



Proportionality of Trade Secret Remedies in European Union – In Comparison with Patent Law Enforcement

Ulla-Maija Mylly 

Accepted: 16 August 2022
© The Author(s) 2022

Abstract In academic discourse it has been pointed out that many European courts do not pay sufficient attention to assessing the proportionality of patent law remedies. Article 3 of the Enforcement Directive (IPRED), which harmonizes the remedies for all intellectual property rights (IPRs), requires that remedies be proportionate. However, it seems that this requirement is often overlooked, with more attention being paid to the rest of Art. 3, namely the requirements that remedies be efficient and dissuasive. This article contributes to the discussion on the potential over-enforcement of IPRs, but focuses in particular on analyzing the remedies available under the Trade Secret Directive (TSD). Special attention will be paid to the explicit proportionality factors under the TSD. The availability of the bona fide defense under the TSD will also be analyzed. In this article, comparisons will be made between remedies under patent law and those under trade secret law. This article argues that the trade secret regime differs from the patent regime. Therefore, balancing the various interests under the TSD proportionality factors and the bona fide defense is more important under the trade secret regime than under the patent regime. This article seeks both to identify the differences between the two regimes and to dissect possibilities for a more balanced approach to enforcement practices under the IPRED for patent rights.

Keywords Trade secrets · Patents · Remedies · Proportionality · Fundamental rights · Public interest

This article was written within the framework of the project “Dissecting the Trade Secret Chimera in the Era of Data-Driven Economy DISTRASEC (338849)”, funded by the Academy of Finland.

U.-M. Mylly (✉)

Academy Research Fellow (Associate Professor), Hanken School of Economics, Accounting and Commercial Law, Helsinki, Finland
e-mail: ulla-maija.mylly@hanken.fi

1 Introduction

There is an emerging body of literature on the over-enforcement of patent rights. Academics have pointed out that many European courts do not pay sufficient attention to assessing the proportionality of remedies. This has been a problem in particular when granting injunctive relief without due consideration but rather quasi-automatically. Such injunctions issued without discretion pose a problem, for example, in cases where a patentable invention constitutes only a minor element of a potentially infringing product. Consequently, unless properly tailored, an injunction may be too strong a remedy. Article 3 of the Enforcement Directive (IPRED),¹ which harmonizes the remedies for all intellectual property rights (IPRs), requires that remedies be proportionate. However, it seems that this requirement is often overlooked, and that the European courts pay more attention to the rest of Art. 3, namely the requirements that remedies be efficient and dissuasive.²

If patent enforcement has been identified as a problematic issue, it is easy to understand that the enforcement of trade secrets may prove even more challenging for defendants. Yet, in many instances, trade secret claims are intertwined with patent claims. However, for trade secrets, there is, prior to a lawsuit, only a putative trade secret holder's belief and claim that the trade secret exists and meets the cumulative criteria of the Trade Secrets Directive (TSD).³ In this regard, the starting point in trade secret cases is far more uncertain than for registered patent rights. This uncertainty comes on top of other issues identified in the discourse related to patent enforcement. Therefore, the proportionality of the remedy should be a particularly important factor when courts issue remedies for trade secret claims.

The IPRED does not explain the concept of proportionality. In comparison, the TSD, in Arts. 11 and 13, sets forth factors to be taken into account when evaluating the proportionality of remedies for trade secret infringements. When the TSD was drafted, the available remedies for trade secret infringements were partly copied from the IPRED.⁴ However, it was considered important that the TSD have remedies of its own and that these differ to a degree from those available under the IPRED. It has been rightly argued that enacting remedies independently under the TSD without bringing trade secret remedies under the umbrella of the IPRED indicates that the EU seeks to conceptually distinguish trade secrets from intellectual property proper.⁵ This legislative choice highlights the different nature of trade secrets when compared to intellectual property proper.

This article contributes to the discussion on the potential over-enforcement of IPRs, but focuses on analyzing the remedies available under the TSD. Particular

¹ Directive (EC) 2004/48 of the European Parliament and the Council of 29 April 2004 on the enforcement of intellectual property rights. [2004] OJ L 157/45.

² See, for example, Strowel and Ldonard (2020), pp. 1, 8, 17–18.

³ Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure [2016] OJ L157/1.

⁴ Riis (2020), p. 220.

⁵ Udsen et al. (2020), p. 23.

attention will be paid to proportionality factors under the TSD, which need to be taken into account when issuing both preliminary and final injunctions. This article will focus on final injunctions. Another area under analysis will be the availability of the bona fide defense under the TSD. The article will compare remedies under patent law with those under trade secret law. The aim is to identify the differences but also to dissect possibilities for a more balanced approach to enforcement practices under the IPRED for patent rights.

This article will critically analyze some of the remedies under the TSD, which may give IPR-type protection to trade secrets. It is argued here that justifications for trade secrets differ from those for IPRs in such a way that protection, including the availability of remedies, should also be different. The aim of trade secret protection is not to grant exclusive rights, and this should be borne in mind also when tailoring remedies for infringements. It is particularly alarming if problems detected in the enforcement of IPRs spread into the area of trade secrets. As the remedies under the IPRED and the TSD resemble each other to some extent, this is a valid concern. The analysis at EU level will compare the provisions of the IPRED and the TSD. The analysis of national-level implementations and interpretations will focus mainly on German and Finnish approaches. These countries are among those EU Member States in which patent law injunctions have so far been issued quasi-automatically, yet their approaches are slightly different from each other, which makes a comparison between the two fruitful.⁶ Selecting these countries for closer evaluation will also illuminate the lack of flexibility that has prevailed in patent enforcement and contributed to the potential over-enforcement of patent rights. The recent revision of the German Patent Act, however, might improve how proportionality is evaluated in patent cases in the future and indicate a shift towards more flexibility, which is what academics have rightly argued is already a requirement of the IPRED.

Section 2 will elaborate on why it is justified to exercise the discretion granted by the IPRED and the TSD when issuing remedies. This section will cover discussions on specific characteristics of today's technology markets and enforcement practices, as well as on the objectives and justifications of the patent law and trade secret regimes. It is argued here that these perspectives should be included in the teleological interpretation of provisions related to remedies. Section 3 will concentrate on analyzing proportionality under both the IPRED and the TSD. Section 4 will discuss the level of knowledge required for infringement and the role of bona fide defense under the IPRED and the TSD. Section 5 will conclude the discussion.

2 Why Flexibility and Proportionality in Remedies are Justified

Today's technological markets are extremely complex. Many end products, such as smartphones, electric cars and autonomous vessels, contain a vast amount and variety of technological components that may be protected by patent⁷ and/or contain

⁶ Contreras and Husovec (2022), p. 315.

⁷ See, for example, Sikorski (2022), p. 33.

trade secrets. Patent thickets have been the subject of academic discussion for quite some time already.⁸ While they may lead to entry barriers to certain technology markets, they also make it difficult for even a diligent market actor to be completely certain that their own product implementation will not infringe some patent rights. Going through a vast amount of registered patents is in itself a demanding exercise, and uncertainty will still remain about whether or not one will face a patent infringement claim in the future. Moreover, a potentially infringing component may comprise only a fraction of the technology utilized in the end product.⁹ In principle, liability for patent infringement is a strict liability rule, meaning that it does not matter whether the infringement takes place intentionally or unintentionally, for example through negligence. Therefore, liability for patent infringement may hit even the bona fide, innocent market actor who has developed the technology independently and been diligent in patent database searches to try to ensure non-infringement.

When considering the uncertainty related to the possibility of facing a patent infringement claim, it is apparent that trade secret protection creates additional risk for market actors. Information about whether a trade secret exists is naturally not available in the market. Therefore, market actors cannot know whether their own product implementations infringe someone else's trade secrets. In principle though, a trade secret infringement claim should not be brought against an innocent, bona fide party that has acted without knowledge of a trade secret, but only against those liable for a wrongful act. However, under the provisions of the TSD, a person who was initially bona fide when acquiring certain information may still face liability later (Art. 13(3) and recital 29). The nature of the remedies covering even such innocent parties will be the subject of in-depth analysis in this article.

In addition to the uncertainties described with regard to infringement claims, it may be that the entities initiating infringement proceedings are not market actors that truly deserve access to the full enforcement machinery. In the area of patent rights, a particular type of questionable market actor is often called a patent "troll".¹⁰ This is an umbrella term for various types of market actors that do not themselves practice patentable inventions. One type consists of patent assertion entities (PAEs), which acquire patent rights merely in order to claim and collect royalties based on the patent portfolio in their proprietorship. Another type consists of non-practicing entities (NPEs), which may include companies and also universities that have carried out research and development for a patentable invention, but do not themselves produce the products for the markets that implement the patent-protected technology.¹¹ In these cases, it may be questionable to allow such market actors full patent exclusivity and thus enable them to exclude others from

⁸ See, for example, Shapiro (2001); Lemley and Shapiro (2007).

⁹ See, for example, Sikorski (2022), p. 33.

¹⁰ The potential for stronger trade secret protection to create the phenomenon of trade secret trolls is also discussed. Such trolls would use the threat of litigation for monetary benefit. Trade secret infringement claims are less costly than patent infringement claims as there are no fees for registering trade secrets. See Levine and Sandeen (2015).

¹¹ Strowel and Leonard (2020), p. 4.

practising the invention.¹² The question is whether monetary compensation would suffice in such cases.

Remedies are part of the IP system and therefore their implementation needs to comply with the objectives of protection. Yet this part of the discussion within the scope of IP law has long been neglected or at least misunderstood. Justifications of the system are often understood one-sidedly, to the effect that, if exclusivity and enforcement are not efficient, the IP system is not fulfilling its functions. One notable conceptualization that leads to this type of understanding of the IP system is when IP rights are understood as a form of property.¹³ When IPRs are conceptualized as property rights, the legal system makes injunctions available as a remedy against infringing activities.¹⁴

However, justifications for a patent system do not consider patent protection to be an end in itself. Articles 7 and 8 of the TRIPS Agreement¹⁵ assume a much broader purpose for both patents and other IPRs. Article 7 TRIPS provides that intellectual property protection should contribute to the promotion of technological innovation and the transfer and dissemination of technology to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare. Consequently, third-party interests and the dissemination of technology form a vital element in justifying patent law. Moreover, Art. 8(1) TRIPS allows member states to adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance for socio-economic and technological development. This provision enables member states to further consider broader public interest aspects. During the present period of pandemic, aspects related to public health are more important than ever and enable member states to adopt measures to tailor the scope and enforcement of patents in the area of life-saving vaccines and medication in a more flexible manner than the property constellation paradigm assumes.

Moreover, Art. 8(2) TRIPS also recognizes that right holders might abuse their rights. Therefore, Art. 8(2) allows member states to adopt measures that may be needed to prevent right holders from abusing IPRs or resorting to practices that unreasonably restrain trade or adversely affect the international transfer of technology. These articles of TRIPS clearly illuminate that the TRIPS Agreement,

¹² A particular problem in such situations relates to the options the defendant has to negotiate an agreement. In situations where the plaintiff is practising the invention, a cross-licensing agreement between the parties might prevent a trial. However, if the plaintiff is an NPE, the trial (and injunction) can be prevented only through the collection of a sufficient monetary royalty. Yanagisawa and Guellec (2009), p. 22.

