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From Product Liability to Production Liability: Modelling a Response to the Liability Deficit of Global Value Chains on Historical Transformations of Production

Abstract

A legal response to the liability deficits inherent in global value chains, the new standard of economic production, could be modelled on legal responses to the liability deficits of earlier transformations of production. One example is provided by the rise of product liability law in the 20th century. In the wake of centralized mass production and fragmented distribution chains, manufacturers and users of goods were increasingly separated from one another not only physically but also from a legal perspective. Law responded by developing causes of action that overcame contractual and corporate boundaries and allowed users of defective goods effective recourse towards manufacturers with whom they otherwise might not have had a legally relevant relationship otherwise. Similarly, in today's global value chains a central problem is the lack of a legally relevant relationship between lead firms responsible for organizing and governing production and those harmed by their various tiers of subsidiaries, suppliers and subcontractors. Current approaches to developing a legally relevant relationship, such as debates over a duty of care based on the common law tort of negligence, are comparable to early developmental phases of product liability law. Under product liability, these early developments were found insufficient for guaranteeing the rights of injured parties, as also seems to be the case in relation to global value chains today. I compare law's responses to these two transformations of production and propose modelling lead firm liability for inadequate value chain governance ('production liability') on the current, more advanced phases of development of product liability law.

1. Introduction: Litigating and Regulating Value Chain Governance

In mid-October 2017 at the Skellefteå trial court in Northern Sweden, the main hearings began in what not so long ago would have been an almost unheard of legal case, *Arica Victims KB* v *Boliden Mineral AB*:[1] Over seven hundred Chilean citizens were suing the Swedish company Boliden for allegedly having sold toxic sludge to a Chilean company incapable of processing it and, in doing so, poisoning hundreds of Chilean citizens. In the last few decades, similar cases focusing on the liability of lead firms for the insufficient governance of their subsidiaries, subcontractors and suppliers in relation to labour conditions or environmental degradation have become a staple of transnational litigation (Meeran, 2011; Holly, Smit and McCorquodale, 2018). Currently, for example, in addition to the Swedish case against Boliden lead firms are in court in Ontario over the catastrophic collapse of a supplier factory in Bangladesh (*Das* v *George Weston Ltd*, 2017)[2] and in Germany over a catastrophic fire at a supplier factory in Pakistan (*Jabir* v *KiK Textilien und Non-Food GmbH,* 2015)[3]. In addition to such comparatively local catastrophes, lead firms are facing litigation in relation to global events, for example due to the contribution of their value-chain-wide greenhouse gas emissions to global warming (Ganguly, Setzer and Heyvaert, 2018; Peel and Osofsky, 2015).

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While many cases have been dismissed, some have resulted in ground-breaking judgments (e.g. *Chandler* v *Cape*, 2012)[4], others in major settlements (e.g. *Trafigura*[5] and *Lubbe* v *Cape*)[6], and new cases, such as those mentioned above, are developing new arguments to help claimants. Arguably, the media uproar and litigation that follow catastrophes arising out of inadequate value chain governance also help develop private value chain governance (Locke, 2013). For one example, several global garment brands have joined together to organize production in Bangladesh with a special focus on fire and building safety under a novel governance agreement that connects two ends of a value chain to govern the middle-actors (Anner, Bair and Blasi, 2013; ter Haar and Keune, 2014). At the same time, developments in private governance are ultimately based on lead firm benevolence, even when embodied in specialized governance contracts (Salminen, 2018). This in turn has led to an increased focus on regulation. Despite the rise of international soft law instruments, such as the 2011 iteration of the OECD Guidelines for Multinational Enterprises which specifically focuses not only on subsidiaries but also contractual suppliers and 2011 UN Guiding Principles, any international hard law instrument for regulating global value chains, such as the 'Zero Draft' of a proposed business and human rights treaty, faces an extremely uncertain political pipeline. And while national regulators are now also focusing on issues of transnational production through local hard law instruments that draw in part on international soft law, these national instruments focus primarily on due diligence and are often vague in relation to questions of liability for damage caused by inadequate global value chain governance.

Despite the uncertainties of litigation and regulation, the continued development of both entails an increased risk of liability for social, environmental and other harms that lead firms cause through the inadequate governance of their global value chains. My aim with this paper is to contextualize these developments by comparing them to legal responses to the predecessor of today's global value chains. During the 19th century, technological advances in transportation shifted production towards centralized mass production and globally fragmented distribution chains. This resulted in a liability deficit to which law responded by developing *product liability*, a lead firm's liability over the inadequate governance of production towards users of products. In the late 20th century, technological developments in communication enabled the fragmentation of production into global value chains. To conceptualize legal responses to the novel liability deficits posed by today's global value chains I use the term *production liability*, with which I mean a lead firm's liability for the inadequate governance of its value chain towards labour, environmental, and other interests. The current state-of-the-art of production liability litigation relies heavily on the common law tort of negligence, an approach that was developed to regulate product liability but which was ultimately found inadequate for that purpose. In short, to overcome the problems of current approaches to production liability, I propose modelling it on historical precedent from product liability.

The structure of this paper is as follows. First, I describe the rise and development of the established legal concept of product liability, a boundary-breaking legal response to the liability deficits inherent in the predecessor to today's global value chains. Then, in the following section, I focus on technological, economic, and legal developments giving rise to global value chains and their liability deficit. In particular, I focus on the paradox between control and fragmentation: both are necessary for the efficient operation of global value chains but simultaneously they create an uncertain legal environment that interdisciplinary research is trying to explain and typologize. Finally, in the third main section, I turn to possibilities for developing production liability based on novel understandings of control in

global value chains and the model provided by product liability. This includes questions ranging from legal conceptualizations of value chain control, to the localization of transnational disputes, the role of private governance, and public regulation. I end with a brief conclusion noting that developing lead firm liability for the inadequate governance of global value chains could profit well from the rich historical and interdisciplinary research and legal precedent on product liability.

