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Private Law as an Enabler and Regulator of New Forms of Production: A Socio-Functional Analysis of the Ideals of Doctrinal Stability and Social Congruence

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1. Introduction

Melvin Eisenberg has argued that there are two ideals for all rules of the common law: *doctrinal stability*, which in the Swedish might be referred to as *principfasthet*, and *social congruence*, which in the Swedish might be referred to as *pragmatism*.[2] In this paper, I propose a socio-functional analysis of these two corner stones of private law doctrine. In short, I submit that the ideal of doctrinal stability has a key function to play in *enabling new forms of economic production*. Social congruence, on the other hand, has a key function to play in *regulating new forms of production to balance their benefits and detriments*.

With new forms of production I mean major systemic changes in how optimal economic production is understood in our capitalist society. One historical example is provided by the rise of centralized mass production during the 19th century when the massive concentration of production was enabled by global distribution networks. Another, more recent example is the fragmentation of centralized mass production complexes during the 20th century into networks of increasingly specialized actors, that can be referred to as 'global value chains', brought about by communication technologies that allowed the governance of production from afar. A third, and contemporary, example is provided by the so-called 'platform economy', founded upon advanced digitalization. In each case, the new forms of production were based on novel means of using the basic private law institutions of contract and corporation. In particular, novel governance mechanisms based on technological and ideological advances were used to fuse together individual contracts and corporations into new forms of production in ways that were unimaginable when the legal foundations of these institutions were laid.

The function of doctrinal stability, I argue, is to grant free reign for innovating these new forms of production by protecting them from regulatory intervention. The function of social congruence, then, is to balance the societal benefits and disadvantages of these new forms of production once they have established themselves. However, the argument goes further than that. In particular, I argue that understanding the intertwined social and legal functions of doctrinal coherence and social congruence helps highlight the crucial role that the basic, transnationally accepted and nigh immutable private law institutions of contract and corporation play in developing new forms of production and economic growth, in particular in contrast to earlier research focusing primarily on the role of barriers to trade. It also helps us conceptualize and understand one of the main problems in trying to balance new forms of production from the onset instead of *ex post*.

The structure of this paper is as follows. In Section 2 I focus in detail on the rise of, first, centralized mass production, second, global value chains, and third, digital platforms, as

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[2] Melvin A Eisenberg, *The Nature of the Common Law* (Harvard University Press 1988). This paper is to a major extent based on impressions received from the seminar *Pragmatism v. principfasthet i nordisk förmögenhetsrätt* held on 22–23 November, 2018, at the Stockholm Centre for Commercial Law. Hence the reference to the Swedish.

dominant forms of economic production. In each case I focus in particular on the role that stable private law institutions and novel means of governing actors beyond contractual and corporate boundaries have had in the rise of new forms of production and the role that a multitude of legal responses to their negative externalities, culminating in court-led development of private law doctrines, has had in their regulation. Then, in Section 3, I outline the proposed socio-functional analysis based on the examples discussed in Section 2. A brief conclusion ends the paper.

2. Extreme Legal Pragmatism in the Wake of Radical Transformations of Production

2.1 Centralized Mass Production and the Rise of Product Liability

A major change took place in economic production over the 19th century.[3] Earlier, production had typically taken place in conjunction with consumption. Now, new transportation techniques, such as railroads and steamships, enabled the physical separation of production and consumption. This in turn made feasible the massive concentration of production in one place for bureaucratic efficiency and economies of scale. The outcome was that centralized mass production complexes, with potentially global distribution chains, became the dominant form of capitalist production.

The new standard of economic production led to severe social, environmental and economic problems, such as poor work safety, factories spewing waste, and inadequate wages for labour. This was in part because, from the perspective of law, newly reigning ideas of private autonomy, as reflected in contractual privity and corporate independence, led to the effective insulation of production from the rest of society.[4] The extent of this private autonomy was hotly debated in classic cases such as *Lochner* v *New York*, where the crucial legal question was whether society was allowed to protect bakers by regulating their working hours instead of leaving the issue as a matter of contract.[5] The divided court famously answered *no* as allowing regulation would have restricted the private autonomy of labourers.