¹³ Hilty (2015), pp. 4–5.

¹⁴ For criticism of the approach in which IPRs are categorized simply as property rights and where IPRs' exclusionary powers, i.e. strong property rights, are seen as vital for the IP system, see Lemley (2005). Different countries still have different approaches to patent law injunctions. Contreras and Husovec (2022) have identified that countries that grant injunctions quasi-automatically consider injunctions to be a right whereas countries that have a more flexible approach to injunctions and tailor them on a case-by-case basis consider them to be a remedy rather than a right as such.

¹⁵ Agreement on Trade-Related Aspects of Intellectual Property Rights (the TRIPS Agreement), Annex 1C of the Marrakesh Agreement establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994.

by putting in place an international framework for IPRs, not only protects right holders' interests but also ensures that IPRs including patent rights can promote the welfare of society as a whole. This further explains concerns about abuses of rights and the concerns that protection in some situations might have an adverse impact on technological markets and trade. Consequently, a critical approach to IPRs as part of the property paradigm reveals that the underlying justification for the patent system is not so much about strong property rights and the need for their efficient enforcement, as often highlighted in policy and academic debates.

When one compares trade secrets with patent rights, one issue that has attracted a lot of attention is the debate over the nature of trade secrets. Internationally, there is no clear consensus on this issue. However, trade secrets are often understood as falling under unfair competition law rather than under the intellectual property regime.¹⁶ For example, the TRIPS Agreement refers to unfair competition law when ensuring protection for trade secrets. In Art. 30(1) TRIPS, reference is made to the unfair competition provision of the Paris Convention.¹⁷ Furthermore, Art. 39(2) TRIPS requires members to prevent trade secret information from being disclosed to, acquired by, or used by others without their consent "in a manner contrary to honest commercial practice".

Behavior that is regulated under unfair competition law is connected with trade and must have relevance in terms of competition.¹⁸ The goal of the unfair competition law is to ensure that market actors play by the book. Therefore, the unfair competition law regime resembles tort law to some extent.¹⁹ Protection against unfair competition does not require exclusive rights to be granted; nor it is connected to property rights.²⁰ Remedies are required only if there have been dishonest practices. An act of unfair competition has been defined as an act by which a competitor "intentionally exploits" another person's industrial or commercial achievement for their own business purposes without substantially departing from the original achievement. It has been highlighted that unfair competition law does not protect market interests as such, but does regulate behavior.²¹ Merely copying is not sufficient for liability purposes, because copying and imitation (outside exclusive rights) are part of the free competitive markets. There is liability only when exploitation of others' achievements is considered

¹⁶ See for example Schovsbo and Riis (2019).

¹⁷ TRIPS Art. 39(1): "In the course of ensuring effective protection against unfair competition as provided in Article 10bis of the Paris Convention (1967), Members shall protect undisclosed information in accordance with paragraph 2". However, the fact that TRIPS is an intellectual property treaty, along with the Art. 39 reference to unfair competition law, has led some to define trade secrets as a sui generis protection. Bently (2013). Others classify trade secret protection as a hybrid form of protection between intellectual property and unfair competition law. Ohly (2020), p. 111.

¹⁸ Henning-Bodewig (2007), p. 57.

¹⁹ Riffel (2016), p. 4

²⁰ Much subject matter that can be protected through IPRs was previously regulated by unfair competition law. Unfair competition law rules are more flexible and therefore capable of covering new emerging areas before they are regulated through IPRs. Riffel (2016), pp. 20, 22.

²¹ Resource book (2005), pp. 521, 523.

unequitable.²² Under rules on unfair competition, the plaintiff has the burden of proof that dishonest practices have taken place.²³

In compliance with the unfair competition law approach to trade secrets, the protection under TRIPS against the acquisition, use and disclosure of undisclosed information is not absolute but applies only to acts that are condemnable or wrongful.²⁴ As what is considered unfair, condemnable behavior is subject to interpretation, TRIPS defines in footnote 10 to Art. 39(2) what at least should give rise to liability:

For the purpose of this provision, “a manner contrary to honest commercial practices” shall mean at least practices such as breach of contract, breach of confidence and inducement to breach, and includes the acquisition of undisclosed information by third parties who knew, or were grossly negligent in failing to know, that such practices were involved in the acquisition.

As TRIPS lays down only minimum requirements for the protection of trade secrets, member states are allowed to confer broader protection on them. It seems that the EU, through the TSD, has adopted an unfair-competition-law approach to trade secrets. At least recital 1 of the TSD appears to support the argument that trade secrets are not considered to belong to the realm of IPRs.²⁵ The recital states that use of intellectual property is one means for businesses to appropriate innovation-based results. Trade secrets are considered to be another means. This provision can be understood in the sense that trade secrets are considered to belong to the area of unfair competition law,²⁶ which was the situation in many countries before the introduction of the TSD.²⁷ Furthermore, articles of the TSD defining what is considered lawful or unlawful behavior refer to honest and dishonest commercial practices. These references lean towards protecting trade secrets through the unfair competition law approach.²⁸

Therefore, the central feature of unfair competition law – the regulation of wrongful conduct – is an important premise of trade secret protection under the TSD. The requirement of wrongful behavior under TRIPS and the TSD indicates that, in the trade secret context, there should be an efficient bona fide defense. Any liability is not strict liability but, in order for there to be an infringement, an infringing party needs to have knowledge of the infringing act. How this requirement for knowledge and bona fide situations are construed under the TSD will be analyzed more thoroughly later in this article.

²² Kamperman Sanders (1997), p. 7.

²³ Riffel (2016), p. 26.

²⁴ Resource book (2005), p. 528.

²⁵ The approach adopted by the TSD is also in line with the approach taken by the EC during the negotiations for the TRIPS Agreement. The EC demanded that the unfair-competition-law approach be the form of protection for trade secrets, while the US insisted on adopting the property approach. The EC approach prevailed. Resource book (2005), p. 523.

²⁶ Aplin (2021), pp. 175–176

²⁷ For example, for the situation in the Nordic countries, see Bruun and Schovsbo (2020), p. 87.

²⁸ Knaak et al. (2014), p. 955.

Another notable feature of trade secret protection connected to the unfair-competition type of protection, which differentiates trade secrets from IPRs, is that the protection does not create exclusive rights to information, even if that information is confidential. This distinguishes trade secrets from patent rights, which are exclusive rights. This is explicit in recital 16 TSD, which provides that “[i]n the interest of innovation and to foster competition, the provisions of this Directive should not create any exclusive right to know-how or information protected as trade secrets”. This understanding also justifies differentiating trade secret protection from IPRs and the property regime. Therefore, there are valid reasons why the TSD defines its own remedy structure rather than merely brings trade secret protection under the umbrella of the IPRED. It is important then to critically analyze the elements of the TSD remedy system, which lean towards an intellectual property type of approach and come close to the remedy structure under the IPRED.

All these specific features of trade secret protection support the understanding that trade secret protection does not justify protection mechanisms similar to those under the patent laws. This difference should have implications for the availability of remedies and the possibilities of tailoring such remedies. This is the case at least if we accept that how we conceptualize the nature of a legal right may have an impact on how we understand its role in a legal system and what kind of legal tools we attach to a specific type of right.²⁹ The role of injunctions and other remedies in the trade secret regime is a particularly important area of legislation where this difference should play a role. When looking at the provisions that define the factors for analysing proportionality under the TSD, there is a clear difference.

It is argued in this article that justification for the patent system requires remedies to be proportionate and therefore injunctions should be tailored by taking into account the whole context of the case rather than only the patent holder’s interest. Moreover, when interpreting remedies for trade secret infringement, attention should be paid to the difference in the underlying justifications for trade secret protection compared with for patent law. Such interpretation/differentiation should cover also how we construe what is an infringement in the trade secret regime and in particular the role that bona fide defense should play in the unfair-competition type of system. Proportionality should have a more important role when granting remedies in trade secret infringement cases but cannot be overlooked when granting patent law remedies either.

²⁹ Aplin argues that such conceptualizations may affect the limits of a right in question. Aplin (2021), p. 175. Bently describes attempts at classifying trade secrets for the purpose of enabling them to be applied coherently in a legal system. However, he is somewhat critical towards such formalistic approaches and questions whether, in the global era of legal pluralisms, one would be able to rely on such legal coherence. Bently (2013). Schovsbo and Riis argue that we should not infer any consequences from the abstract classification of a right. Schovsbo and Riis (2019), p. 2.

3 Proportionality of Remedies

3.1 Proportionality in Patent Law Remedies

The enforcement provisions under the TRIPS Agreement and IPRED not only focus on IP holders' rights but also recognize a need to balance an efficient enforcement mechanism with other factors. The first group of situations in which a defendant's options for defending itself against infringement claims are taken into account are where a claimant is *mala fide*. From the defendant's perspective, these situations, where the plaintiff is abusing litigation, are naturally the worst possible scenarios.

The provisions of the TRIPS Agreement and the IPRED require that remedies are applied so as to prevent abuse of the procedure. The TRIPS Agreement sets out in Art. 41(1) that “[m]embers shall ensure that enforcement procedures [...] permit effective action against any act of infringement [...] These procedures shall be applied in such a manner as to avoid the creation of barriers to legitimate trade and to provide for *safeguards against their abuse*” (emphasis added). Article 41(2) provides that “procedures concerning the enforcement of intellectual property rights shall be *fair and equitable*”. (emphasis added)

In line with the TRIPS Agreement, the IPRED, in Art. 3, also requires that “measures, procedures and remedies shall be *fair and equitable* [...] Those measures, procedures and remedies shall also be effective, *proportionate* and dissuasive and shall be applied in such a manner as to avoid the creation of barriers to legitimate trade and to provide for *safeguards against their abuse*”. (emphasis added)³⁰

In the discourse related to patent enforcement, a particular problem that has been identified is that of court practices where discretion that is available under the IPRED does not form an important element of EU Member States' legal doctrine. This is a particular problem in the assessment of proportionality. Even though proportionality may in some countries play a role when preliminary injunctions are issued, it seems that injunctions on the merits of the case, i.e. final injunctions, are granted quasi-automatically.³¹

Traditionally, the German approach has been identified as being among the most rigid.³² Before 2021, German legislation did not include any explicit provision on proportionality or abuse of rights. Yet abuse of rights and good faith are recognized as general legal principles in Germany. Consequently, it has been possible to take into account situations where there are indications of an abuse of rights. However,

³⁰ It is noteworthy that the IPRED requires both procedures and remedies to be proportionate, while the TRIPS requirement rather differently focuses on the fact that enforcement procedures are to be fair and equitable and prevent abuses of rights. However, the TRIPS principles that apply to enforcement procedures and the articles related to remedies seem to provide latitude for Member States to design their own national legislation. For example, Art. 44(1) TRIPS requires that judicial authorities “shall have the authority to order a party to desist from an infringement”. The provision does not require injunctive relief always to be granted. Dinwoodie and Dreyfuss (2022), pp. 8–10. The Agreement on a Unified Patent Court (UPCA) contains provisions concerning the proportionality of both procedures and remedies. Agreement on a Unified Patent Court, OJ C 175, 20.6.2013, pp. 1–40, not yet in force.