2. Product Liability: A Historical Response to the Liability Deficit Posed by the Predecessor of Today's Global Value Chains

In the 19th century something radical and unprecedented was taking place in the so-called developed societies. Earlier on, goods such as foodstuffs, medicines, and household tools, used to be manufactured primarily by local farmers, apothecaries, and blacksmiths who furnished these goods directly to their users (e.g. Regier, 1933). Now, however, new transportation technologies, such as steamships and railways, made possible the physical separation of production from consumption (Baldwin and Martin, 1999; Baldwin, 2011). Once possible, the increased return on capital allowed by centralized mass-manufacturing made it inevitable. By the end of the 19th century, increasingly complex goods, from canned foods to automobiles and advanced medicines, were manufactured in centralized mass manufacturing complexes. These were then delivered to users who could be far removed from the manufacturer geographically, organizationally and in relation to technical and other capabilities and thus did not have other means of appraising the goods except factors such as reliance on brands.

Centralized mass manufacturing coupled with global distribution was a predecessor to today's global value chains. And like global value chains today, it brought with it a number of challenges that legal and other, such as reputational, accountability mechanisms were unprepared to respond to at first. To focus on legal accountability, take Ellen from Chicago who wants to buy a warm hearty meal to her friend Jennifer at a local restaurant.[7] The meal the restaurant prepares is made with canned food. The restaurant bought the canned food from a wholesaler. The wholesaler in turn bought the canned food from a distributor, who bought it from the manufacturer. Now suppose that the canned food was spoiled due to the manufacturer's defective production practices and Jennifer got food poisoning. From the standing point of late 19th century English and American common law, Jennifer might not have a legal case against anyone: Not Ellen, not the restaurant, not the manufacturer, not any of the middle actors (Whittaker, 2010; Stapleton, 1994).

If instead it was Ellen who had gotten sick, she could perhaps have sued the restaurant with which she had a contract; the restaurant might in turn have sued the wholesaler with which it had a contract and so on up the chain until the manufacturer was reached, but all this depended on the specific contents of each individual contract. And suppose that someone in the chain had no money, or did not want to sue? And besides, is it Ellen's or the restaurant's or some other middle-actor's fault if the manufacturer had negligently manufactured the canned food, and does this have something to do with who is best equipped to provide compensation for e.g. health care and other costs? And what of those like Jennifer who had no connection whatsoever to the chain of sales, who were merely using products that others had supplied them (generally on these issues, see Stapleton, 1994)?

Thus the existing legal infrastructure provided the new combination of centralized production and fragmented distribution with a shield against liability that contributed to various excesses

(Regier, 1933). Despite this shield, by the late 19th century cases related to manufacturers' liability over their production practices started proliferating and causing confusion in the law (Prosser, 1960 and 1966). No one knew how exactly to respond to the legal challenges arising out of centralized mass production and fragmented distribution chains. Take the example of American common law (for which Stapleton, 1994). Contractual actions existed, of course, but were limited firstly by their focus on the parties to a contract (the 'privity of contracts' doctrine) and secondly by any limitations of liability inherent in individual contracts. Tort law was increasingly an option in relation to so-called dangerous categories of goods, such as poisonous materials or weapons, but no general tort of negligence existed which could be used to claim damages from the manufacturer of a generic defective product (Palmer, 1983).

Rapidly, the disjuncture between law and what was perceived by users of goods as the just outcome became too great to be overlooked. Regulators were generally supportive of action and implemented various means of industry oversight (Regier, 1933), but did not directly manage to tackle the questions of liability. Instead, courts started experimenting with different causes of action and, eventually, both contract and tort causes of action were developed to respond to these problems (Prosser, 1960). Under both English and American common law, the current general tort of negligence is very much founded in questions of product liability (e.g. cases *MacPherson* v *Buick Motor*, 1916,[8] and *Donoghue* v *Stevenson*, 1932)[9]. Several salient features of current laws of contract are similarly so, from the gradual fall of *caveat emptor* doctrines to the prohibition of unfair contract terms (Whittaker, 2010).

These developments, however, were soon shadowed by even more advanced product liability regimes which, whether sounding in contract or tort, would place on manufacturers a strictish liability in relation to harm caused to users by defective products (Stapleton, 1994; Whittaker, 2010). The gist of the new approaches was that, unlike under the tort of negligence, the burden of proof of showing a manufacturer's inadequate governance of its production shifted from users to manufacturers. At the same time, manufacturers' defences against liability were considerably limited. Together, these factors allowed claimants to sue not just in theory but also increasingly in practice. The end result was a profound transformation of the central private law paradigms of contract and tort. For example, in certain US jurisdictions contractual causes of action could now be used to sue actors beyond privity and despite limitations of liability, something that was simply inconceivable just a few decades earlier (Prosser, 1966).

Product liability thus largely came to be not through regulation but through the court-led development of general paradigms of contract and tort. These developments cover not just common law but also extend to European civil law legal systems (Whittaker (ed), 2010). Collectively, they show that liability deficits inherent in new forms of production have the power to radically alter our existing understanding of contract and tort. And more than merely establishing a bridge over the newly-found chasm between users and manufacturers, product liability deals with fragmented production more generally. Modern product liability is a lead firm's liability towards users for its entire production complex, no matter how production is organized, as one big corporation or as a network of smaller actors connected through contractual or corporate relationships.