Many of the questions related to the ills of centralized mass production were, over time, resolved through for example labour and environmental regulation. In all cases, however, this did not seem possible. The example of *product liability* is particularly pertinent.[6] The increased degree of separation between users of goods and manufacturers led to a clear liability deficit to the detriment of users. Earlier, goods were generally acquired directly from producers. Now, production and consumption were separated to an unprecedented degree and in many cases users no longer had an avenue of meaningful bilateral contact with manufacturers due to extensive distribution networks organized through contracts between several on the face of it independent actors, such as distributors and retailers. While reputational mechanisms, such as branding, maintained an illusion of a relationship between manufacturers and users, from the perspective of then-reigning paradigms of private law

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[3] Richard Baldwin, *The Globotics Upheaval: Globalization, Robotics, and the Future of Work* (Oxford University Press 2019).

[4] Patrick S Atiyah, *The Rise and Fall of Freedom of Contract* (Oxford University Press 1979).

[5] *Lochner* v. *New York*, 198 U.S. 45 (1905). David Bernstein, "Lochner v. New York: A Centennial Retrospective" (2005) 85 Washington University Law Quarterly 1469.

[6] Generally, see Jane Stapleton, *Product Liability* (Butterworths 1994); Simon Whittaker (ed), *The Development of Product Liability* (Cambridge University Press 2010).

distribution networks precluded the existence of a legally-relevant relationship between user and manufacturer.

Traditionally, contract law might have provided a remedy, in particular as it was shedding off the vestiges of *caveat emptor* and moving towards an inclusive approach to implied terms that shifted liability towards sellers. However, two problems remained. First, contractual causes of action were generally limited to actors in privity. In the new reality of economic production, consumers were typically far-removed from manufacturers by way of distribution chains and mere users of goods were not included under the canopy of privity at all. Second, contractual causes of action were curbed by limitations of liability included in the chain of contracts. And at the same time, there was no general tort of negligence to override the private ordering of the parties.

This lack of recourse from users harmed by defective goods towards manufacturers of the same goods led to an unprecedented court-led development of private law. First, over several decades tortious doctrines were gradually expanded from manufacturer liability for *dangerous goods* to a general theory of negligence that encompassed *all goods* and which would, ultimately, even override contractual private ordering.[7] Even this, however, was not deemed enough. A key problem with tort is that the injured actor has to show the negligence of the tortfeasor, providing a practical burden in particular in relation to complex industry, the workings of which are not easy to discern from the outside. In the several common law jurisdictions of the United States, this led to radical experimentation with contractual causes of action.[8]

At the height of this development, mere users (i.e. even those not associated with the chain of sales) could raise contractual causes of action towards manufacturers and these contractual causes of action could override any contractual limitations of liability that would otherwise have shielded a manufacturer.[9] Ultimately, though, these radical developments of private law doctrine were relegated into the narrow niche of the 'tort of product liability' to hinder their more general spread.[10] Nonetheless, contractual, tortious and other causes of action can still coexist depending on the individual state in question.

These legal developments to regulate the negative externalities of defectively manufactured goods did not take place in a vacuum. On the one hand they were supported by a growing understanding of the political economy of centralized mass production and how private law allowed certain actors to shield themselves from liability in a way that struck contemporaries as inherently unfair. On the other hand, they were supported by legislators gradually developing means for controlling production and thus providing, via regulation, a signal that more could be expected from manufacturers.[11] The ultimate thrust of this development, however, was the court-led development of private law doctrines of contract and tort. From the perspective of private law theory, these developments seem radical still today and they

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[7] Simon Whittaker, "The Development of Product Liability in England," *The Development of Product Liability* (Cambridge University Press 2010); Stapleton (n 5).

[8] William L Prosser, "The Assault Upon the Citadel (Strict Liability to the Consumer)" (1960) 69 Yale Law Journal 1099.

[9] William L Prosser, "The Fall of the Citadel (Strict Liability to the Consumer)" (1966) 50 Minnesota Law Review 791.

[10] Stapleton (n 5).