³¹ Strowel and Ldonard (2020), p. 9.

³² Contreras and Husovec (2022), p. 315.

the threshold for finding an abuse of rights has been set quite high.³³ Primary cases where German courts have been willing to tailor injunctions are those where competition law concerns are involved, for example where there is a standard essential patent and FRAND commitments.³⁴ This practice follows the guidelines given by the ECJ in its *Huawei* decision.³⁵ Yet the abuse of a dominant position involving competition law concerns is not the only situation where a claimant may abuse its position and where the threat of injunction is too strong a mechanism. As competition law cases cover only a small number of situations, interpretation and discretion should be developed to take more account of other factors leading to abuses of rights.

In Germany, the requirement for finding an abuse of rights has been set quite high, and the burden of proof has been with the defendant, which has to show that an infringement claim has been filed with intention to harm or in bad faith. In this approach, patent holders' rights have prevailed over defendants' rights.³⁶ In particular, the fact that proof is required of such subjective elements as intention to harm is challenging for defendants.

In addition to clear cases of an abuse of rights, another time when injunctions need to be tailored is when remedies have been disproportionate. This has been indicated in the case law³⁷ even though the German Patent Act did not previously have an explicit provision on the proportionality of the injunction.³⁸ However, the threshold for disproportionality of an injunction has likewise been set high. For example, German courts have not treated PAEs or NPEs any differently to other patent holders but have considered that the existence of a patent right and finding an infringement are sufficient reasons for granting an injunction. The fact that an infringing component has been present in only a small proportion in the defendant's end product, but other factors have been required to show that remedies would be disproportionate, has not been sufficiently taken into account.³⁹ This approach, favoring patent holders, has led to a situation where patent rights have been extensively enforced in Germany.⁴⁰

Germany has introduced a legislative change that aims to provide clarity with regard to the options for assessing proportionality in patent law injunctions. The legislative change was initially claimed to codify only options currently available under German doctrine and principles. The new legislation precludes a claim to the extent that, in view of the particular circumstances of the individual case and the principle of good faith, it would cause disproportionate hardship for the infringer or

³³ Sikorski (2022), pp. 40–41.

³⁴ Strowel and Ldonard (2020), p. 11.

³⁵ Case C-170/13, *Huawei Technologies Co. Ltd. v. ZTE Corp. and ZTE Deutschland GmbH*. ECLI:EU:C:2015:477.

³⁶ Strowel and Ldonard (2020), pp.12–13.

³⁷ Such exceptional possibility was indicated by the German Federal Supreme Court on 10 May 2016, in its decision BGH – X ZR 114/13, published in GRUR 2016.

³⁸ Bucher (2020), pp. 2–3.

³⁹ Strowel and Ldonard (2020), pp. 13–14.

⁴⁰ Schönbohm and Ackermann-Blome (2020), pp. 57, 578–579.

third parties that was not justified by the patent exclusivity right. In this case, the injured party must be granted appropriate monetary compensation.⁴¹

The earlier version of this provision was criticized because it seemed to give priority to the exclusive right and the patent holder.⁴² This problem is still apparent in the final version with its balance between justification for the exclusive right and the disproportionality of enforcement in the sense of creating hardship for either the infringer or third parties. Critics argued that proportionality should be understood under EU law principles in the sense that a measure was proportionate if it was appropriate and necessary for meeting the objectives it legitimately pursued. This would require the objectives of the whole patent system to be taken into account, without emphasizing the patent holder's interests when assessing proportionality in remedies.⁴³ The earlier draft did not refer to third-party interests or the public interest in the proportionality analysis at all. Now third parties are included, as "hardship for third parties" is to be taken into account. This legislative change in Germany indicates a shift towards a more flexible approach to analyzing proportionality.⁴⁴ It shows that concerns regarding inflexibility in the issuing of injunctions have been recognized. Yet some have doubted whether the legislative amendment will change German practise dramatically.⁴⁵

In the taxonomy created by Contreras and Husovec, the approach in Finland to patent law injunctions has been a bit more flexible than that applied earlier in Germany.⁴⁶ This flexibility can be seen in Sec. 57(1) of the Patents Act, which provides that, if someone infringes the exclusive right of a patent holder, the court may prohibit that person from continuing or repeating the act. The flexibility is emphasized in the wording that a court *may* issue injunctions. This has been interpreted as meaning that courts do have a wide margin of discretion, understood as the option of taking into consideration third-party interests, fundamental rights and public interest when tailoring and issuing injunctions. Yet, in practice, the fact that there has been an infringement and that there is a risk of its continuing has been sufficient reason for issuing an injunction. The possibility of denying an injunction has been considered mainly where there has been no risk of the infringement's continuing. In Finland there have so far been no patent infringement cases where a court denied the final injunction.⁴⁷ Therefore, the factors that might lead to a denial are in essence mostly speculative by nature. In actual case law, it seems that patent holders' interests prevail over defendants' and other interests.

⁴¹ The German Parliament approved a change to Sec. 139 of the German Patent Act in August 2021. The earlier draft proposal was: "The claim is excluded insofar as its enforcement is disproportionate because it constitutes a hardship not justified by the exclusive right under the special circumstances and taking into account the interests of the patentee vis-à-vis the infringer and the principle of good faith".

⁴² Criticism related to the draft proposal, Desautettes-Barbero et al (2020), pp. 4–7.

⁴³ *Ibid.*

⁴⁴ Picht and Karczewski (2022), p. 159.

⁴⁵ *Ibid.*, pp. 161–162.

⁴⁶ Contreras and Husovec (2022), p. 315.

⁴⁷ Norrgård (2022), pp. 100 and 106–107, *See also* Finnish Supreme Court case KKO 2003:127.

One problem behind the lack of an in-depth analysis of proportionality may be that the IPRED does not define what “proportionate” means.⁴⁸ This may also have been one reason for the different approaches adopted in the Member States to the value and emphasis to be placed on the proportionality of remedies. However, the principle of proportionality has been recognized as belonging to the common constitutional traditions of EU Member States. In national legislation, it has had a specific role in administrative law. From there it has been developed as an important principle of EU legal doctrine. The analysis of proportionality carried out under EU law primarily focuses on checking whether Member State legislation complies with EU law. The ECJ evaluates whether the purpose of the national legislation that limits economic freedoms under the Treaty on the Functioning of the European Union (TFEU) is lawful under the provisions thereof. Then, the ECJ assesses the proportionality of the measure, i.e. whether it is capable of achieving that lawful purpose and whether the purpose could be achieved in a less restrictive manner. Consequently, the principle of proportionality is not an empty concept without meaning. It has been argued that, for the purposes of interpreting proportionality under the IPRED and enforcing patent law, the meaning of “proportionality” could be derived from EU law sources.⁴⁹

Another area of EU law where proportionality has played an important role is copyright law enforcement. In particular, it has been argued that, when issuing remedies against internet service providers (ISPs), the proportionality analysis has constituted an essential factor in the ECJ’s reasoning. In these cases, the ECJ has aimed to analyze proportionality between the various fundamental rights at stake. The fundamental rights identified in these cases have included the right to intellectual property (and property), ISPs’ rights to conduct business, users’ privacy rights and freedom of expression. In the case law, it has been held that the right to intellectual property is not an absolute right and consequently can be balanced against other fundamental rights. It has been suggested that this balancing exercise could be useful as guidance in patent enforcement cases too. This could mean taking into account a potential patent infringer’s right to conduct business when issuing injunctions.⁵⁰

However, criticism of ECJ practice in analyzing the proportionality of fundamental rights has identified that the balancing exercise seems to focus on the parties to the case in question. In addition, even though the ECJ has referred to users’ freedom of expression and right to privacy, these fundamental rights have played a limited role in the balancing exercise, as the focus has been on economic freedoms, namely the right to intellectual property and the right to conduct business. Analyses of the proportionality of fundamental rights have not taken account of wider consequences that the case may have, for example for internet infrastructure, which, as a corollary, has an impact on freedom of expression more generally.⁵¹

⁴⁸ Some have even argued that IPRED does not require proportionality to be analysed when injunctions are issued. Schönbohm and Ackermann-Blome (2020), p. 581.

⁴⁹ Sikorski (2022), pp. 35–36.

⁵⁰ Sikorski (2022), pp. 42–46.

⁵¹ Mylly (2020).

Consequently, ECJ case law on copyright enforcement may not provide any useful guidance on how third-party interests and public interests could form elements of the analysis of proportionality. Neither is it very helpful in providing guidance for balancing fundamental rights, as it seems that some fundamental rights have not been given much weight in the ECJ's analysis.

Academics have identified various factors that could constitute elements of the proportionality analysis when issuing patent law remedies and in particular when issuing injunctions. For example, Ohly has suggested a five-factor analysis in light of the IPRED.⁵² He has suggested that, as a main rule, the injunction option should be available, but that there could be circumstances that justify tailoring it. His argument is based on Art. 12 IPRED, which allows a court to order pecuniary compensation instead of other remedies where the defendant's actions were neither intentional nor negligent. In addition, the wording of Art. 11 IPRED is that the court "may" issue an injunction. These provisions indicate that there is room for flexibility under the IPRED. Yet some academics have highlighted that it should lie with the defendant to prove that such exceptional circumstances are present to justify not granting an injunction. Moreover, it is highlighted that, even in many exceptional cases, the best option might be to stay injunctions and not refuse them completely.⁵³

The first situation, under particular suggested factors, where an injunction could be considered disproportionate is when the infringer would face economic consequences far beyond what would be a reasonable amount of royalties for the situation in question. This type of situation could occur, for example, when the infringing component in the end product is only a minor element of the whole.⁵⁴ Situations where a patent holder would be able to collect excessive royalties for small components in complex products occur particularly if it is not technologically or economically feasible to invent around the infringing component.⁵⁵

One particular situation in which inventing around is impossible is when a patented technology is a standard essential patent (SEP). An injunction would lead to disproportionate situations. However, where the technology involved is part of an official standard, a patent holder is bound to license the technology on fair, reasonable and non-discriminatory (FRAND) terms. The FRAND commitment rules out the possibility of collecting excessive royalties.⁵⁶ The role left for injunctions in such cases is determined by the ECJ's *Huawei* decision.⁵⁷ It should be noted that the

⁵² Ohly (2009). In the article, Ohly discusses also US case law and academic discussion. Consequently, the proposed list is partly inspired by the US Supreme Court case *eBay Inc. v. MercExchange, LLC*, 126 S.Ct. 1837 (U.S. 2006).

⁵³ Ohly (2009), pp. 8–9. The position that refusing an injunction should be an exception is held also by the German Federal Ministry of Justice in its discussion draft on the reform of the German Patent Act ("German discussion draft"), Section II.1.(b).