The developments relating to expanding contractual causes of action were a major force in shifting burdens of proof from users of goods to manufacturers and thus making product liability law much more effective than the mere tort of negligence under which claimants had to show a manufacturer's negligence. This use of contract, however, was not without a

backlash. The idea that a contractual cause of action could extend both beyond the parties to a contract *and* overcome any limitations of liability included in a contract was seen as against the nature of private ordering as represented by classical paradigms of contract. Despite contractual origins, the new developments were relegated into their own neat little niche as 'the tort of product liability', governed by tort instead of contract and thus limiting the extent to which the new developments could be seen as reflecting a general development of contract law (Stapleton, 1994).

Because many of the doctrinal developments related to product liability were relegated to a specific niche, the story of how the need for product liability expanded paradigms of law in complex structures of production came to a rapid end save for one general principle. Under the common law, one strand of the development of product liability lives on as the general tort of negligence. Founded in classic product liability cases revolving around defective automobiles and rotten snails in bottles of lemonade, what the tort of negligence comes down to is that under specific circumstances a lead firm may have a duty of care towards other actors even beyond contractual boundaries. Typically the tort of negligence does not require actors to act on behalf of others. However, if one nonetheless chooses to act, one must act in a diligent fashion. This duality lives on in how control is perceived in global structures of production and forms the foundation of many current approaches to liability in global value chains (Phillips and Lim, 2009).

At the same time, in relation to product liability the tort of negligence was found grossly inadequate to provide a measure of liability on lead firms for defective production practices. So the question is whether developments similar to those that took place in multiple legal systems in relation to developing product liability beyond standards comparable to the tort of negligence could provide precedent and models for developing production liability from its current meagre beginnings that are comparable to the early history of product liability law. Put another way, this would mean extending developments related to lead firm liability towards users of defectively produced goods also to third parties harmed by inadequately governed manufacturing processes. This will be my focus in the next section.

3. The Rise of Global Value Chains through the Paradox of Fragmentation and Control

The structures of global production have changed considerably since the early days of centralized mass production and fragmented distribution chains that gave rise to product liability law. In particular, to reverse the earlier trend of centralization, production began to fragment on an unprecedented scale towards the late 20th century. A primary driver of this development was the rapid advancement of communication technologies (Baldwin and Martin, 1999; Baldwin, 2011). Earlier on, incorporating as many production related processes as possible in the same physical space allowed a centralized bureaucracy maximum control over production. With the advancement of communication technologies it no longer mattered where different aspects of production physically took place: production could be organized and coordinated on a global scale, always just-in-time for the next production run. This change is reflected in both economic theory and law.

In relation to economic theory, the possibility of efficiently coordinating fragmented production allows lead firms to focus on their high-value creating core competences while outsourcing less value producing aspects of production to other actors (Prahalad and Hamel, 1990). What exactly is deemed high value depends on context but can include functions such

as research and development, marketing, design, and intellectual property management, while functions such as manufacturing, component development, and various supportive functions such as property administration and financial management may be seen as less-value-creating, unless these are at the core of the lead firm's business model. Thus from an economic perspective fragmentation could simply be seen as a reallocation of resources to guarantee efficiency.

In relation to law, new means for the efficient coordination of fragmented production may serve to undermine regulation by moving production away from the ambit of existing regulatory approaches. Within a legal system, actors may be treated differently based on for example their size and sector: the applicability of labour law and collective agreements can vary considerably based on sectoral differences or if labour is provided by a labour-hire firm (Weil, 2014). And when outsourcing to other jurisdictions, regulatory differences in relation to labour, environmental, tax and other law may be vastly more different (e.g. Hepple, 2005). While in both cases there may be nonregulatory reasons for the fragmentation of production, such as increased efficiency through the re-localization of different aspects of production by placing them closer to markets, raw materials, or labour, fragmentation can also lead to a regulatory race to the bottom (e.g. UNCTAD, 2013: 144–147).

These developments are in many ways comparable to those caused by the rise of centralized mass production and global distribution chains a hundred years earlier. In both cases technological developments leading to a new economic reality were not adequately matched by existing paradigms of law. Whether or to what extent the new economic realities relied on the deficiencies of existing legal paradigms is unclear, but what is clear is that in both cases a liability deficit ensued because existing legal safeguards had not been designed to account for new technologies (for similar cases, see e.g. Martín-Casals (ed), 2010).

Despite the trend towards fragmentation of production into global value chains consisting of multiple seemingly independent entities, lead firms paradoxically have in many cases a need to control outsourced production. For one, the standards that products must fulfil, for example in relation to product safety,[10] in practice require lead firms to maintain a measure of control over product quality throughout their value chains. For another, to maintain competitiveness lead firms need to ensure that cost management and research and development measures are developed *throughout* the value chain (Kajüter and Kulmala, 2005; Gilson, Sabel and Scott, 2009). And finally, growing awareness of the dark side of global value chains, ranging from appalling labour conditions to environmental damage, have put increased pressure on lead firms to focus also on these aspects of value chain governance (e.g. Locke, 2013). In some cases, effective control seems to be a prerequisite for the fragmentation of production, such as when ensuring product quality by standardizing raw material and component production or when collectively governing a whole value chain to develop a novel prototype. In other cases, effective control seems to be developed incrementally due to external pressure after fragmentation, such as in relation to developing value-chain-wide cost-management or in relation to governing the ethicality of production. In any case it is clear that control and fragmentation go hand in hand, as already implied by the hypothesis that advanced communication technologies are a condition precedent to the fragmentation of production (Baldwin and Martin, 1999; Baldwin, 2011).