[11] E.g. C.C. Regier, "The Struggle for Federal Food and Drugs Legislation" (1933) 1 Law and Contemporary Problems 3.

were even more so a hundred years ago. Furthermore, similar developments, though modified to the local parameters of private law, took place in several legal systems.[12]

2.2 Global Value Chains and the Rise of Production Liability

In the 20th century the general contours of economic production shifted again. This time, new communications technologies enabled the effective governance of production from afar.[13] Suddenly, it was no longer necessary to bundle together as many aspects of production as possible to ensure bureaucratic efficiency. New economic theories started reflecting this reality by shifting focus towards increased specialization.[14] Actors were now expected to focus on their most value producing core competences, such as intellectual property management, research and development, and marketing, and outsource less value producing aspects of production, such as manufacturing and support functions. The end result were globally fragmented networks of seemingly independent actors that are nonetheless organized and governed by lead firms. These production networks can be called global value chains.[15]

Earlier, local regulations had been used to counter the negative externalities of centralized mass production. The shift to global value chains made these earlier regulatory approaches insufficient in particular in two ways. First, the organizational fragmentation of production could in some cases negate the effects of regulation within a jurisdiction. For example, outsourcing labour to labour hire firms could remove labour from the sphere of earlier regulation, whether in the form of labour laws or collective bargaining agreements targeting specific sectors.[16] Second, and more importantly, production could now be outsourced to other jurisdictions where regulatory and enforcement regimes might be radically different compared to the lead firm's home jurisdiction. Thus many of the negative externalities of production are effectively outsourced along with production, whether or not this is the primary intent of outsourcing.[17]

The key driver of global value chain capitalism is a combination of new technologies and ideologies of control that extend beyond corporate, contractual and jurisdictional boundaries. The very idea that governance can be effectively extended in production networks far beyond corporate and contractual boundaries seems incompatible with the idea of contract and corporation as they were conceived of in the 19th century and as they are to a great extent still taught today. Nonetheless, global value chains could not be possible without a lead firm's effective control over fragmented production so that goods

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[12] E.g. Jean-Sébastien Borghetti, "The development of product liability in France" in Simon Whittaker (ed), *The Development of Product Liability* (Cambridge University Press 2010); Gerhard Wagner, "The development of product liability in Germany" in Simon Whittaker (ed), *The Development of Product Liability* (Cambridge University Press 2010).

[13] Baldwin (n 2).

[14] Coimbatore Krishnarao Prahalad and Gary Hamel, "The Core Competence of the Corporation" (1990) 68 Harvard Business Review 79.

[15] Generally on global value chains, see Gary Gereffi, John Humphrey and Timothy Sturgeon, "The governance of global value chains" (2005) 12 Review of International Political Economy 78; Gary Gereffi, "Global value chains in a post-Washington Consensus world" (2014) 21 Review of International Political Economy 9; Jennifer Bair, "Global Commodity Chains: Genealogy and Review" in Jennifer Bair (ed), *Frontiers of Commodity Chain Research* (Stanford University Press 2009).

[16] David Weil, *The Fissured Workplace: Why Work Became So Bad for So Many and What Can Be Done to Improve It* (Harvard University Press 2014).

[17] Peer Zumbansen, "Lochner Disembedded: The Anxieties of Law in a Global Context" (2013) 20 Indiana Journal of Global Legal Studies 29.

comply with target market standards and, increasingly, that all value chain actors co-operate to ensure value-chain wide cost-effectiveness and research and development capabilities.[18] The means of control are still for the most part, and in particular in relation to governance through contract, seen as operating outside the law, fusing together several legal institutions that from the perspective of law would be regarded as independent.[19]

Slowly, a multilevel legal response to the social, environmental, and economic problems of global value chain capitalism has begun to emerge. It is not as easy to describe as in relation to centralized mass production because the cogs and wheels of this response are still in motion. However, it is clear that at least three fronts are crucial.

A first approach focuses on private governance.[20] In transnational contexts, it is argued, reliance on private governance avoids the problems of legitimacy, participation, and democracy that affect any attempt at extraterritorially focused national regulation.[21] Also, as noted a plethora of diverse private governance mechanisms lie at the heart of how lead firms already govern their global value chains in relation to target market standards, cost-management and research and development. Considering the current extent of governance, extending it to other negative externalities of production does not seem as such a considerable leap.[22] Several reporting standards have focused on value chain wide reporting.[23] Standards are not enough, however, and recent governance mechanisms have focused on developing value chain wide *capability building* mechanisms to ensure that all actors can comply with standards in practice.[24] There is currently a growing understanding of typologies highlighting increasingly effective private governance mechanisms—the key problem being simply that private governance is ultimately voluntary.[25]