⁵⁴ Ohly (2009), pp. 8–9.

⁵⁵ German discussion draft. Part on complex products.

⁵⁶ Desautettes-Barbero et al (2020), p. 9. On German case law related to FRAND commitments, see Picht and Karczewski (2022), pp. 156–157.

⁵⁷ Case C-170/13, *Huawei Technologies Co. Ltd. V. ZTE Corp. And ZTE Deutschland GmbH*. ECLI:EU:C:2015:477.

technology might also be part of a de facto standard.⁵⁸ In these situations, competition law too might provide some tools if a patent holder has a dominant position.⁵⁹

A second suggestion for when to tailor an injunction would be where a patent holder does not itself exercise or implement a patented technology. In these situations, where the patent holder does not itself exercise the invention, the infringement does no harm to the patent holder's competitive advantage in the markets. A patent law injunction in such cases could be used by the patent holder as a tool in licensing negotiations in order to collect excessive royalties. Therefore, it can be argued that it is not objectively so detrimental for the patent holder if only damages are granted in lieu of an injunction.⁶⁰ Yet it has been argued that the fact that the patent holder is an NPE is not sufficient reason for denying an injunction. The possibility of extracting value from the markets constitutes part of the patent right. However, for example, instances where a patent holder delays its actions in order to extract more value from the infringement could justify tailoring an injunction.⁶¹ These two factors are closely connected because both indicate that the exclusionary power given to the patent holder in a form of injunction may lead to excessive, mainly economic, consequences from the perspective of the defendant.

A third situation might focus on whether an infringer copied the technology or whether the technology was created independently. This factor would include analyzing whether the technology was not completely the same but only equivalent. In such a situation, the intentions of the infringer play a role. A fourth factor might give broader protection to strong patents where the protected patent contains greater innovations in the sense that the invention goes well beyond the inventive step required. A fifth factor is closely connected to the third factor as it analyses the level of intention or negligence on the part of the infringer.⁶² The German discussion draft also referred to subjective elements on the side of the putative infringer, highlighting that patent law infringement is still a strict liability rule. The draft suggested that, only where an infringer had taken reasonable action in the context to ascertain that there had been no infringement, could these factors be taken into account when tailoring remedies. A patent holder's behavior in license negotiations can also be a factor for proportionality analysis. This refers, for example, to cases where negotiations are unduly delayed.⁶³

The factors that take into account the defendant's intentions and knowledge can be justified by the provisions of the IPRED even where Member States have not transposed Art. 12 thereof into their own legislations. In particular, recital 17 IPRED points to case-by-case evaluation of the remedies, providing that:

⁵⁸ Desaunettes-Barbero et al (2020), pp. 9–10.

⁵⁹ T-201/04, *Microsoft Corp. v. Commission* [2007] ECR II-3601.

⁶⁰ Ohly (2009), pp. 8–9.

⁶¹ Desaunettes-Barbero et al (2020), p. 9.

⁶² Ohly, (2009), p. 9.

⁶³ German discussion draft, Part on subjective elements. Desaunettes-Barbero et al (2020), pp. 10–11.

The measures, procedures and remedies provided for in this Directive should be determined in each case in such a manner as to take due account of the specific characteristics of that case, including the specific features of each intellectual property right and, where appropriate, the intentional or unintentional character of the infringement.

Account can be taken not only of the defendant's intentions but also of the patent holder's behavior in licensing negotiations. This is justified by the recital text's reference to the "specific characteristics of the case", while tailoring remedies so as to give better protection for strong patents can be justified by the reference in recital 17 to the "specific features of each intellectual property right".

As can be seen, these factors for analyzing proportionality focus on the activities and knowledge of the parties to the infringement proceedings: the patent holder and the infringer. The analysis of proportionality relates to whether, for example, only compensation instead of an injunction would be proportionate from the perspective of the parties involved. The interest of third parties or the public has not played such an important role in these suggested factors. However, the amendment of the German Patent Act does now include third-party interests in the balancing exercise for injunctions.

Academics have referred to patent law justifications as a reason to include public interest and third-party interests when analyzing proportionality. It has been rightly argued that public interest is part of the patent law system and therefore should have an impact on how legal provisions throughout the regime, including remedies, are interpreted.⁶⁴ However, so far, many European courts have not paid much attention to this need when tailoring injunctions. This has been particularly true in civil-law countries like Finland and in the earlier German doctrine elaborated above.⁶⁵ Even though final injunctions are quasi-automatic, when it comes to preliminary injunctions, courts in Europe are more willing to balance the interests at stake, including the public interest.⁶⁶

As EU Member States have slightly different approaches to tailoring injunctions, it will be interesting to see what kind of approach the Unified Patent Court (UPC) will take on this issue. The provision on final injunctions, Art. 63(1) UPCA, has very similar wording to that in the IPRED, stipulating that the Court *may* issue an injunction.⁶⁷ But, more interestingly, in the UPCA provision concerning corrective

⁶⁴ See for example, Hilty (2015), pp. 8–19; Desaunettes-Barbero et al (2020), p. 7.

⁶⁵ A different approach has been adopted in many common-law countries, including the UK and the US, based on common law equity. Contreras and Husovec (2022), pp. 318–319. However, in this article the national focus is on German and Finnish interpretations, in order to illuminate a rather strict approach to the flexibility that, in principle, should be part of the tailoring of remedies under the provisions of the IPRED.

⁶⁶ Contreras and Husovec (2022), pp. 321–322.

⁶⁷ Article 63(1) UPCA: "Where a decision is taken finding an infringement of a patent, the Court may grant an injunction against the infringer aimed at prohibiting the continuation of the infringement".

and protective measures, there is a clear requirement when analyzing the proportionality of such remedies to also include third-party interests.⁶⁸ Based on these provisions, the UPC may well be more inclined to take into account the proportionality of remedies, including injunctions.⁶⁹ Therefore, the suggestions for evaluating proportionality made by academics on the basis of the provisions of the IPRED may play a bigger role in the future. The revision of the German Patent Act also seems to tend in this direction.

3.2 Proportionality of Remedies under the TSD

Like the IPRED, the TSD contains a provision that prevents the abuse of rights. Article 7(1) TSD is similar to Art. 3(1) IPRED. However, Art. 7(2) TSD further provides that

Member States shall ensure that competent judicial authorities may, upon the request of the respondent, apply appropriate measures as provided for in national law, where an application concerning the unlawful acquisition, use or disclosure of a trade secret is manifestly unfounded and the applicant is found to have initiated the legal proceedings *abusively or in bad faith*. (emphasis added)

Consequently, the TSD goes further than the IPRED in ensuring that an enforcement system is not to be abused. In addition, recital 22 sheds some light on what is considered abusive behavior by giving examples: “the aim of unfairly delaying or restricting the respondent’s access to the market or otherwise intimidating or harassing the respondent”. Such actions are considered to disrupt the smooth functioning of the internal market.

It has been argued that these further explanations about abuses of rights indicate a shift towards better understanding that enforcement mechanisms need to be more balanced. One might think that the criticism made of the over-enforcement of patent rights had led to more explicit provisions in the TSD, which is a new legislative instrument. This approach is supported by the fact that the UPCA too, which also postdates the IPRED, has more advanced provisions on proportionality.

However, another way of understanding the more nuanced approach under the TSD is that it is particularly important in trade secret cases to balance the interests

⁶⁸ Article 64(4) UPCA: “In considering a request for corrective measures pursuant to this Article, the Court shall take into account the need for proportionality between the seriousness of the infringement and the remedies to be ordered, the willingness of the infringer to convert the materials into a non-infringing state, *as well as the interests of third parties*” (emphasis added).

In addition, Art. 62(2) UPCA, which sets rules for provisional and protective measures includes a clear requirement for a weighting between the parties. It provides that “[t]he Court shall have the discretion to weigh up the interests of the parties and in particular to take into account the potential harm for either of the parties resulting from the granting or the refusal of the injunction”.

⁶⁹ Compare, however, with Leistner and Pless (2022), p. 52. They point out the fact that the UPCA text has no proportionality requirement for permanent injunctions. Yet they elaborate how the primacy of EU law affects the UPCA in the sense that the requirements of Art. 3(2) IPRED, including on proportionality, have to be complied with.

of the right holder with those of the defendant. In particular where there is no system of registration, there are more uncertainties in trials. In addition, as trade secrets are not exclusive rights, the defendant might more often have a legitimate right to use the information in question – or a justified belief that such a legitimate right exists. Hence, there are reasons that may support adopting a different approach under the trade secret regime. However, when balancing enforcement mechanisms in the patent system, it is not impossible that one could learn something about flexibility from the trade secret regime.⁷⁰

As well as being more explicit about the abuse of rights, the TSD is also explicit on what at the very least needs to be included in any evaluation of proportionality. This can be considered an additional way of differentiating trade secrets from IPRs proper. How the proportionality of remedies is analyzed is stipulated in Arts. 11(2) and 13(1) TSD. These articles list the circumstances that courts need to take into consideration when deciding on provisional and precautionary measures (Art. 11(2)) and injunctions and corrective measures (Art. 13(1)). The importance of the proportionality of the remedies is also highlighted in the preamble to the TSD. Consequently, there is at the moment a difference between the availability of remedies for trade secrets and for exclusive IPRs. This is particularly visible with regard to proportionality as the IPRED does not expand on what proportionality involves. In this article the focus will be on analyzing permanent remedies and proportionality under Art. 13 TSD.

Art. 13(1) TSD provides as follows:

Member States shall ensure that, in considering an application for the adoption of the injunctions and corrective measures provided for in Article 12 and assessing their proportionality, the competent judicial authorities shall be required to take into account the specific circumstances of the case, including, where appropriate:

- a) the value or other specific features of the trade secret;
- b) the measures taken to protect the trade secret;
- c) the conduct of the infringer in acquiring, using or disclosing the trade secret;
- d) the impact of the unlawful use or disclosure of the trade secret;
- e) the legitimate interests of the parties and the impact which the granting or rejection of the measures could have on the parties;
- f) the legitimate interests of third parties;
- g) the public interest; and
- h) the safeguard of fundamental rights.

One can categorize these factors into groups. The first group relates mainly to the trade secret holder. Factor (a), on value and the specific features of the trade secret, refers mainly to issues on which a trade secret holder has knowledge and on which its own activities have an impact. Factor (b), on measures taken to protect trade secrets, is even more clearly under the control of the trade secret holder. Here it is

⁷⁰ It is also noteworthy that, in many instances, patent claims may be combined with trade secret claims.

noteworthy that, if no measures are taken, the trade secret does not even technically exist. Taking reasonable steps to protect secrecy is in itself an important requirement for protection. This is one way in which third parties are notified of the existence of protection, and is also, importantly, related to the wrongful act required for infringement. Without a trade secret holder's own action in taking reasonable steps to protect information, third parties would not be able to desist from unlawful activities.⁷¹ Yet if protective measures go beyond the reasonable measures required under the directive (Art. 2(1)(c)), this may affect what is considered to be a proportionate remedy in the specific case in question. Yet it is debatable whether excessive protective measures should be encouraged, as they may create secrecy and unavailability around information that might not otherwise qualify for trade secret protection at all.⁷² This could reduce what is in the public domain.⁷³

Factor (d), on the impact of the unlawful use or disclosure of the trade secret, is another element that may partly depend, for example, on the market share of the trade secret holder, based on the competitive advantage gained through the latter's contribution in creating the valuable information, marketing activities and other strategic decisions that is then taken by another party accessing the information.