Despite the practical relevance of understanding how lead firms can and do govern global value chains, there is comparatively little material available. First, the details of value chain governance tend to be a closely guarded business secret because exposing this control may

lead to bad press, regulatory intervention, and private law liability. Research on governance structures may rely on anonymized studies or cases where lead firms have a special reason for publicizing their governance mechanisms (Kajüter and Kulmala, 2005; Salminen, 2018). At the same time, the general novelty of value chain governance as a field of research becomes evident by comparing the extant massive literature on corporate governance (Levi-Faur, 2012) to the comparatively minuscule available literature on governance through contract that forms a core part of global value chain governance (but for some examples of the latter, see Williamson, 1979; Gereffi, Humphrey and Sturgeon, 2005; Locke, 2013; Möslein and Riesenhuber, 2009; Grundman, Möslein and Riesenhuber eds., 2015). Despite these challenges, different sources suggest a preliminary, at least three-tiered typology of contractual control in global value chains.

First, lead firms can rely on market-price mechanisms to make the choice of whether to outsource and from whom. This can generally be referred to as market governance (Gereffi, Humphrey and Sturgeon, 2005; Williamson, 1979). From a global value chain perspective a key feature is that such governance relies on traditional notions of corporate and contractual boundaries: lead firms focus solely on their direct relationship to first-tier suppliers without regard to the composition of the rest of the value chain. From a traditional legal perspective this means that the lead firm has no legally relevant relationship to other value chain actors than its first-tier suppliers. The lead firm does not consider the rest of the value chain as an issue for it to manage other than by focusing on first-tier suppliers who are required to provide the contracted products or services without regard to externalities such as their own capabilities or those of the rest of the value chain (for how this works out under current law, see Schwenzer and Leisinger, 2007).

Second, lead firms can take a more comprehensive approach by spreading codes of conduct or technical standards throughout the value chain and then monitoring their compliance. This can be done for example by cascading standards up and down the chain of supply contracts and reserving a right to audit actors. This combination of standards and monitoring can be referred to as modular governance (Gereffi, Humphrey and Sturgeon, 2005), private compliance (Locke, 2013), or, if focusing on the often third party nature of standards and auditing, trilateral governance (Williamson, 1979). The role of private standards has received considerable attention in legal literature (e.g. Eller, 2017; Paiement, 2017; Wielsch, 2012). Generally, however, it is up to each value chain actor itself to ensure that it is capable of compliance. While lead firms acknowledge a need for shared standards and monitoring through the value chain, they often rely on sticks (e.g. termination of relationship) and carrots (e.g. prolonged continuation of relationship) and potentially uncertain auditing mechanisms instead of directly taking responsibility for understanding and developing the capabilities of suppliers (Locke, 2013). It seems improbable that this kind of governance would break through traditional legal notions of corporate and contractual boundaries even when there is a considerable legal and practical shift from market governance, reflecting the privity-focused values of classical contract law, to modular governance, reflecting an increasing acceptance of third parties under so-called neoclassical contract law (Macneil, 1978).

Third, in some cases shared standards may not be available, for example in prototype development, or value chain actors may not have the capabilities or interest to put them in place, for example in relation to value-chain-wide cost management or ethical compliance (Locke, 2013). Instead, lead firms may need to engage directly with value chain actors, also beyond first-tier suppliers, to develop their capabilities or motivate specific actions. This kind of governance can be referred to as relational governance (Gereffi, Humphrey and Sturgeon,

2005), capability building (Locke, 2013), or, if focusing on the need for specialized bilateral relationships between a lead firm and a specific supplier, bilateral governance (Williamson, 1979). Practical examples include lead firms working with Bangladeshi supplier employees to help several tiers of suppliers to maintain building standards (Salminen, 2018) and the lead firm of an automotive value chain cooperating with several tiers of suppliers to map and develop value-chain-wide cost-management capabilities (Kajüter and Kulmala, 2005). In practice, this kind of governance requires considerable transparency between actors to give the lead firm an idea of what kind of developmental action is necessary. It is also necessarily context-sensitive as it depends on the existing capabilities of each individual value chain actor. Finally, by undertaking to develop the capabilities of value chain actors, lead firms may also become directly implicated in these other actors from a legal perspective, breaking through traditional legal notions of corporate and contractual boundaries as seen in the next section.

This typology portrays three different types of lead firm governance in global value chains, reflecting three different approaches to governance through contract (Gereffi, Humphrey and Sturgeon, 2005; Locke, 2013; Williamson, 1979; with the latter based to a great extent on Macneil, 1978). Each type of governance implies a different level of engagement between lead firms and their value chains, no matter whether between independent companies or members of a corporate group, even if corporate governance no doubt plays an additional role between group members (for corporate governance, e.g. Fleckner and Hopt (eds), 2013; Szabó and Sørensen, 2017). They also differ radically in how they fit current legal notions of contract and corporate boundaries, as described in more detail in the next section.

At the same time, all three types of governance are dependent on how lead firms balance their own needs and the perceived governance needs of other value chain actors. For now, at least, it is up to a lead firm to decide how it organizes and governs its value chain, for example by making the decision of whether or not to outsource to a particular actor and whether or not the lead firm tries to ensure that outsourced production complies with specific standards. As the mode of governance is in each case up to the lead firm, from a legal perspective it might be more logical to approach all variations of lead firm control in a similar way, as ultimately happened in relation to product liability. In the next section I will elaborate on this by comparing the diversity of current legal approaches to the governance of global value chains to earlier developments related to product liability.