As it is becoming clear that lead firms can and do control their value chains, focus has turned to *public regulation of* the negative externalities of inadequate value chain governance. At

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[18] For diverse examples of control, see Peter Kajüter and Harri I Kulmala, "Open-book accounting in networks: Potential achievements and reasons for failures" (2005) 16 Management Accounting Research 179; Ronald J Gilson, Charles F Sabel and Robert E Scott, "Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration" (2009) 109 Columbia Law Review 431; Richard M Locke, *The Promise and Limits of Private Power: Promoting Labor Standards in a Global Economy* (Cambridge University Press 2013); Thomas Dietz, *Global Order Beyond Law: How Information and Communication Technologies Facilitate Relational Contracting in International Trade* (Hart 2014).

[19] Jaakko Salminen, "Sustainability and the Move from Corporate Governance to Governance Through Contract" in Beate Sjåfjell and Christopher Brunner (eds), *Cambridge Handbook of Corporate Law, Corporate Governance and Sustainability* (Cambridge University Press 2020).

[20] Klaas Hendrik Eller, "Private governance of global value chains from within: lessons from and for transnational law" (2017) 8 Transnational Legal Theory 296.

[21] Kenneth W Abbott and Duncan Snidal, "Strengthening International Regulation Through Transnational New Governance: Overcoming the Orchestration Deficit" (2009) 42 Vanderbilt Journal of Transnational Law 501; David Vogel, "The Private Regulation of Global Corporate Conduct" (2010) 49 Business & Society 68; Larry Catá Backer, "Transnational Corporations' Outward Expression of Inward Self-Constitution: The Enforcement of Human Rights by Apple, Inc." (2013) 20 Indiana Journal of Global Legal Studies 805.

[22] Generally, Locke (n 17).

[23] Such as the Greenhouse Gas protocol (https://ghgprotocol.org) that focuses not only on corporate groups (scope 1 emissons) but also contractual suppliers (scope 3 emissions). For other examples on standardization, see Phillip Paiement, *Transnational Sustainability Laws* (Cambridge University Press 2017).

[24] Such as the Accord on Fire and Building Safety in Bangladesh, connecting lead firms to value chain labour interests in order to jointly govern work safety throughout the value chain. Jaakko Salminen, "The Accord on Fire and Building Safety in Bangladesh—A New Paradigm for Limiting Buyers' Liability in Global Supply Chains?" (2018) 66 American Journal of Comparative Law 411.

[25] Locke (n 17).

first, focus was on public international soft law, such as the OECD Guidelines for Multinational Enterprises starting in 1976 and, later on, in particular the UN Guiding Principles on Business and Human Rights. There is also continuing debate over a hard international business and human rights treaty, but any such instrument has yet to materialize.[26] On the other hand, the many soft law instruments have provided a model for regulating global value chains. Together with the ultimate failure of private governance to effect change, the soft law models have acted as a major impetus to *national* hard laws regulating lead firms' governance of their global value chains in relation to human rights and social and environmental problems. Over the last ten years there has been a rising tide of such hard laws that have incrementally developed ideas of how global value chains can be regulated.[27] While such legislation is still in its infancy and major challenges remain, such as a bias towards corporate groups instead of contractually organized value chains,[28] it provides a concrete and growing signal that, if necessary, global value chains can be regulated through public law.

While regulatory approaches to global value chains have developed massively over the last decade or so, they are still in many ways lacking. In particular, the question of lead firm *liability* over inadequate value chain governance in relation to social and environmental externalities remains vague in many of the regulations. To offset this, *private law doctrine* has also developed markedly over the past years. For just one example, in *Chandler* v *Cape* the UK Court of Appeals allowed for the tort of negligence to be used to establish a parent company's liability towards its subsidiary's employees where the parent, despite its better knowledge, had not used its controlling position to establish asbestos related work safety policies in its subsidiary.[29] In several later cases, courts have stuck to a rather strict interpretation of *Chandler*.[30] However, in the recent 2019 *Lungowe* v *Vedanta* ruling the United Kingdom Supreme Court saw Chandler in a more liberal and expansive light, opening the floor for the continuing development of negligence liability for a lead firm's inadequate governance of its value chain.[31]

Together, *Chandler* and *Lungowe* could mean to value chain liability what classic cases such as *MacPherson* v *Buick Motor Co*[32] and *Donoghue* v *Stevenson*[33] meant for the establishment of negligence-based product liability. At the same time, as more and more regulations are put in place requiring companies to report on their social and environmental impact in more

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[26] Olivier De Schutter, "Towards a New Treaty on Business and Human Rights" (2016) 1 Business and Human Rights Journal 41.