When compared with the factors involved in assessing proportionality for patent law enforcement, it has been suggested that stronger patents should receive broader remedies. Likewise, it has been suggested that such factors as whether a patent holder has been insufficiently active, as is the case with NPEs or PAEs, or whether licensing negotiations have been unduly delayed, should play a role when remedies are being tailored.⁷⁴ Such suggestions come close to the factors for assessing proportionality under Art. 13(1) TSD, where the trade secret holder's own activities play a role.

The second group of factors refer to the actions of the putative infringer. Factor (c) refers to the conduct of the infringer in acquiring, using or disclosing the trade secret. This proportionality test is applicable to all decisions on remedying trade secret infringement. Therefore, a party that has initially acquired a trade secret in good faith, but later learns that the secret is derived from unlawful use or disclosure, may also rely on this proportionality test in addition to Art. 13(3), discussed below, which provides that such a party may, in lieu of injunctions, request that pecuniary compensation be paid to the trade secret holder. When compared with the remedies for patent law infringement, a putative trade secret infringer's conduct and intentions play a larger role, as trade secret infringement requires knowledge or constructive knowledge whereas patent law enforcement is based on a strict liability rule. Yet, as discussed above, even under the IPRED, the unintentional character of the infringer's

⁷¹ On the notification role of reasonable steps, *see*, for example, Bone (2011), p. 59.

⁷² On factual secrecy concerns in the context of AI, *see* Sandeen and Aplin (2021).

⁷³ On ways of interpreting trade secret law to limit the expansion of rights and secure the public domain. Mylly (2021b).

⁷⁴ Ohly (2009), p. 9.

activities may play a role. It has been suggested that this be made part of the analysis of proportionality under the patent law enforcement system.⁷⁵

The third group of factors constitutes a balancing act between the parties. Factor (e) refers to the legitimate interests of both trade secret holders and infringers, and the impact on them of granting or rejecting a remedy. Ultimate factor (h), on the safeguarding of fundamental rights, can be seen as a balancing act between at least the parties to the case. Considering how the ECJ has analyzed proportionality with regard to the safeguarding of fundamental rights in its copyright law case law, one may assume that this factor focuses mainly on those fundamental rights that are at stake in the case in question and between the parties. However, the Charter rights that the preamble text has identified as relevant under the TSD include the following (recital 34):

the right to respect for private and family life, the right to protection of personal data, the freedom of expression and information, the freedom to choose an occupation and right to engage in work⁷⁶, the freedom to conduct a business, the right to property, the right to good administration, and in particular the access to files, while respecting business secrecy, the right to an effective remedy and to a fair trial and the right of defense.

The list is quite comprehensive. Therefore, even though some of these fundamental rights are clearly beneficial either to the plaintiff or to the defendant, the list also allows third-party interests and the public interest to be taken into consideration under fundamental rights. For example, the right to good administration and access to files may include third-party and public interests. Consequently, the factors referring to the safeguarding of fundamental rights seem to belong to a different type of group of factors for assessing proportionality.

The final category of proportionality factors does not refer to the parties to the case, but explicitly requires that account be taken of the legitimate interests of third parties (f) and the public interest (g). Fundamental rights seem to refer both to the parties to the case in question and these other interests. These provisions of the TSD are especially laudable. As explained in the patent law section of this article, in the discussion of German and Finnish approaches to the analysis of proportionality in patent law, even where it has been recognized that there is a possibility of tailoring injunctions, most attention has been paid to the perspectives of the parties to a case. Consequently, courts have not sufficiently considered the impact of a case's outcome on society more generally. The same shortcoming can be seen in ECJ copyright case law where the ECJ has assessed proportionality with regard to fundamental rights. Now, under the trade secret regime, a clearly different approach has been adopted. Balancing the various interests seems to be far more important under the TSD than under the IPRED.⁷⁷ This is clear in the analysis of

⁷⁵ Desaunettes-Barbero et al (2020), p. 9. This is also the position adopted in the German discussion draft, Part on subjective elements. Ohly (2009), pp. 8–9.

⁷⁶ The freedom to choose an occupation and right to engage in work is the core fundamental right ensuring employee mobility. For a closer analysis of trade secret protection and the conflicts at stake in the context of employee mobility see Kolasa (2018) and (2020).

⁷⁷ Torremans (2015), p. 35.

proportionality, but the factors listed for such analysis play a role in other parts of the TSD as well. Fundamental rights and the public interest are relevant throughout the TSD.

Of particular importance is “the right to freedom of expression and information which encompasses media freedom and pluralism”, as highlighted in recital 19 TSD. This fundamental right is also explicitly recognized by the provisions of the TSD as an exception. Under Art. 5(a), Member States are under an obligation to dismiss remedies in cases where the alleged acquisition, use or disclosure of the trade secret was carried out “for exercising the right to freedom of expression and information as set out in the Charter, including respect for the freedom and pluralism of the media”. Consequently, freedom of expression is a factor that may lead to total dismissal of the remedies under Art. 5(a). But, in addition, it may have an impact on tailoring remedies in cases where freedom of expression has not been accepted in the proceedings as fully justifying alleged infringement actions.⁷⁸ Freedom of expression as a fundamental right, therefore, has a particularly important role under the trade secret regime and one that is completely different from that under the IPR regimes.⁷⁹

Another important factor in assessing proportionality, which is connected with the exceptions in the TSD, is the requirement for the public interest to be taken into account. The public interest is an important component in the Art. 5(b) provision with regard to whistleblowers. Remedies against whistleblowers should be dismissed in cases where their actions relate to revealing misconduct, wrongdoing or illegal activity, provided also that whistleblowers act *for the purpose of protecting the general public interest*. Therefore, the public interest is to be taken into account both when interpreting the whistleblowing exception, and when using the proportionality factors to tailor remedies. As with the freedom of expression exception, all remedies under the whistleblowing exception may be dismissed. But in cases where the respondent is not sufficiently within the scope of the exception, there are still other options for tailoring remedies.⁸⁰ In the way that its exceptions and proportionality factors refer to fundamental rights, the public interest and third-party interests, the TSD clearly differs from the IPR regimes. In many provisions the TSD clearly points to a balancing exercise that takes account of a broad scope of interests within society.

Even though the TSD in general provides the minimum harmonization, this proportionality factor list forms part of its mandatory provisions, Member States do need to adhere to it as such. The same is true for the freedom of expression and whistleblowing exceptions.⁸¹ The impact of this is that, in this area, the Member States cannot give the trade secret holder any stronger protection, but they do need to apply the proportionality list, which is by nature mandatory.

⁷⁸ Aplin (2021), p. 188.

⁷⁹ See more about comparisons on the role of freedom of expression in copyright and trade secret regimes, Mylly (2021a).

⁸⁰ Aplin (2021), p. 188.

⁸¹ Article 1.1 provides that the Trade Secret Directive provides minimum harmonization but specifically requires compliance with Arts. 11 and 13.

However, some Member States have not transposed this provision into their trade secret laws as such. For example, Germany moved this provision from remedies to defenses. The impact of this legislative solution is that the burden of proof for any disproportionality of the remedies is transferred to the defendant. Yet this has been considered to potentially have only a minor effect in practice, as the burden of proof may under normal circumstances also be transferred to the party that relies on the factor, for example the disproportionality of the remedies in court proceedings.⁸²

However, the requirement is that remedies should be proportionate. This is slightly different from the requirement that remedies not be disproportionate, at least if it is to be the defendant's task to produce evidence of disproportionality. The list of factors for analyzing proportionality under the TSD includes many issues that do not refer to actions of or harm done to the defendant. Therefore, for many issues listed, it seems that the party that has knowledge and evidence of those factors is more likely to be the putative trade secret holder. Such factors are, for example, the value or other specific features of the trade secret; the measures taken to protect the trade secret; and the impact of the unlawful use or disclosure of the trade secret.

In addition to these factors relating to the trade secret holder, the list also contains the public interest and legitimate interests of third parties. For these issues, it is not clear who may have best access to this knowledge and therefore who should have the burden of proof. Therefore, if the full burden of proof lies with the defendant for all the issues that the competent court takes into account when analyzing proportionality, the legislative solution seems to be overly burdensome for the defendant. It is questionable whether such an approach would comply with EU law. General EU law principles require that national procedural rules, including the burden of proof, ensure the efficiency of EU law at national level.⁸³

The Finnish implementation of the TSD, the Trade Secret Act, does not include the explicit list for analyzing proportionality but provides more concisely that courts need to ensure that remedies do not cause unreasonable harm to the defendant in comparison with the interest to protect trade secrets, third parties and the public interest. The Finnish *travaux préparatoires* explain that this provision is meant to implement the TSD's requirements for analyzing proportionality.⁸⁴ Finnish implementation does not refer to fundamental rights, yet fundamental rights need to be adhered to in any case. However, deviations at national level may prove problematic if they lead to a situation where a defendant cannot effectively rely on the criteria set out in the TSD. In Finland, it would have been more informative to include the list in the Trade Secret Act.

⁸² Ohly (2020), p. 119.

⁸³ See, for example, Case C-109/88 *Handels- og Kontorfunktionærernes Forbund i Danmark v. Dansk Arbejdsgiverforening*, acting on behalf of Danfoss, EUR-Lex CELEX 61988J0109 (17 October 1989).

⁸⁴ The Finnish Government Bill for Trade Secret Act 49/2018, p. 99. Paragraph 9(3) of the Trade Secret Act on the proportionality of the preliminary injunction contains the same wording.

However, such implementation does not prevent these factors being relied on.⁸⁵

When compared with the proportionality in patent law enforcement, the TSD clearly advocates taking into account third-party interests, the public interest and fundamental rights when issuing remedies. The role of these factors has been unclear under patent law enforcement. In addition, a detailed list of factors in Art. 13(1) makes clear what kind of issues should at least be taken into account by the law when considering proportionality. This provision directs courts to utilize discretion when issuing remedies. The fact that a trade secret is not an exclusive right means that more attention has to be paid to the balancing of various interests. Moreover, the underlying justifications of the trade secret regime seem to be in line with unfair competition law. Therefore, considerations of what is fair also when issuing remedies play a role. Therefore, denying injunctions may not be as exceptional as it is under the patent regime. This should be the case in particular when it comes to unintentional infringement situations, which will be discussed next.

4 Knowledge Requirement for Infringement and Availability of Remedies

4.1 Knowledge Requirement under Patent Law

A general starting point in true IPR regimes, like patent law and copyright law, is that the defendant infringes the claimant's intellectual property right, irrespective of whether they knew about it or intended to infringe it.