4. Production Liability: Legal Operationalization of Global Value Chain Governance Modelled on Product Liability

4.1 Developing Liability for the Acts of Others

A general starting point in law is that if one actor does not control the affairs of another, then the first actor is typically not liable for harm caused by the other to third parties. Thus if a lead firm outsources production to a supplier, the lead firm is *typically* not liable for any harm that the supplier causes to a third party, such as another company, the supplier's employees, the environment, or society at large. As seen in relation to product liability, a lead firm's liability towards *users* of defective goods has become one widely accepted exception to this rule. If, on the other hand, the lead firm *does* control the actions of the supplier, then it *may* be liable for the effects of negligent control (Phillips and Lim, 2009). This leads to a nigh schizophrenic conundrum: for liability related reasons lead firms generally do not want to be seen as having control over their suppliers, but at the same time for reasons related to

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organizing production, such as guaranteeing compliance with product safety standards, value-chain-wide cost management, research and development, and maintaining an ethical image, they are interested in maintaining control over their value chains.

Currently, it is unclear exactly what kinds of control may translate to legal liability. Under the English *Chandler* v *Cape* ruling, for example, it was found that a parent company can be held liable on behalf of its subsidiary if specific requirements of control have been met, with control meaning in particular a measure of knowledge of and direction of a subsidiary's business (*Chandler* v *Cape*, paragraph 80):

> *In summary, this case demonstrates that in appropriate circumstances the law may impose on a parent company responsibility for the health and safety of its subsidiary's employees. Those circumstances include a situation where, as in the present case, (1) the businesses of the parent and subsidiary are in a relevant respect the same; (2) the parent has, or ought to have, superior knowledge on some relevant aspect of health and safety in the particular industry; (3) the subsidiary's system of work is unsafe as the parent company knew, or ought to have known; and (4) the parent knew or ought to have foreseen that the subsidiary or its employees would rely on its using that superior knowledge for the employees' protection. For the purposes of (4) it is not necessary to show that the parent is in the practice of intervening in the health and safety policies of the subsidiary. The court will look at the relationship between the companies more widely. The court may find that element (4) is established where the evidence shows that the parent has a practice of intervening in the trading operations of the subsidiary, for example production and funding issues.*

The criteria for liability in *Chandler* are beset with uncertainties arising out of the comparatively narrow scenario of the judgment: to what extent is the ruling in a case concerning a domestic parent – subsidiary relationship and focusing on the health and safety of subsidiary employees transposable, for example, to a transnational buyer – supplier relationship focusing on environmental degradation? While there are many uncertainties involved, it would seem that, due to the *Chandler* court's reliance on the general principles of the common law tort of negligence, the basic scenario might well be generally transposable to both transnational contexts (*Milieudefensie* v *Shell*, Netherlands 2015;[11] Enneking, 2014). and contractual value chain relationships (Terwindt et al., 2017; Rott and Ulfbeck, 2015; Phillips and Lim, 2009). These kinds of extended scenarios are being currently contemplated by courts in several cases such as *Das* v *George Weston*, *Jabir* v *KiK*, and *Arica Victims* v *Boliden Minerals*.

However, notwithstanding their range of application in a global value chain, it is clear that the possibilities for finding a lead firm liable for its subsidiaries or suppliers under *Chandler* are considerably narrower than those developed under product liability law. This is evident in two ways in particular.

First, product liability now generally applies to all lead firms no matter how they govern their value chains. The approach under *Chandler* is much more limited because liability can be found only where a lead firm has undertaken extensive governance over another value chain actor. Following the three-tiered typology of governance described in the previous section, the first two tiers, market governance and modular governance, would probably not fulfil the *Chandler* requirements. The third tier, relational governance, might do so at least as long as the damage suffered by claimants is specifically related to the governance measures of a lead firm. One exception to the comparatively narrow scope of liability under *Chandler* might be

when a company knowingly outsources production to a clearly uncapable actor that then causes damage to others, as in the *Trafigura* or *Arica Victims* v *Boliden Mineral* scenarios.

Second, product liability now generally places a presumption of liability on lead firms. This is very beneficial to claimants who do not need to show exactly where and how a lead firm has acted negligently. Under the *Chandler* ruling, however, claimants have to show that a lead firm has both extended governance to another value chain actor and been negligent in practicing this governance. Uncovering how lead firms govern other value chain actors is a major practical problem that is further confounded by such governance generally constituting a closely-guarded business secret. This makes any attempt at litigation very demanding for claimants from a practical perspective.

Chandler finds closer comparison in the historical phases of development of product liability law. For example, during the late 19th century it was unclear whether a general duty of care existed under the common law in relation to defective products or whether the duty of care was limited only to specific categories of goods, generally so-called 'dangerous goods' (Whittaker, 2010; and Stapleton, 1994). In the early 20th century, this limited material scope of application was then extended to cover goods generally. At the same time, under the new more general duty of care that developed as a broader response to societal problems arising out of defective goods, the burden of proof to show negligence remained on claimants making it difficult for them to litigate against lead firms despite the possibility of doing so. Over time, this additional problem was overcome by cross-pollinating contract and tort causes of action to create a stricter product liability standard that placed a presumption of liability on lead firms with very limited exceptions.[12]

Could a similar progressive development take place in relation to production liability? There have been proposals for a more general duty of care that would broadly require human rights due diligence throughout a lead firm's value chain (Cassel, 2016; Terwindt et al., 2017). Furthermore, at least in some legal cases and scholarship there has been discussion of the possible role of contractual causes of action (e.g. *Doe* v *Wal-Mart Stores, Inc*, 2009;[13] Teubner and Collins; 2011; Beckers, 2015). Such a development would also seem natural from the perspective that contractual relationships form the very foundation of global value chains and enable several different kinds of value chain governance, as seen above. At the same time, such developments would probably reflect national contract laws. Product liability again provides a case in point: prior to harmonization by the European Union in the form of the EC Product Liability Directive (Council Directive 85/374/EEC, 1985) the different European legal systems created local solutions to the question of product liability based on their own parameters of contract and tort and to some extent these local solutions live on as an alternative avenue for recourse even after the implementation of the directive (Whittaker ed., 2010).