[27] Jaakko Salminen and Mikko Rajavuori, "Transnational sustainability laws and the regulation of global value chains: Comparison and a framework for analysis" (2019) 26 Maastricht Journal of European and Comparative Law 1 (open access at: https://journals.sagepub.com/doi/full/10.1177/1023263X19871025); Jaakko Salminen and Mikko Rajavuori, "Yritysvastuulait ja ylikansallisen arvoketjun oikeudellinen käsitteellistäminen" (2019) 117 Lakimies 387.

[28] Salminen, "Sustainability and the Move from Corporate Governance to Governance Through Contract" (n 18).

[29] *Chandler* v *Cape plc* [2012] EWCA Civ 525. E.g. Martin Petrin, "Assumption of Responsibility in Corporate Groups: Chandler v Cape plc" (2013) 76 Modern Law Review 603.

[30] E.g. *Okpabi* v *Royal Dutch Shell plc* [2018] EWCA Civ 191.

[31] *Lungowe* v *Vedanta Resources plc* [2019] UKSC 20. In particular, the court noted that the criteria set forth in *Chandler* were not definitive but just one example of a case in which a duty of care could rise. The court also focused on the reporting of lead firms as a possible source of liability instead of factual control, perhaps similarly to how brand marketing was a major impetus for establishing product liability.

[32] *MacPherson* v *Buick Motor Co*., 217 N.Y. 382, 111 N.E. 1050 (1916).

[33] *Donoghue* v *Stevenson* [1932] UKHL 100 (appeal taken from Scotland).

detail, there should be ample material on which to base these claims. While there is still a long way to a stricter approach, for example a la *Henningsen* v *Bloomfield Motors* in the product liability context,[34] the gradual easing of requirements for negligence liability coupled with increasing regulatory reporting requirements that can be used as a basis for such claims already go a long way. It can be said that, at least to date, the development of a nascent *production liability* in many ways matches the early phases of development of product liability.[35]

2.3 Digital Platforms and Platform Liability as a Third Example in the Making—And Where These Examples Lead Us

Richard Baldwin argues that a third transformation of production, now ongoing, is based on new algorithmic and telepresence technologies that enable the ubiquitous presence of advanced labour despite physical and temporal barriers.[36] While the first and second transformations have profoundly affected the blue-collar labour market as massive production units have first been built-up in specific locations under centralized mass manufacturing and then displaced around the globe under global value chain capitalism, this third transformation should extend beyond the earlier ones in particular through its effect on a part of the labour force that has comparatively well survived the earlier transformations—white-collar workers.

In short, technology is increasingly allowing white-collar labour, from surgeons to ship and airplane captains to lawyers, engineers and researchers, to operate surgical robots, navigate vessels, and participate in meetings, design, and monitoring in real-time from anywhere in the world. This should considerably change the way lead firms are organized as many of the high-value producing functions previously physically located in corporate headquarters can now be outsourced, similarly to less-value producing functions of production during the second transformation. As white-collar labour is outsourced transnationally to other countries and algorithmic actors, societies will need to cope with new economic realities such as a possible drop in local high-paying white-collar employment.

Something of this future change may already be visible in the rise of digital platforms over the last ten years. These platforms are again based on the use of private law institutions of contract and corporation in novel ways. In particular, they bypass earlier structures through which *lead firms* extended governance over their value chains and instead focus on external actors, platform operators. Platform operators create private online market places and decide which actors may enter these market places under which terms to transact there. This results in two-layer governance. One the one hand, one contract reflects the relationship of the buyer and seller. On the other hand, the buyer's and seller's user agreements with the platform operator reflect the parameters under which transactions take place in the marketplace. Thus the *platform operator* becomes the relevant lead firm in terms of governing both the economic efficiency of the platform and its externalities as it is the platform operator who has allowed the transaction to take place under specific economic, social, and environmental parameters.