However, the IPRED allows Member States to implement pecuniary compensation in lieu of an injunction if the defendant was in good faith, i.e. innocent. Article 12 IPRED provides that

[...] the competent judicial authorities may order pecuniary compensation to be paid to the injured party instead of applying the measures provided for in this Section if that person acted *unintentionally and without negligence*, if execution of the measures in question would cause him/her disproportionate harm and if pecuniary compensation to the injured party appears reasonably satisfactory. (emphasis added)

This provision in the IPRED would allow account to be taken of proportionality in specific situations where the defendant was not acting either intentionally or negligently. This would tackle some of the problems related to complex products and patent thickets, where it is especially burdensome for a market actor to identify all possible patent rights relevant for his/her product implementation. This provision is clearly a balancing act between the patent holder and the defendant.

In connection with this provision, recital 17 IPRED provides that

⁸⁵ In Finland's Market Court decision MAO:H71:2022 (decided 15 March 2022), concerning a preliminary injunction, the defendant relied on the proportionality requirement. In this case the plaintiff's claims were denied because those concerning trade secrets were not sufficiently defined. Therefore, the court did not analyze the proportionality of the requested preliminary injunction. The decision is not yet final.

[t]he measures, procedures and remedies provided for in this Directive should be determined in each case in such a manner as to take due account of the specific characteristics of that case, including the specific features of each intellectual property right and, *where appropriate, the intentional or unintentional character of the infringement.* (emphasis added)

Even though Art. 12 IPRED is clearly a balancing act between the patent holder and the defendant, the recital indicates the possibility of more broadly evaluating also other aspects relevant for each specific case. This recital has been argued as a reason for assessing the proportionality of the remedies in a flexible manner.⁸⁶ However, the unintentional character of an infringement is to be taken into account only where appropriate. The strict liability approach in IPR infringement cases in many countries is embedded in the high standard of duty of care. This indicates that only in a very limited number of cases can the defendant rely on its complete innocence.⁸⁷ This is also clear from Art. 12 IPRED, which stipulates as a requirement for pecuniary compensation that the defendant must have acted unintentionally and “without negligence”. This imposes a duty of care to ensure non-infringement.

It is important to highlight here that it was not mandatory for Member States to implement Art. 12 IPRED. Neither Germany nor Finland did.⁸⁸ Consequently, it seems that the systems in question follow the strict liability regime in patent cases, and the defendant’s knowledge and innocence do not play a role when setting the final remedies in patent infringement cases. The impact of this non-transposition into national legislation does not mean that innocence would have no meaning when national courts were issuing remedies. They are still obliged to respect Art. 3 IPRED, which requires remedies to be proportionate. In this analysis also, as indicated in recital 17, the defendant’s intentions can have an impact. The latest revision of the German Patent Act now also more clearly allows broader aspects to be taken into account when issuing injunctions. The amendment stipulates also a requirement for appropriate monetary compensation where a claim for injunction is denied.

In Finland, it was considered, when IPRED was transposed into the national legislation, that Sec. 59(3) of the Finnish Patents Act fulfilled the requirements of Art. 12 IPRED.⁸⁹ Sec. 59(3) provides that “the court may order, on request, if there are special reasons for this, that the holders of [infringing] objects [...] shall be able to dispose of the objects for the remainder of the patent term or for a part thereof, against reasonable compensation and on reasonable conditions”. There is no case law where this section has been applied.⁹⁰ Even though this section of the Finnish Patents Act does not explicitly mention the defendant’s knowledge or innocence as

⁸⁶ Hilty (2015), p. 15, case-by-case evaluation.

⁸⁷ Ohly (2009), p. 7.

⁸⁸ For Germany *see* Ohly (2009), p. 2, for Finland *see* Norrgård (2022), p. 116.

⁸⁹ Finnish Government Bill for changing industrial property right and copyright legislations (HE) 26/2006, p. 13.

⁹⁰ Norrgård (2022), pp. 116–117.

a factor in deciding whether to issue compensation in lieu of corrective measures, the factor of innocence can be included in the “special reasons”.

The provisions of the IPRED seem to favor the patent holder’s interest. This is clearly visible from the fact that it was not obligatory for Member States to transpose Art. 12 into their national legislations. This possibility was also utilized at national level. The patent law remedies therefore are more inclined to a strict liability rule, where injunctions are conceived as a patent holder’s right.⁹¹ Yet, proportionality should still be taken into account.⁹²

4.2 Knowledge Requirement Creating Liability under Trade Secret Law and Role of Bona Fide Defense

Unlike for IPRs and patent law, trade secret protection does not involve strict liability, but is regulated under the unfair-competition type of protection. Therefore, in order for there to be liability, an infringing party must have acted in a condemnable way. This requires an infringing party to have knowledge about trade secrets and be directly or indirectly involved in the acquisition, use or disclosure of trade secrets in a dishonest manner. As briefly discussed earlier in this article, TRIPS provisions on trade secrets (undisclosed information) contain a definition on what at least gives rise to liability in line with the unfair-competition-law approach to trade secrets. The definition is found in footnote 10 to Art. 39(2), which provides that,

[f]or the purpose of this provision, “a manner contrary to honest commercial practices” shall mean at least practices such as breach of contract, breach of confidence and inducement to breach, and includes the acquisition of undisclosed information by third parties who knew, or were grossly negligent in failing to know, that such practices were involved in the acquisition.

The definition firstly refers to contractual relationships. In addition, it creates liability for third parties *acquiring* information in situations where they *knew or were grossly negligent in failing to know* that information had been derived by improper means. It is noteworthy that the Anell draft to TRIPS referred in respect of third-party liability to situations where a party acquires information and knows, or has reasonable grounds to know, that information has been acquired dishonestly.⁹³ The final version covers a narrower scope of situations because it requires greater negligence on the part of a third party in order for there to be liability. When interpreting “gross negligence” under TRIPS one may need to take into account both commercial practices in international trade and business culture in a relevant member state. As the concept is widely utilized in many national legislations, both in civil law and common law countries, one might be able to find a uniform

⁹¹ Contreras and Husovec (2022), p. 314.

⁹² UPCA 64(4) provides that “[...] the Court shall take into account the need for proportionality between the *seriousness of the infringement* and the remedies to be ordered [...]”. The stipulation on the *seriousness of the infringement* probably enables account to be taken of the unintentional character of the defendant’s infringement. (emphasis added)

⁹³ Resource book (2005), p. 524.

interpretation. Gross negligence is generally understood as referring to an intentional failure to perform a manifest duty in reckless disregard of the consequences. It is different from a failure to exercise ordinary care.⁹⁴ Gross negligence requires some clear manifestation, which would catch the attention of a diligent market actor and require some activity. One example related to trade secrets is that of the dubious circumstances of the communication of the information.⁹⁵

It is further noteworthy that, under TRIPS, the point of time at which a third party's knowledge is decisive is the time of acquisition of the information. If a market actor was acting in good faith at the time of acquisition, the information can be freely utilized.⁹⁶ It has been argued that, if *ex post* knowledge (i.e. knowledge after the relevant conduct had taken place) gave rise to liability, the trade secret regime would become approximated with IPR protection, which was not the intention of the drafters of TRIPS.⁹⁷ However, as already explained, TRIPS allows member states to give broader protection to trade secrets.

Under Art. 4(4) TSD, "acquisition, use or disclosure" of a trade secret is an unlawful act whenever a person, "at the time of the acquisition, use or disclosure, knew or ought, under the circumstances, to have known" that the trade secret had been obtained directly or indirectly from another person who was using or disclosing the trade secret unlawfully. In addition, Art. 4(5) regulates liability related to activities concerning infringing goods, for example their import and export. This provision also requires the person carrying out the relevant activities to have known about the unlawful use at the time of the activity.⁹⁸ It is clear that the TSD covers a broader area of actions than what is required under TRIPS in two important ways. Firstly, a party has a stricter duty of care under the TSD because gross negligence is not required: it is sufficient for incurring liability that a third party should have known under the circumstances of the unlawfulness. Secondly, the relevant point of time for knowing of the unlawfulness refers not only to the time of acquisition of the information but also to that of its use and disclosure. Therefore, a party that has acquired information in good faith may become aware of

⁹⁴ Gervais (1998), pp. 186–187.

⁹⁵ Peter and Michaelis (2009), p. 645.

⁹⁶ Heinemann (1996), p. 240.

⁹⁷ Peter and Michaelis (2009), p. 645. They claim, however, that later knowledge can have an impact on conduct committed later with such knowledge. They argue that later actions would then be *mala fide* and against commercial honest practice. *Ibid.* However, for this argument to be logical under TRIPS, one would need to construe that later actions are done in breach of confidence. Otherwise, this would not be in line with the text in footnote 10, which requires third-party knowledge at the time of acquisition or a party to be subject to some other liability in line with footnote 10.

⁹⁸ Article 4(5): "The production, offering or placing on the market of infringing goods, or the importation, export or storage of infringing goods for those purposes, shall also be considered an unlawful use of a trade secret where the person carrying out such activities knew, or ought, under the circumstances, to have known that the trade secret was used unlawfully [...]". Lee has analyzed thoroughly problems with regard to liability concerning infringing goods. In particular, she pays attention to the fact that the goods in themselves may not contain infringing elements, for example when the benefit from using trade secrets would relate to customer lists. Then it would be extremely difficult for third parties to detect infringing products. *See, more closely, Lee (2021). Knaak et al (2014), pp. 957–958 also regard liability related to infringing goods too far-reaching.*

unlawfulness later. In such situations any later use and disclosure are considered unlawful and subject to liability under the TSD.

Under Art. 13(3) TSD, an initially innocent defendant who learns only later that information was unlawfully acquired or disclosed may ask for pecuniary compensation instead of a prohibitive injunction and corrective measures. For pecuniary compensation in lieu of an injunction, Art. 13(3)(a) requires that “the person concerned at the time of use or disclosure *neither knew nor ought, under the circumstances, to have known* that the trade secret was obtained from another person who was using or disclosing the trade secret unlawfully”. (emphasis added) This provision seems to create liability for parties who at the time of use and disclosure are fully innocent. However, Art. 4(4), which defines unlawfulness of use and disclosure, requires knowledge at the time of use and disclosure in order for there to be liability. The relevant point of time for requiring knowledge of unlawfulness in Art. 13(3)(a) makes sense only when read together with recital 29 TSD. This provides that

[a] person could have originally acquired a trade secret in good faith, but only become aware at a later stage, including upon notice served by the original trade secret holder, that that person’s knowledge of the trade secret in question derived from sources using or disclosing the relevant trade secret in an unlawful manner.

Consequently, if the initial acquisition of the information takes place without such knowledge, later actions can lead to liability only if they take place with such knowledge or if there is reason to know of previous unlawful actions. Likewise, early stages of use may have taken place in good faith but, in order for there to be liability, the use must have also taken place with explicit or constructive knowledge of unlawfulness.⁹⁹ Otherwise, there is no condemnable act by the party and therefore there cannot be liability.

