaning and the importance of national property principles.¹⁴⁷ Since many rights have their origin in either international organizations or multinational companies, we should look out for more general conceptualizations which depart from the given principles but aim to catch modern functionalities.

First, the core of modern property is the right to decide (about control and use), which is defensible against the world (remedies). The former principles of full dominance and individual satisfaction have functionally receded. Yet, decision rights are not available to everyone (like emission rights, which are only tradable by registered dealers), are sometimes limited in scope (like third-party protection for licences in insolvency¹⁴⁸) and are often limited by time.¹⁴⁹ Time limitations are common in IP law, where these limitations are founded on the principle of free competition, conceptualizing IP as an exception to competition as the rule.¹⁵⁰ However, in essence, this conceptualization reflects the regulatory set-up. Seen from this perspective, time limitations, e.g. for emission rights, are one possible expression of the foundational idea that contemporary property rights are, in principle, not absolute. They reflect the immanent time limitations of democratic regulation.

Second, today's property is responsive. That means that property is not only limited by equal property rights, but also by other constitutional guarantees which shape the scope of the right. This limitation reverses the traditional concept of property's hierarchical structure, which renders property superior to any other entitlement. Instead, it integrates a constitutional reasoning into property protection in terms of Polanyi's embeddedness, which in turn renders regulation a necessity, not an intrusion. The background model is the idea of

146 Thus we cannot derive principles from EU law in the same way that Micklitz could from consumer protection laws and regulated markets in order to characterize European contract freedom as "Enabling [to act on the European Market] and Restricting [by law]", *ibid.*, p. 16.

147 B. Akkermans, "The European Union Development of European Property Law", in: C. Godt (ed.), *Cross Border Research and Transnational Teaching under the Treaty of Lisbon*, Hanse Law School Series, Vol 1, Oisterwijk: Wolf Legal Publ., 2011, 39–60; S. van Erp, "From 'classical' to modern European property law?" in: A. Sakkoulas/Bruylant (eds), *Essays in Honour of K.D. Kerameus*, Vol. 1, A. Nt. Athens/Brussels, 2009, 1517–1533 (also: <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1372166>).

148 See C. Godt/J. Simon in this volume.

149 As noted already by S. van Erp, "Fluidity of ownership and the tragedy of hierarchy", *European Property Law Journal (EPLJ)* 2015; 56–80, p. 63.

150 C. Godt, *Eigentum an Information*, Tübingen: Mohr Siebeck, 2007, p. 505.

a network which substitutes the older idea of a pyramid, and which allows a conceptual inclusion of the horizontal effects of human rights.

Third, property is a universal institution. As a consequence, the *lex rei sitae* rule becomes a technical default rule, but deprived of the rationale of the former "internal legal harmony" of the nation state. In contrast, society accepts and welcomes "legal irritations" from the outside,¹⁵¹ which are reflected not at the conflicts of law level, but at the substantive law level. At the conflicts of law level, „connecting factors“ may take priority over the *lex rei sitae* ground rule, like "habitual residence" or the choice of law.¹⁵² Consequently, foreign law will apply much more often. However, this process will not be unidirectional. While sometimes foreign law will be imported, in other situations, domestic law will be exported.

Fourth, transparency will substitute for the principle of publicity. In many countries, registers have been implemented. Yet, registration is not a constituent element, but a means to secure a third-party effect. In a similar way, possession has lost its importance as a means of publicity in securities. Possession has also lost its importance to documents and due diligence in transfer regimes. Transparency seems already to describe the status quo. The standard of transparency might vary. In settings of modern self-regulation, the limitation to "transparency for the concerned community" (e.g. for freight forwards: registered members of Baltic Exchange) might suffice. As far as "virtual property" is concerned, it is the whole public. As a matter of principle, determinability will suffice. Where public legitimate "recognition" is required, a legislative act or judicial authority will upgrade the transparency standard.

Fifth, transfer rules will be differentiated by sector. Three forms have emerged: bilateral, multilateral or replicative. While "bilateral transfer" describes the traditional transfer of a fungible good from one person to another,¹⁵³ "multilateral transfer" denotes a multilateral setting of an offer to several bidders where transfer solely depends on the price tag. The latter form depends on standardization, of which various means have been devised. Commodities are categorized, services standardized (e.g. transport by way of containers), and financial contracts commodified and standardized by way of "re-bundling" in "special purpose vehicles". Replicative transfer refers to use rights; it often takes the form of licences which grant access to digital goods.

151 J. Basedow (2013, *supra* n. 29), p. 472 discusses the "open society".

152 J. Basedow (2013, *supra* n. 29), p. 478.

153 Applicable to special goods and bulk ware.