The legal question begged by private law is naturally to what extent weight should be given to what, from a traditional perspective, appears to be the *transaction itself*, i.e. the contract

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[34] *Henningsen* v *Bloomfield Motors, Inc.*, 32 N.J. 358, 161 A.2d 69 (N.J. 1960). Prosser (n 8).
[35] Jaakko Salminen, "From Product Liability to Production Liability: Modelling a Response to the Liability Deficit of Global Value Chains on Historical Transformations of Production" (2019) 23 Competition & Change 420.
[36] Baldwin (n 2).

between buyer and seller, and to what extent weight should be given to the governance of the transaction by the platform operator. While regulatory plans also exist,[37] in particular several recent cases have tried to tackle this issue, for example from the perspective of whether a platform operator should be seen as an *employer* of service providers operating in its marketplace due to the ways in which it governs their actions.[38] While there is little space to discuss these cases in detail here, it is clear that they are increasingly taking place *after* platform operators, from Uber to Amazon and from Microsoft to Alibaba, have in a very short time become some of the most highly valued corporations in the world. Once again, the basic structures of private law have been fused together with new technological and ideological means of governance to create a novel form of economic production.

While this third transformation is still in the making, it seems to provide added continuity to the respective relationships of doctrinal stability and social congruence in enabling and regulating new forms of production. In all three examples, new technologies and ideologies have been used to fuse together, in new ways, what from a traditional legal perspective seem to be individual contracts and corporations. Each shift has resulted in societal problems that have needed regulation, ultimately in the form of court-led development of private law doctrines. The question then becomes whether these examples could be used as the basis for a broader socio-functional analysis of doctrinal coherence and social congruence. In the next Section, I attempt such a preliminary analysis.

3. Towards a Socio-Functional Analysis of Doctrinal Coherence and Social Congruence in Relation to New Forms of Production

Doctrinal coherence and social congruence are slippery concepts that are not easy to approach. Cases, contexts, and opinions vary widely. To overcome some of these problems, I propose, as an early test case, approaching this question by looking at a very specific societal context, the creation and regulation of three new forms of production; centralized mass production, global value chains, and the platform economy. This means that I have the benefit of *three* potentially analogous societal developments. I will compare these societal developments functionally from the perspective of how private law has on the one hand *enabled their rise* and, on the other hand, *learned to conceptualize and regulate* the externalities ensuing from their use.[39] In particular, it would seem that the principle of doctrinal coherence plays a key role in enabling the rise of new forms of production *outside the law* while the principle of social congruence plays a key role in conceptualizing and regulating new forms of production *inside the law*.

First, it seems clear that in each case new forms of production were built upon an enabling foundation of *doctrinal coherence*. The distribution chains that were central to making mass manufacturing work, the supply chains central to making global value chains work, and the tripartite governance behind platform economies, were all built on the basic institutions of private law: contract and corporation. Whether the new forms of production present themselves as corporate groups or contractual networks seems ultimately irrelevant, because both similarly allow benefits to new forms of production based on the traditional

[37] E.g. a European agenda for the collaborative economy, COM(2016) 356 final.
[38] E.g. *Uber BV & Ors* v *Aslam & Ors* [2018] EWCA Civ 2748.
[39] For the general contours of functional comparative method, see Ralf Michaels, "The Functional Method of Comparative Law," *The Oxford Handbook of Comparative Law* (2006).

assumption that corporate and contractual boundaries form effective barriers to control: without control over seemingly independent entities there surely could be no liability either.

At the same time, in each case new forms of governance enter the picture from *outside* the law and are used to tie these seemingly independent legal structures together via new technologies and ideologies. In the case of distribution chains, new forms of marketing and branding that tied products to manufacturers were a central factor in the ultimate rise of liability beyond privity, coupled with the increasingly difficult appraisability of increasingly complex goods by buyers (e.g. canned goods, medicines, automobiles). Manufacturers were clearly in the best position to control production, distribution, and marketing. In relation to global value chains a similar progression has taken place. It is clear now that lead firms can and do control their value chains when it suits their interests, for example in relation to target market product standards, value-chain-wide cost management and research and development. From here it is a small step to requiring them to extend control also to the negative externalities of production. For example under the Greenhouse Gas Protocol numerous lead firms are already reporting on their GHG emissions on a value chain wide scale. And in relation to digital platforms, despite claims that the ultimate transaction is between parties separate from a platform operator it is clear from the onset that *platform operators* are in control of who can join their platforms and under what parameters they can transact in them.