In addition to the bona fide requirement at the time of the acquisition of the information, it is required that the execution of normal corrective measures cause disproportionate harm to the defendant and that pecuniary compensation appear reasonably satisfactory to the injured party. These other requirements for adopting pecuniary compensation instead of an injunction or other corrective measures refer to the balancing act between a trade secret holder and an infringer. Whether this type of liability in the trade secret context will become a serious problem from the perspective of small and medium-sized enterprises depends partly on how the requirements of “reasonably satisfactory” and “disproportionate harm” will be interpreted by the courts.¹⁰⁰

In Finland it has been estimated that disproportionate harm to the innocent party would be caused in a situation where a party has already invested massively on the basis of trade secret information before becoming aware of the fact that the information is derived from unlawful sources. In this type of situation, it would be unreasonable not to let the entity recoup such investment. On the other hand,

⁹⁹ The Finnish Government Bill for Trade Secret Act HE 49/2018, p. 62.

¹⁰⁰ Thomas Riis (2020), pp. 101–102.

pecuniary compensation in lieu of an injunction or corrective measures would not be reasonably satisfactory for a trade secret holder if the defendant were allowed to use trade secrets, and this would lead to trade secrets being lost because they became generally known through such use. Another situation in which pecuniary compensation would not be considered reasonably satisfactory would be where a trade secret holder would not be able to continue its activities within its own market area on account of continued use by the defendant.¹⁰¹

Article 13(3) TSD further set the maximum amount for pecuniary compensation in lieu of a corrective measure as not exceeding the amount of royalties or fees that would have been due if the person liable had requested authorization¹⁰² The royalties can cover the period of time for which use of the trade secret could have been prohibited.¹⁰³ It is noteworthy that no other economic losses are payable. The amount of normal royalties or fees is the absolute limit. Hence, there is a chance to grant less compensation. Consequently, there is a clear difference between damages, which can be paid for the whole period of time the infringer benefited from use of the trade secret, and pecuniary compensation, which does not cover the whole period of time. Also, actual damages in the event of normal liability would cover all damages appropriate to the actual prejudice.¹⁰⁴ When deciding upon the correct amount of pecuniary compensation, a court also needs to pay attention to the proportionality factors for the remedies stipulated under Art. 13(1). All in all, Arts. 13(3) and 13(4) should be interpreted in a way that takes into account the underlying premises and principles of trade secret protection.

Riis has highlighted that even where IPRED and TSD provisions look similar, the two regimes may be interpreted differently. Riis bases his interpretation on the fact that the TSD makes no reference to the IPRED other than stipulating in recital 39 that, when TSD and IPRED provisions overlap, the TSD takes precedence as *lex specialis* for trade secret cases.¹⁰⁵ The recital has been considered somewhat unclear as to whether it excludes application of the IPRED altogether for trade secret cases. This type of interpretation is anyhow considered to stem from the justification approach in the TSD, which seems to favor an unfair-competition type of protection.¹⁰⁶ This argument supports the approach highlighted also in this article

¹⁰¹ The Finnish Government Bill for Trade Secret Act HE 49/2018.

¹⁰² Under Art. 13(2) IPRED, the amount of compensation, in the event of innocence, is set rather vaguely, providing that “[w]here the infringer did not knowingly, or with reasonable grounds to know, engage in infringing activity, Member States may lay down that the judicial authorities may order the recovery of profits or the payment of damages, which may be pre-established”.

¹⁰³ Finland has implemented this in such a way that a court can order pecuniary compensation in lieu of injunction to cover royalties only for future use, *i.e.* from the time of the court’s decision. The earlier period of time can be covered by the payment of damages. The Finnish Government Bill for Trade Secret Act HE 49/2018, p. 102.

¹⁰⁴ Article 14(2) TSD: “When setting the damages referred to in paragraph 1, the competent judicial authorities shall take into account all appropriate factors, such as the negative economic consequences, including lost profits, which the injured party has suffered, any unfair profits made by the infringer and, in appropriate cases, elements other than economic factors, such as the moral prejudice caused to the trade secret holder by the unlawful acquisition, use or disclosure of the trade secret”.

¹⁰⁵ Riis (2020), p. 220.

¹⁰⁶ Knaak et al. (2014), p. 956.

that the justification for a system does have a role in interpreting each and every provision. Therefore, even similar-looking provisions may lead to different outcomes on account of the differences underlying the regimes in question. In particular, under trade secret rules, attention needs to be paid to unlawful actions. As already discussed above, trade secrets are different from IPRs proper because of the requirement for wrongful action. The TSD explicitly provides in recital 16 that “[i]n the interest of innovation and to foster competition, the provisions of this Directive should not create any exclusive right to know-how or information protected as trade secrets”. This is an important principle, which should limit the undesirable expansion of trade secret protection.

When one compares the remedy under Art. 13(3) TSD to the one available under Art. 12 IPRED more closely, there are some differences as well as similarities. The main difference is that, under the IPRED, it was not mandatory (as it is under the TSD) for Member States to implement the more lenient remedy against parties that acted unintentionally. Consequently, a distinctive approach was adopted, which is reasonable when considering the underlying justifications for the regimes in question. Remedies under the IPRED follow a strict liability regime based on exclusive IPRs. However, a more lenient remedy that balances the parties’ interests is still possible under Art. 12 IPRED.

Moreover, the requirement for knowledge of unlawfulness is slightly differently worded in each regime. Under the IPRED, market actors have a stricter duty of care under the provision, because Art. 12 includes the wording “without negligence”, whereas, under the TSD, a defendant is considered to be in good faith if they did not know or did not have a reason to know of previous unlawful actions. The circumstances in question should have caught a party’s attention in the sense that they might suspect unlawful acquisition or disclosure, but there is no general obligation under the TSD to check that the information does not derive from unlawful actions. Consequently, even where Member States have transposed Art. 12 IPRED into their national legislations, the liability in unintentional situations is still differently construed than that under the TSD. The liability and duty of care under the IPRED are stricter. This difference should also be borne in mind when construing liability based on constructive knowledge in trade secret cases.

Article 13(3) on bona fide defense and Art. 13(1) on proportionality factors together indicate that there is more flexibility under the TSD for a court to tailor remedies and also to take into account an infringer’s knowledge than under the IPRED. However, it is controversial that, in Art. 13(3) TSD, the remedies vis-à-vis innocent parties are almost identical to those of Art. 12 IPRED. Aplin has argued that the similar remedies may indicate that, under the provisions of the TSD, one will receive an IP-type of protection. She is concerned about the conceptual ambivalence of the TSD. One such inconsistency is between the fact that the justification underlying the TSD is of the unfair-competition type but, in the end, trade secret protection approximates IPR protection in many instances.¹⁰⁷

When one looks more generally at the remedies available under the TSD, it seems that they resemble the ones available under true IPR regimes, which lead to

¹⁰⁷ Aplin (2021), pp. 175–176.

situations where a person without any intention of committing an infringement may be held liable either to discontinue use of certain information or to pay compensation to the trade secret holder. Such parties may need at a later stage to choose between corrective measures and paying compensation, notwithstanding that they initially acted innocently.¹⁰⁸ Consequently, the remedies under the TSD create liability without a potential infringer having any awareness in advance of the existence of such a risk.¹⁰⁹

The distinctive risk relates to the confidential nature of information subject to trade secret protection and the lack of specific subject matter for trade secrets. If a person is not the one liable for the initial unlawful acquisition, use or disclosure of information in question, and the person in question does not have any reason to know of previous unlawful actions, a remedy against such a party seems equivocal. The potential liability would be an enormous risk for information-sharing, unless the liability became clearly limited. This type of liability structure in the TSD may cause challenges, for example, in collaborative initiatives for open data ecosystems. It is noteworthy that, in the preamble to the TSD, the importance of collaboration, open innovation and use of co-created knowledge are also highlighted. Recital 3 stipulates that “[...] [c]ollaborative research, including cross-border cooperation, is particularly important in increasing the levels of business research and development within the internal market. The dissemination of knowledge and information should be considered as being essential for the purpose of ensuring dynamic, positive and equal business development opportunities [...]”. In this context, trade secrets too have a role in protecting the exchange of knowledge between businesses. However, not all shared information can be assumed to be protectable and, therefore, one should receive clear notice of the existence of trade secrets. Without such notice and knowledge, information should flow freely.

5 Conclusion

Background premises for IPRs and trade secrets are different: IPRs are based on exclusive rights, with strict liability rules, whereas trade secrets are often understood as being part of unfair competition law. This approach to trade secrets is visible in many of the provisions and recitals of the TSD.¹¹⁰ The underlying premises of the TSD should be borne in mind in particular when construing liability and the knowledge required for infringing acts. And where a more lenient remedy is

¹⁰⁸ Riis (2020), p. 227. This type of compensation scheme is not available under US rules, but US rules include an efficient bona fide defense at least for purchase and licensing. Sandeen (2020), p. 55. However, Bone has interpreted US legislation in the sense that a third party may become liable for use and disclosure after a party learns about misappropriation. Bone (2006), p. 536.

¹⁰⁹ Also Ohly warns that trade secret protection should not become a strict liability regime like IP regimes, but that a potential infringer should have some reason to know about the unlawfulness of previous actions in order for there to be infringement. However, Ohly discusses in this context liability under Art. 4 of the Trade Secret Directive, under which knowledge (or reason to know) under the provision is required, to the exclusion of Art. 13(3). Ohly (2020), p. 114.

¹¹⁰ Knaak et al. (2014), p. 955.

available for market actors that are initially innocent, one needs to pay careful attention to the fact that the trade secret regime is not a strict liability regime and trade secrets are not exclusive rights. Third-party liability and all components thereof should be interpreted with these underlying premises of the regime in mind. This is particularly important because, when it comes to initially innocent actors, the remedy structure seems to resemble, controversially, the one under the IPRED for IP infringements. However, as argued earlier in this article, even similar-looking provisions can lead to different interpretations when teleological interpretation is applied, which takes account of the justifications for the system and the overall regime in question.

In addition, the proportionality requirements under the TSD seem to adopt a different approach to balancing the remedies from the IPRED. It is noteworthy that it was mandatory for Member States to transpose the TSD's proportionality factors into their national legislation. This reduces the possibilities of fragmentation in national interpretations. The factors also bring some clarity to the concept of proportionality. In particular, the factors that take into account public interest, third-party interests and fundamental rights are those for which a different approach from the interpretations under the IPRED is clearly visible. These factors play a particular role under the trade secret regime, and courts need to take careful account of them when setting and balancing any type of remedy under the TSD. Many of the proportionality factors, however, are in line with suggestions academics have made for understanding and interpreting proportionality under the IPRED for patent law remedies. Moreover, recent legislative developments in the area of patent law enforcement seem to tend towards explicitly recognizing even third-party interests in such a balancing exercise. Consequently, the explicit proportionality factors under the TSD, while particularly important under the trade secret regime, may bring some way forward for interpreting the proportionality of patent law injunctions and preventing problems with the over-enforcement of patent rights.

