The research exception rule in Norwegian patent law

- *How patents are essential for the advancement of knowledge and innovation*

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"If I have seen far, it is by standing on the shoulders of giants"

Isaac Newton

Table of Content

1 The research exception rule

1.1 Introduction

The exclusive rights that patent holders are given through patent law grant them the right to exploit their invention and for actors within the patent system to invent, invest and commercialize the invention. The way in which the patent holder's invention is exploited is regulated through the Norwegian Patents Act. However, patent holders cannot refuse research on their invention in quest of advancing knowledge and innovation. In fact, it is paramount for the fundamental purpose of the patent system that patent rights do not exclude further research and knowledge, and that patented inventions are made accessible and public to all. The contract entered into when patent holders apply for and are granted rights and protection through the patent system thereby strikes a balance between protecting the patents holder's rights and incentivizing investment and commercialization, whilst demanding that patented technology and inventions are publicized for the advancement of research and development which in turn incentivizes new innovation and inventions.

It follows from the Norwegian Patents Act § 3 that "no one but the patent holder may […] exploit the invention" except for the "[e]xploitation by experiment relating to the subject matter of the invention", cf. § 3, section 3, number 3. The research exception rule includes the underlying term of "exploitation" which is linked to the unlawful use of the patent holder's invention, the terms of an experiment, as well as a term of experimentation or research on the "subject matter of the invention". Th provision thereby establishes three key terms in order to invoke the research exception as laid out in the Norwegian Patents Act.

In Rt. 2009 p. 1665, the so-called SINTEF judgment, the Supreme Court found that the commercial research foundation SINTEF, when conducting research on a specific fish counting program, constituted an infringement of the patent holder's exclusive rights to exploit the invention. The Supreme Court found that the research SINTEF had conducted alone did consitute research privileged under the research exception rule and that the foundation's commercial interests in the research was irrelevant for utilizing the research exception rule. However, the delivery of a software program being the result of said research was deemed by the Supreme Court as an infringement on the patent holders exclusive right to exploit the invention. Thus, SINTEF had conducted research beyond the scope of the research exception rule and was therefore ordered to pay damages to the patent holder.

In the aftermath of the SINTEF judgment and upon their request, the Norwegian Ministry of Justice considered clarifying the research exception rule in the Norwegian Patent Act. The Ministry of Justice found, however, that the current research exception rule was in line with case law in the European Union, and that the rule did not need to be altered or clarified.

However, comprehensive literature and reports from the World Intellectual Property Organization (WIPO) argue that research institutions and actors within the patent system become apprehensive of researching patented invention in fear of litigation or difficulties with conducting privileged experiments in regard to patent rights.[1] Hesitation to utilize patented inventions amidst researchers and institution tend to heighten in the aftermath of patent law litigation, as illustrated by the Madey v. Duke judgment in the US Supreme Court. Therefore, this thesis concludes that clear, consistent and unambiguous rules on the use of patented research and experiments are paramount for obtaining the patent system's goal of advancing knowledge and research.

On the basis of the aforementioned observations, the main research question of this thesis is as follows:

> Should the research exception rule in the Norwegian Patents Act be clarified in order to achieve the fundamental goals of patent law in advancing knowledge, and if so, in which ways should the rule be clarified?

1.2 Limitations

This thesis focuses primarily on the content and scope of the research exception rule as laid out by the Norwegian Patents Act § 3, section 3, number 3, with the objective to examine and argue whether the research exception rule in the Norwegian Patents Act should be altered in order to clarify its scope, and if so, in which way the rule should be specified. By highlighting three key factors for conceptualizing the scope of the research exception rule, this thesis argues that the research exception rule can be utilized in a clear and consistent manner which ultimately benefits all actors within the patent system.

Although this thesis is heavily anchored in the ruling of the SINTEF judgment, the particular ruling on the matter of contributory infringement is not the focal point of examination for this thesis. In examining the SINTEF judgment, questions of contributory infringement contiguous with the question of the research exception rule may occur. However, the matter of contributory infringement will not be examined further. Thereby, this thesis is limited to the matter of the research exception rule and its scope. Despite a significant focus on the SINTEF judgment, this thesis is not meant as an analysis of the judgment as such. The SINTEF judgment is, on the other hand, the only Supreme Court judgment on the research exception rule in Norwegian patent law, and therefore of central interest for the subject matter of this thesis, namely the scope of the research exception rule. The SINTEF judgment is paramount to illustrating and debating the complexity of the content of and scope of the research exception rule in Norwegian patent law.

Furthermore, the European cooperation and agreements on patent law is substantial and therefore central to the coherent application of patent law within the EU/EEA-area through the European Patent

[1] Dent, C. et. al (2006) pp. 27-29; Bently. L (2010) et. al.

Convention (EPC) and the Community Patent Convention (CPC). However, this thesis is limited to the examination of Norwegian patent law, where specific European case law is highlighted in order to argue for the specific scope in which the research exception rule can be utilized within Norwegian patent law. The European patent agreements, European directives and international treaties as such will not be of focus in this thesis.

2 The patent system and its objectives

In order to fully grasp the context in which the research exception rule is implemented, it is essential to understand the main objectives of the patent system in general with the various processes within the patent system, the application system as well as the patent laws remaining the core of the patent system.