Second, it seems that in each case a radical correction towards better social congruence either has taken or is taking place. In each case it is clear that a more thorough understanding of how private governance extends beyond contractual and corporate boundaries has been a major factor in developing legal responses. The development of regulation, such as product safety regulation in relation to product liability, transnational sustainability laws requiring lead firms to analyse their social and environmental impacts in relation to production liability, and the recent European agenda for collaborative economies, have also played an important supportive role. While these have often not resulted in liability, they have provided a signal of positive interest towards accountability from the perspective of legislators.

Ultimately, the correction towards better social congruence has in each case been left to the court-led development of private law doctrine. The focus on court-led developments seems appropriate as in each case the events leading to a mismatch between law and societal expectations is founded in the novel use of fundamental private law institutions. Due to their globally widespread use, radical changes to contract or corporate form would no doubt be difficult to put in place through legislation thus making the incremental development of doctrine seem the more natural avenue. At the same time, local legal parameters in relation to the intertwined relationship of contact and other forms of law can be widely divergent.[40] It would be difficult if not impossible to construct any overriding regulatory approach from the perspective of one regulator alone.

Reflecting this, developments have not always been evenly paced. In relation to product liability English courts, unlike their American, French, and German counterparts, could not agree on a stricter form of product liability until such was put in place by the EEC Product

[40] Basil Markesinis, "An Expanding Tort Law–The Price of a Rigid Contract Law" (1987) 103 Law Quarterly Review 354; Simon Whittaker, "Privity of Contract and the Law of Tort: The French Experience" (1995) 15 Oxford J. Legal Stud. 327; Jay M Feinman, *Professional Liability to Third Parties* (3rd edn, American Bar Association 2013).

Liability Directive (85/374/EEC), long after the other legal systems had natively developed a stricter form of product liability.[41] The basic idea of liability through negligence was, however, accepted early enough also in England and *in itself* can be seen as a radical departure from the previous status quo. Somewhat similarly, in relation to global value chains momentum for negligence liability seems for now to be building up in English courts, while many other legal systems have yet to have their say.[42] In relation to platform operators' liability the jury is still out, but at least in relation to product liability and production liability it is clear that a radical transformation has taken place.

To sum up, both doctrinal coherence and social congruence would seem to serve two separate societal functions. Doctrinal coherence allows actors to experiment freely with new forms of production. These new forms of production bind together the private law institutions of contract and corporation in imaginative ways by means of governance that transcends contractual, corporate and jurisdictional boundaries with the help of technological and ideological advances. These new forms of production carry benefit to society, even if it is clear that they bring with them not only increased efficiency but also new variations of environmental, social, and economic problems. Social congruence, then, serves the function of balancing out negative externalities of new forms of production, even if these externalities are only external because the earlier institutional readings of contract and corporation thought them to be so. This balancing seems to take place only once the new forms of production have established themselves by becoming wide-spread enough for society to both have the motivation and means of understanding their practical effect.

This preliminary proposal for identifying a socio-functional role for doctrinal coherence and social congruence no doubt raises several critiques and questions. In particular, three questions seem foundational for better understanding the role of these two functions, i.e. the role of law in enabling and regulating new forms of production.

First, earlier research seems to focus on the role of *free trade* as the *legal* reason par excellence for economic growth.[43] The socio-functional analysis provided here would point instead to the major role of the *immutability* of the private law institutions of contract and corporation as major drivers of new forms of economic production and, thus, growth. If the role of nigh immutable, transnationally recognized private law institutions is as crucial as this functional analysis would seem to propose, then this needs to be acknowledged as a major driver for new forms of production. More research is needed to develop and test this hypothesis, even if critical research[44] and circumstantial evidence would seem to support it.[45]

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[41] Stapleton (n 5); Whittaker, "The Development of Product Liability in England" (n 6).

[42] This is in part due to the prevalence of the common law in many of the cases litigated to date, due in part to the rules of private international law favouring the law of the place where damage occurs which, in many cases, has been a former common law country, such as Nigeria in Dutch litigation related to Shell's actions in Nigeria or Pakistan in a German case focusing on a fire at a German buyers' Pakistani supplier.