This article argues that the trade secret regime is different from the patent regime. Therefore, the balancing of various interests under the TSD is more important, and the courts should diligently exercise their discretion when issuing remedies. However, if one wishes to use one regime to help interpret the other, it would be more appropriate to use the flexibility of the trade secret regime to shed some light on how to make excessively rigid patent law enforcement more flexible rather than, conversely, to allow the already much-criticized inflexibility of the patent system to spread to the trade secret regime.

Funding Open Access funding provided by Hanken School of Economics.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain

permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Aplin T (2021) The limits of trade secret protection in the EU. In: Andeen S, Rademacher C, Ohly A (eds) *Research handbook on information law and governance*. Edward Elgar, Cheltenham, pp 174–194
- Bently L (2013) Trade secrets: intellectual property but not property? In: Howe R, Griffiths J (eds) *Concepts of property in intellectual property law*. Cambridge Intellectual Property and Information Law (21). Cambridge University Press, pp 60–93. <https://doi.org/10.1017/CBO9781107300880>
- Bone RG (2006) Secondary liability for trade secret misappropriation: comment. *Santa Clara Comput High Technol Law J* 22(3):529–546
- Bone RG (2011) Trade secrecy, innovation and the requirement of reasonable secrecy precautions. In: Dreyfuss RC, Strandburg KJ (eds) *The law and theory of trade secrets*. Edward Elgar, Cheltenham, pp 46–76
- Bruun N, Schovsbo J (2020) Implementation of the Trade Secrets Directive in the Nordic countries. In: Schovsbo J, Minssen T, Riis T, (eds) *The harmonization and protection of trade secrets in the EU: an appraisal of the EU Directive*. Edward Elgar, Cheltenham, pp 85–102
- Bucher S (2020) German patent reform targets “automatic” injunctions in patent litigation. *Int In-House Counsel J* 13(50):1–8
- Contreras JL, Husovec M (2022) Issuing and tailoring patent injunctions – a cross-jurisdictional comparison and synthesis. In: Contreras JL, Husovec M (eds) *Injunctions in patent law: trans-Atlantic dialogues on flexibility and tailoring*. Cambridge University Press, Cambridge, pp 313–341
- Desaunettes-Barbero L, Hilty RM, Kim D, Lamping M, Slowinski PR, Ullrich H (2020) Position paper on the envisaged reform of the German Patent Act. Max Planck Institute for Innovation and Competition Research Paper No. 20-05.
- Dinwoodie GB, Dreyfuss RC (2022) Injunctive relief in patent law under TRIPS. In: Contreras JL, Husovec M (eds) *Injunctions in patent law: trans-Atlantic dialogues on flexibility and tailoring*. Cambridge University Press, Cambridge, pp 5–25
- Gervais D (1998) *The TRIPS Agreement, drafting history and analysis*. Sweet & Maxwell, London
- Heinemann A (1996) Antitrust law of intellectual property in the TRIPS Agreement of the World Trade Organization. In: Beier F-K, Schricker G (eds) *From GATT to TRIPS – the agreement on trade-related aspects of intellectual property*. IIC Studies, Studies in Industrial Property and Copyright Law, pp 239–247
- Henning-Bodewig F (2007) *International unfair competition law*. In: Hilty RM, Henning-Bodewig F (eds) *Law against unfair competition: towards a new paradigm in Europe?* Springer, Berlin
- Hilty RM (2015) The role of enforcement in delineating the scope of IP rights. Max Planck Institute for Innovation and Competition Research Paper No. 15-03. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2602221
- Kamperman Sanders A (1997) *Unfair competition law*. Clarendon Press, Oxford
- Knaak R, Kur A, Hilty RM (2014) Comments of the Max Planck Institute for Innovation and Competition of 3 June 2014 on the proposal of the European Commission for the Directive on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure of 28 November 2013, COM (2013) 813 final. IIC 45:953–967. <https://doi.org/10.1007/s40319-014-0270-3>
- Kolasa M (2018) *Trade secrets and employee mobility: in search of an equilibrium*. Cambridge University Press, Cambridge
- Kolasa M (2020) Using fairness to determine post-employment duties with respect to trade secrets: the case of remedies under the Trade Secrets Directive. In: Gervais D (ed) *Fairness, morality and ordre public in intellectual property*. Edward Elgar, Cheltenham
- Lee N (2021) Hedging (into) property? – Invisible trade secrets and international trade in goods. In: Griffiths J, Mylly T (eds) *Global intellectual property protection and new constitutionalism, hedging exclusive rights*. Cambridge University Press, Cambridge, pp 106–130
- Leistner M, Pless V (2022) European Union. In: Contreras JL, Husovec M (eds) *Injunctions in patent law: trans-Atlantic dialogues on flexibility and tailoring*. Cambridge University Press, Cambridge, pp 26–64

- Lemley MA (2005) Property, intellectual property, and free riding. *Texas Law Rev* 83:1031. Available at SSRN: <https://ssrn.com/abstract=582602>
- Lemley MA, Shapiro C (2007) Patent holdup and royalty stacking. *85 Texas Law Rev* 1991. Stanford Law and Economics Olin Working Paper No. 324. Available at SSRN: <https://ssrn.com/abstract=923468>
- Levine DS, Sandeen SK (2015) Here come the trade secret trolls. *Wash Lee Law Rev* 71:230. <https://scholarlycommons.law.wlu.edu/wlulr-online/vol71/iss4/3>
- Mylly T (2020) Proportionality in the CJEU's internet copyright case law: invasive or resilient? In: Bernitz U, Groussot X, Paju J, de Vries S (eds) *General principles of EU law and the EU digital order*. Wolters Kluwer, Alphen aan den Rijn, pp 257–286
- Mylly UM (2021) Freedom of the media and trade secrets in Europe. In: Sandeen SK, Rademacher C, Ohly A (eds) *Research handbook on information law and governance*. Edward Elgar, Cheltenham, pp 193–216
- Mylly UM (2021) Preserving the public domain: limits on overlapping copyright and trade secret protection of software. *IIC*. <https://doi.org/10.1007/s40319-021-01120-3>
- Norrgård M (2022) Finland. In: Contreras JL, Husovec M (eds) *Injunctions in patent law: trans-Atlantic dialogues on flexibility and tailoring*. Cambridge University Press, Cambridge
- Ohly A (2009) Three principles of European IP enforcement law: effectiveness, proportionality, dissuasiveness. In: Drexel J (ed) *Technology and competition, contributions in honour of Hanns Ullrich*, pp 257–274. Available at SSRN: <https://ssrn.com/abstract=1523277>
- Ohly A (2020) Germany: the Trade Secrets Protection Act 2019. In: Schovsbo J, Minssen T, Riis T (eds) *The harmonization and protection of trade secrets in the EU: an appraisal of the EU Directive*. Edward Elgar, Cheltenham, pp 103–123
- Peter M, Michaelis M (2009) Section 7, protection of undisclosed information. In: Wolfrum R, Stoll P-T (eds) *WTO – trade related aspects of intellectual property rights*. Koninklijke Brill NV, Leiden, pp 631–654
- Picht PG, Karczewski AL (2022) Germany. In: Contreras JL, Husovec M (eds) *Injunctions in patent law: trans-Atlantic dialogues on flexibility and tailoring*. Cambridge University Press, Cambridge
- Resource book on TRIPS and development/UNCTAD-ICTSD (2005). Cambridge University Press
- Riffel C (2016) Protection against unfair competition in the WTO TRIPS Agreement: the scope and prospects of Art. 10^{bis} of the Paris Convention for the Protection of Industrial Property. Koninklijke Brill NV
- Riis T (2020) Enforcement of rights in trade secrets. In: Schovsbo J, Minssen T, Riis T (eds) *The harmonization and protection of trade secrets in the EU: an appraisal of the EU Directive*. Edward Elgar, Cheltenham
- Sandeen SK (2020) Through the looking glass: trade secret harmonization as a reflection of US law. In: Schovsbo J, Minssen T, Riis T (eds) *The harmonization and protection of trade secrets in the EU: an appraisal of the EU Directive*. Edward Elgar, Cheltenham, pp 38–63
- Sandeen SK, Aplin T (2021) Trade secrecy, factual secrecy and the hype surrounding AI. In: Abott R (ed) *Research handbook on intellectual property and artificial intelligence* (Edward Elgar, forthcoming), King's College London Law School Research Paper Forthcoming, Available at SSRN: <https://ssrn.com/abstract=3929928>
- Shapiro C (2001) Navigating the patent thicket: cross licenses, patent pools, and standard-setting. In: Jaffe A, Lerner J, Stern S (eds) *Innovation policy and the economy*. The MIT Press, London, pp 119–150
- Schovsbo J, Riis T (2019) To be and not to be an IPR – the protection of trade secrets in the EU. Forthcoming, EIPR, University of Copenhagen Faculty of Law Research Paper No. 2019-71, Available at SSRN: <https://ssrn.com/abstract=3347705> or [https://doi.org/10.2139/ssrn.334770541\(7\)EIPR401](https://doi.org/10.2139/ssrn.334770541(7)EIPR401)
- Sikorski R (2022) Towards a more orderly application of proportionality to patent injunctions in the European Union. *IIC* 53:31–61. <https://doi.org/10.1007/s40319-021-01139-6>
- Strowel A, Ldonard A (2020) Cutting back patent over-enforcement – how to address abusive practices within the EU enforcement framework. *JIPITEC* 11
- Schönbohm J, Ackermann-Blome N (2020) Products, patents, proportionality – how German patent law responds to 21st century challenges. *GRUR Int* 69(6):578–584. <https://doi.org/10.1093/grurint/ikaa071>
- Torremans PLC (2015) The road towards the harmonisation of trade secrets law in the European Union. *Revista La Propriedad Immaterial* 20:35

- Udsen H, Schovsbo J, van der Donk B (2020) Trade secrets as part of information law. In: Schovsbo J, Minssen T, Riis T (eds) The harmonization and protection of trade secrets in the EU: an appraisal of the EU Directive. Edward Elgar, Cheltenham, pp 22–37
- Yanagisawa T, Guellec D (2009) The emerging patent marketplace. OECD Science, Technology and Industry Working Papers, No. 2009/09. OECD Publishing, Paris. <https://doi.org/10.1787/218413152254>

Official materials

- Agreement on Trade-Related Aspects of Intellectual Property Rights, The TRIPS Agreement, Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994
- Agreement on a Unified Patent Court OJ C 175, 20.6.2013, pp 1–40
- Directive (EC) 2004/48 of the European Parliament and the Council of 29 April 2004 on the enforcement of intellectual property rights. [2004] OJ L 157/45
- Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure [2016] OJ L157/1
- The Finnish Government Bill for Trade Secret Act HE 49/2018
- Finnish Government Bill for changing industrial property right and copyright legislations, HE 26/2006

Case law

- German Federal Supreme Court on 10 May 2016 decision BGH – X ZR 114/13
- Finnish Market Court decision MAO:H71:2022 (decided 15 March 2022)
- Finnish Supreme Court case KKO 2003:127

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.