4.2 Localizing Transnational Disputes

Another problem related to production liability are the many procedural and practical challenges posed by the transnational nature of litigation (van Dam, 2011; Meeran, 2011). Jurisdictional rules often allow a lead firm to be tried by foreign claimants in its home jurisdiction. Identifying the substantive rules governing a dispute can, however, be very different for claims under contract and claims under tort. Generally, if a claim sounds in tort, as under *Chandler*, then the substantive law of the place where damage occurs governs proceedings. Thus for example a claim against a lead firm based in Canada or Germany for

damages caused by inadequate value chain governance to injured supplier employees in Bangladesh or Pakistan would lead to the application of the substantive laws of the claimants instead of the lead firm (*Jabir* v *KiK* and *Das* v *George Weston*). This can have considerable effect on issues ranging from limitation periods (*Jabir* v *KiK* and *Das* v *George Weston*) to measuring damages (e.g. Goldhaber, 2013) and available causes of action (e.g. Revak, 2012).

Here again, product liability might provide alternatives for developing the current status of production liability. For one, a focus on the lead firm's use of contract to organize its value chain might help alleviate some of the procedural problems of production liability: if a claim sounds in contract, then the substantive law applicable to the contract may be used to govern a dispute instead of the law of the place where the damage occurred (*Doe* v *Wal-Mart Stores, Inc.*). Depending on the case, the law applicable to the governance contract might allow more well-developed legal protections for claimants. A case in point might be the 2018 version of the Accord on Fire and Building Safety in Bangladesh which connects two ends of a value chain and is governed by Dutch law (Salminen, 2018).

For another, under product liability one pragmatic approach to the private international law issue was to use regulation to allow users to sue actors located within their own jurisdiction if lead firms were located in other jurisdictions. For example, Article 3 of the EC Product Liability Directive provides that importers are equated with producers and, where neither can be identified, other suppliers of the product will be held similarly liable. This makes it easier for claimants to identify a defendant with whom problems related to private international law do not rise. In relation to global value chains, a pragmatic regulatory approach might instead focus on making the substantive law of a lead firm's jurisdiction applicable to claims raised against the lead firm for inadequate value chain governance if the claimant's jurisdiction does not offer adequate legal protections. This kind of an approach has been recently contemplated in a Swiss legislative proposal on lead firm due diligence.[14]

4.3 Further Developments—Multiple Lead Firms vis-a-vis a Single Supplier, Defences, Developing Standards of Governance, and Private Ordering

Further questions of production liability relate to more complex situations. These might include contexts where several lead firms have engaged and failed to adequately govern the same supplier, the question of defences against liability and the development of the standard of adequate governance over time, and the effect of private ordering, in particular in the form of liability limitation clauses in the governance contracts of lead firms.

Several lead firms can engage the same supplier with different mechanisms of governance. For example, both a lead firm participating in the Accord on Fire and Building Safety in Bangladesh and a lead firm participating in the Alliance for Bangladesh Worker Safety might use the same supplier, requiring the supplier to comply with both (Salminen, 2018). Suppose that governance does not prove adequate and the factory nonetheless collapses. Apportioning liability between the two lead firms might be treated similarly to the notion of *market share liability* developed in relation to product liability. Under market share liability, all actors marketing a defective product share liability in relation to their market share if it cannot be shown which individual actor was liable (*Sindell* v *Abbott Laboratories*, 1980)[15]. Under production liability, lead firms might similarly be seen to be liable in relation to their share of orders from the supplier, even if some problems are bound to arise for example in relation to defining relevant timelines for measurement of market share.

Putting in place state-of-the-art governance measures, such as the Accord on Fire and Building Safety in Bangladesh, raises the question to what extent *adequate governance* could act as a defence for a lead firm. After all, liability would flow from the *inadequate* governance by a lead firm of its value chain. Turning to product liability might again provide tentative models: while product liability provides a stricter standard of liability than normal tort law, it is also coupled with several defences (Stapleton, 1994: Chapter 10). One example is the 'development risk defence'(Stapleton, 1994: 236–249). This provides lead firms a theoretical possibility of avoiding liability if, for example under Article 7e of the EC Product Liability Directive,[16] they show that:

> *…the state of scientific and technical knowledge at the time when [the lead firm] put the product into circulation was not such as to enable the existence of the defect to be discovered…*

This approach ties a comparatively narrow exception to liability to a standard of best available technology, allowing for a means of developing the standard over time to reflect technological advancements. This kind of a standard that follows the advances of governance might provide a suitable balance between liability and the private development of value chain governance also in relation to production liability. It would open up a possible defence to lead firms, thus making liability politically and practically more palatable. At the same time, it could have the effect of acting as a driver towards future improvement of value chain governance. Working out the details, of course, would need further research.

Advanced governance mechanisms, again such as the Accord on Fire and Building Safety in Bangladesh, also raise the question of the liability limiting potential of private governance mechanisms. Even here product liability provides extensive historical precedent. A major part of the development of current product liability law had to do with overcoming the liability limiting potential of contract (Salminen, 2018). Under the common law, the mere existence of a contract was first seen automatically to rule out any other form or recourse in a value chain (Palmer, 1983). Later legislation and caselaw tackled both the lack of privity and explicit liability limitation clauses (*Henningsen* v *Bloomfield Motors*, 1960;[17] Prosser, 1966; Whittaker, 2010). Similarly to developments related to product liability law, the private governance of value chains is developing not only new forms of contractual governance that may extend lead firm liability, but also narrow it down. Dedicated governance contracts intended to develop the capabilities of value chain actors to the benefit of e.g. supplier employees, such as the Accord on Fire and Building Safety in Bangladesh, may simultaneously enable lead firms to limit liability both substantively, by using various implicit and explicit means of capping liability, and procedurally, by recourse to dispute resolution mechanisms and choice of law that remove governance from the ambit of national legal safeguards (Salminen, 2018). Any form of production liability would thus have to deal with questions related to the leeway given to private governance in limiting liability beyond local defences to liability.