[43] E.g. Robert C Feenstra, "Integration of trade and disintegration of production in the global economy" (1998) 12 Journal of economic Perspectives 31; David Hummels, Jun Ishii and Kei-Mu Yi, "The nature and growth of vertical specialization in world trade" (2001) 54 Journal of international Economics 75.

[44] IGLP Law and Global Production Working Group, "The role of law in global value chains: a research manifesto" (2016) 4 London Review of International Law 57.

[45] E.g. Edwin Black's account of how IBM micromanaged it's Nazi-German and, later occupied-European value chain despite major barriers to trade put in place by Allied governments as relationships between the Allied and Axis sides increasingly soured towards and during the Second World War. Edwin Black, *IBM and the*

Second, the question rises whether it is in the first place possible to design new forms of production in a pre-emptively sustainable manner, or is sustainability automatically a result of *ex post* balancing? This question has a central role for future transformations of production, in particular the increasing move towards platforms, algorithmic actors, and telepresence that allows a global abundance of white-collar specialist labour to be available anywhere and anytime despite boundaries of time, space, and law. Already the many legal issues raised by the radical use of global value chains (for example to outsource production related externalities such as greenhouse gas emissions to developing countries) and platforms (for example by transport platforms that focus solely on economic indicators to the detriment of e.g. environmental indicators)[46] show that future transformations based on using existing private law institutions in novel ways are a burning contemporary issue.

Third, and finally, by highlighting the role of private law institutions and their development through doctrinal stability and social congruence this socio-functional approach highlights an ideological critique inherent in law. Should the relationship between private law and societal development be left to judges as, despite some input from legislators, seems to have happened in each of the three examples discussed here? Is the central role of court-led developments in relation to private law doctrines the proper arena for balancing the role of law in enabling and regulating new forms of production in a democratic societies, in particular as the private law doctrines of contract and corporation generally seem oblivious to their creative use? How should courts approach such issues? Much room remains for further debate.

4. Conclusion

In this brief paper I have proposed that *doctrinal stability* ("principfasthet") and *social congruence* ("pragmatism") serve two important and separate functions in societal development. Doctrinal stability allows new forms of production to be built upon the core institutions of private law, contract and corporation, by means of extra-legal governance mechanisms founded in technological and ideological advances. This allows society to progress towards increased efficiency by means of new forms of production. Social congruence, then, allows law to regulate *ex post* the benefits and problems of these new forms of production. This allows society to balance the benefits of new forms of production with their potentially severe negative effects in hindsight.

I argue that the respective roles of these two functions as enablers and regulators of new forms of production are reflected in historically intertwined developments of both production and law. Two particularly pertinent examples that were discussed in detail are the development of product liability following centralized mass production and the ongoing development of production liability following the rise of global value chain capitalism. A third example, platform operators' liability, may be visible in the rise platform economies that again use the private law institutions of contract and corporation in a novel way that is beginning to elicit a response from courts. By comparing these examples from the perspective of the respective roles of doctrinal coherence and social congruence in enabling

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Holocaust: The Strategic Alliance Between Nazi Germany and America's Most Powerful Corporation (Expanded, Dialog Press 2012).

[46] Jaakko Salminen, "Sustainability in Contractually Organized Supply Chains: Coordinating Transport" in Ellen Eftestöl-Wilhelmsson, Anu Bask and Suvi Sankari (eds), *Sustainable and Efficient Freight in the EU: Organisational and Legal Tools as Drivers* (Edward Elgar 2019).

and regulating the creative use of private law institutions of contract and corporation in developing new forms of production, it seems possible to undertake an analysis of their respective societal functions.

Finally, if this analysis holds then it would suggest that these two principles are, in fact, intertwined and crucial aspects of both legal and societal development that have their own very specific functions. This socio-functional analysis further suggests that the role of relatively immutable private law institutions is crucial to developing new forms of production. This would mean that they also have a major role for economic development. This finding is crucial as earlier approaches to studying the role of law in relation to new forms of production have focused on other reasons, such as barriers to trade. At the same time, this would seem to imply that developing new forms of production that are from the onset sustainable is extremely difficult and raises the critique of whether courts are the proper place for bearing the brunt of balancing the benefits and problems of new forms of production.