4.4 The Role of Regulation

A final question relates to who should be responsible for the development of production liability—to what extent should it be the task of regulators and to what extent the task of courts? Optimally, both the lead firm's home jurisdiction and that of the jurisdiction where the damage occurred should be aligned to enable adequate legal protection for victims. Towards this, several international initiatives focus on requiring lead firms to engage in

human rights due diligence. For example, the current 'zero draft' of the so-called business and human rights treaty would require all state parties to 'provide for a comprehensive regime of civil liability for violations of human rights undertaken in the context of business activities and for fair, adequate and prompt compensation'.[18] Similarly, the UN Guiding Principles for Human Rights (UN Doc. A/HRC/17/31, 2011) and the most recent 2011 iteration the OECD Guidelines for Multinational Enterprises (2011), along with its sector-specific guidances,[19] provide compelling arguments for lead firms responsibility over value chain governance. At the same time, these instruments are either non-binding, such as the guiding principles and the guidelines, or face an extremely uncertain uphill political battle, such as the 'zero draft'.

Private governance has been proposed as a means of compensating the lack of a binding international public law regulation (Abbott and Snidal, 2009) but the failure of both to prevent disasters has turned focus to local hard law initiatives on the transnational regulation of global value chains. These too, however, are for now comparatively few and have several limitations, especially when compared to product liability (Holly, Smit and McCorquodale, 2018; Salminen, 2019). First, national instruments may focus on legally more established concepts such as groups of companies rather than contractually organized value chains. Second, they are generally limited to larger enterprises and in many cases also adopt a narrow material scope, for example by focusing on individual issues such as 'modern slavery', instead of adopting a more comprehensive perspective on environmental and human rights. Third, the concept of a centrally governed but contractually organized value chain is still in its infancy and identifying meaningful relationships between lead firms and contractual suppliers is conceptually challenging. Fourth, the primary focus of these instruments is on increasing value chain transparency through reporting, but defining adequate reporting is problematic and diversity in reporting requirements and how they translate to reporting in practice can be considerable. And fifth, while it is clear that information on governance may help in finding liability (van Dam, 2011) the statutes often do not take a clear stance on whether they help enable private law liability or, instead, allow adequate governance to act as a defence against liability.

Despite its problems, regulation both soft and hard and international and local provides a growing political signal of a global push towards making lead firms responsible for adequate value chain governance. And again, the difficulties of coming up with a unified regulatory approach to production liability has precedent in product liability. For example, the first steps towards food and drugs regulation in the United States were a decades long struggle that did not in themselves resolve questions of product liability but nonetheless contributed to a favourable political climate for court-led developments (Regier 1933; Prosser, 1960). Similar supportive developments took place in other jurisdictions, highlighting a need for both regulatory and court-led development of production liability (Whittaker ed., 2010). In particular, however, current uncertainties related to regulating global value chains, in particular the challenges of legally characterizing lead firm control and the relationship of gradually developing governance to defences against liability, seem to point towards a major role for courts. The tremendously important supportive role of regulation in providing a general framework and guidance to courts cannot, however, be understated. This again would find interesting precedent in the historical development product liability.

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5. Conclusion: The Promise of Modelling Transnational Production Liability on National Product Liability

There is a clear need for law to respond to the liability deficit posed by global value chains becoming the new standard of economic production. Budding approaches for making lead firms liable for harm caused by their inadequate value chain governance to third parties such as supplier employees, the environment, and local economies, are visible in litigation and regulation and developing at an increasing pace. These approaches can collectively be called *production liability*. At the same time, there is historical precedent on a profound transformation of law in response to a liability deficit resulting from the novel production practices that constitute a predecessor to today's global value chains. This precedent comes in the form of the established law of product liability.

There are clear differences between the two. While product liability focused on the liability deficit posed by the fragmentation of distribution chains in a comparatively local context, production liability focuses on the fragmentation of production in a comparatively more global context. Nonetheless, both imply radical transformations of law in response to liability deficits posed by new, fragmented production practices. Thus it is warranted to compare these two responses to one another and use developments related to product liability as possible models for developing production liability.

First, the historical look on product liability can help graft together a more focused approach to the broad topic of law's response to changes in production practices. This includes a focus on topics such as technological development, the role of law in enabling new forms of production, understanding the dynamics of fragmented production in particular from the perspective of lead firm control, and the plurality of responses possible under law ranging from public regulation to the court-led development of private law paradigms of contract and tort. All these different topics can be mined in relation to product liability law to better understand law's possible responses to the broad societal challenges caused by the liability deficit inherent in new forms of production. Such an approach might even have relevance not only in relation to the current state of the art of global value chains but also for future developments such as the proliferation of third-party platforms and algorithmic actors.

Second, a historical focus on product liability highlights the fact that there is no single solution to the ills of global production. In relation to product liability, responses to new production practices were hotly debated in their time from literature to congress (Regier 1933, Prosser 1960). Spurred by these debates, both regulation and the court-led development of private law eventually contributed to our current standards of product liability. A similar process now seems to be taking place in relation to production liability. Lead firms, often seen as culprits for their role in organizing production into global value chains and then neglecting adequate governance, are facing pressure on multiple fronts such as global media outrage, consumer action, litigation, novel forms of regulation and even dedicated debate forums.[20] Ultimately, as under product liability, the question becomes what does this mean for our general societal understanding of contract as a basic form of organizing production and how this understanding is then reflected in private law, regulation, and public debate.

Third, the historical processes that led to the establishment of product liability might offer valid alternatives for developing the legal conceptualization of production liability. Currently, production liability is based on the common law tort of negligence which has roots in product liability related contexts. However, the tort of negligence as such was soon found grossly

insufficient for resolving the liability deficits inherent in fragmented distribution chains. State-of-the-art product liability, as we know it today, was instead the result of further developments, such as a cross-pollination between contract and tort causes of action. These further developments of product liability could provide models for overcoming many of the problems related to production liability today, ranging from balancing burdens of proof to the transnational localization of disputes, apportionment of liability between multiple lead firms, development of standards of care, questions of private ordering and defences to liability. Many of these developments could be implemented by courts or regulators alike, even if input from both is probably necessary.

Finally, the contextual differences between product liability and production liability, to say nothing of differences in today's political economy when compared with a hundred or so years ago, will probably ensure that product liability will not provide an all-encompassing solution to the ills of inadequately governed global value chains. Nonetheless, product liability clearly shows that the liability deficit caused by novel production practices can be countered by law—today's product liability standard was at least as fantastic an idea a hundred years ago as an all-encompassing approach to production liability is today. A concerted focus on how problems similar to those faced by contemporary production liability have been resolved earlier may thus help push production liability from its current, early stages of development towards a more mature form of law. This, in turn, could help drive responsible global value chain governance in the same way that product liability has contributed to product safety over the last hundred years.

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Notes

[1] *Arica Victims KB* v. *Boliden Minerals AB*, Skellefteå tingsrätt [Skellefteå District Court], T 1021-13, March 8, 2018 (Sweden, under appeal). The district court found that Boliden had acted negligently but that damages and causation were not shown adequately enough to rule for the plaintiffs. The judgment has been appealed. For discussion prior to the district court ruling, see Larsen (2014).

[2] *Das* v *George Weston Ltd*, 2017 ONSC 4129, July 5, 2017 (Canada, under appeal).

[3] *Jabir* v *KiK Textilien und Non-Food GmbH*, Landgericht Dortmund [Dortmund District Court], 7 O 95/15 (Germany, on trial). For discussion prior to the trial court ruling, see Wesche and Saage-Maaß (2016) and Terwindt et al. (2017). At the time of proofing this paper, it appears that the district court has dismissed the case due to a Pakistani statute of limitations running out, similarly to the majority of claims in *Das* v *George Weston*. It remains to be seen whether the decision will be appealed.

[4] *Chandler* v *Cape* [2012] EWCA Civ 525 [England and Wales Court of Appeal].

[5] For the *Trafigura* settlement, see e.g. Enneking (2012:102–104).

[6] For the *Lubbe v Cape* settlement, see e.g. Meeran (2011:30–37).

[7] Comparable factual scenarios are discussed in rulings such as the American *Mazetti* v *Armour & Co*, 135 P 633 (Washington 1913) and the UK *Donoghue* v *Stevenson* [1932] AC 562 (House of Lords, appeal from Scotland). In *Mazetti*, the court established that a buyer, in that case a restaurant, could sue not only their contractual partner, a retailer, but also could leapfrog over the retailer and sue the manufacturer of canned food under an implied warranty and recover pure economic loss. In *Donoghue*, the court established that a person enjoying a

defective soft drink bought to her by a friend in a restaurant could raise an action in negligence against the manufacturer.

[8] *MacPherson* v *Buick Motor Co*, 111 N.E. 1050 (New York 1916).

[9] *Donoghue* v *Stevenson* [1932] AC 562 (United Kingdom House of Lords, appeal from Scotland).

[10] E.g. Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety.

[11] *Mileudefensie* v *Shell*, Gerechtshof den Haag (Court of Appeal at the Hague) C/09/337058 / HA ZA 09-1581, C/09/365482 / HA ZA 10-1665, December 18, 2015 (the Netherlands), available (including English translation) at https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:GHDHA:2015:3586.

[12] Compare American, German, French developments, all implementing contract and tort to varying degrees in their search for a reasonable standard of product liability (for the US, see Stapleton, 1994; for France, see Borghetti, 2010; for Germany see Wagner, 2010).

[13] *Doe* v *Wal-Mart Stores, Inc*, 572 F.3d 677 (US Court of Appeals, 9th Circuit, 2009).

[14] The proposal is related to the bill Nationalrat (Switzerland) 16.077 – 11, and is available at www.parlament.ch/centers/documents/de/dok-gegenentwurf-mm-rk-n-2018-05-04.pdf. For parliamentary evaluation see Nationalrat (Schweiz) (2018).

[15] *Sindell* v *Abbott Laboratories*, 26 Cal. 3d 588 (California 1980).

[16] Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products.

[17] *Henningsen* v *Bloomfield Motors*, 161 A.2d 69 (New Jersey 1960).

[18] "Legally Binding Instrument to Regulate, in International Human Rights Law, the Activities of Transnational Corporations and Other Business Enterprises", Zero Draft 16.7.2018. Available at (accessed December 3, 2018): www.ohchr.org/Documents/HRBodies/HRCouncil/WGTransCorp/Session3/DraftLBI.pdf.

[19] See the various guidance documents at OECD Responsible Business Conduct website https://mneguidelines.oecd.org/mneguidelines/.

[20] For one example of a dedicated forum for debate, see the Global Deal, available at www.theglobaldeal.com.