Particularly, it is crucial to understand what the patent system aims to achieve through its legal system and which factors are relevant in understanding how patent laws are shaped. This chapter highlights these factors and underlines the main objectives of the patent system.

2.1 The contract

It is widely known within innovation and technology arenas that eighty percent of a business' assets are intellectual property rights.[2] Protection of these rights and consequently, freedom to operate, are thus essential not only for startups and businesses, but also for society as a whole. New knowledge, innovation and technology are essential in order to combat current deep and complex societal issues such as global health, poverty and climate change. As Jaenichen and Pitz (2015) emphasizes;

> "[p]atents are the proper tool to motivate innovation. Not only do they provide the chance for entrepreneurs and innovative industries to generate return of investment, and, at times, profit, but they also allow the scientific community to further innovative research by full disclosure of the new technical contributions".[3]

The effectiveness of patent laws as laid out by the international and Norwegian patent rules depends entirely on the scope of protection enforced through the various national and international industrial property offices. However, the incentive to seek patent protection must be enforced effectively and consistently by the patent system in general in order to function on a systemic level. Notwithstanding, the patent system is fundamentally anchored in the belief in the continuous development of research and innovation, effectively ensuring the progress of knowledge through publishing patented research. The research exception rule is the result of this belief and should therefore be equivocally manifested in the Norwegian patent system. Thus, the patent system embodies a contract that ensures effective protection of the patented invention in exchange for the publication and full disclosure of knowledge which the invention represents.

By striking a balance between the need for a research exception rule to create freedom to develop research and innovation, whilst promoting an effective patent system which protect and promote the investment in patented technology and research, the contract illustrates the fundamental pillars of the

[2] Ogier, J. P. (2016)
[3] Jaenichen, H-R. and Pitz, J. (2015)

global patent system. This paper aims to examine whether the current research exception rule in the Norwegian Patents Act is fit to strike such a balance.

2.1.1 Incentive to invent

The factors of the patent contract play a major role in facilitating that research and innovation can be done freely and transparently when the publication of such research can be done without the fear of imitation, piracy or third-party appropriation of the technical solution. Moreover, the patent laws and the enforcement mechanisms of the patent system protects not only the interest of the patent holder, but also the interest of investors and third parties of the patent system.

Through the patent system, resources will be allocated more effectively when patented inventions are protected and enforced, and investors can do more reliable predictions on their investments whilst third parties can gain knowledge of what has already been patented and thereby focus their own research on true innovation. An effective and coherent patent system therefore entails a system which incentivizes further invention, and that these inventions are made possible through, and by means of, the patent system in itself.

The research exception rule embodies this component precisely, as Bently et. al. (2015) argues;

> "As it is a universal premise of modern patent systems that the patentee disclose the invention to the public so that they can perform the invention, it is clearly necessary that persons can experiment with the invention to ascertain whether it in fact works (and is sufficiently disclosed). As patent offices do not undertake this task, this freedom must be conferred on competitors, as it is they who have the incentive to investigate and ultimately challenge the validity of the patent".[4]

And as advancing research and innovation as a main objective of the patent system and thereby the patent laws, WIPO (2018) emphasize that "[…] the cumulative nature of technological development in most sectors require the preservation of the ability to innovate and that a patent regime that impedes follow-on innovation will defeat its very purpose".[5] The research exception rule therefore embodies the fundamental purpose of the patent system to incentivize new inventions.

2.1.2 Incentive to invest

In order to attract inventors and investors alike, actors who utilize the patent system directly or indirectly, rely on a coherent patent system which present a safe process for research and innovation before patent application and leading up to the granting of patent. Equally important is the enforcement of patent rights through implementing and enforcing patent laws, application systems and international patent processes. These mechanisms ensure the attractiveness for investors to fund

[4] Bently, L. et. all. (2010) pp. 59
[5] WIPO (2018) pp. 5

important research and innovation by securing their investment in a safe, coherent and effective patent system.

The potential revenue and societal benefit of intellectual property rights makes up a significant motivation for investors and governments alike to fund research and innovation at early stages, where the long-term return of such investments can be substantial. As mentioned earlier, it is estimated that eighty percent of a company's assets are its intellectual property rights, thus making the investment in such rights a lucrative business. In fact, studies have shown that venture capitalists use tighter protection of intellectual property rights as a key selection criterion, and that companies highly engaged in patenting activity attracted more venture capitalist investors in their investment selection.[6] Furthermore, Kumar and Tejswi (2010) argue that;

> "[a]s research and development (R&D) domains progressively became more investment-intensive, a need for stimulating investments was recognized as a major enabler for inventive endeavours and hence the patent system. Thus, the patent system should provide enough impetus for scientists and researchers to pursue innovative research […which] inherently implies freedom for a scientist-inventor to carry out research on anything that could result in an invention".[7]

In general, effective patent regimes are a key factor in incentivizing such investments. However, the international cooperation on patent rights remains instrumental in order to truly secure the value of patent rights as globalization often demands multinational patents. Furthermore, the European cooperation on patent rights play a significant role in creating a coherent and effective patent system, where the patent application systems have become more accessible to non-nationals. Laws, regulations and judgments of patent regimes within the European Union and EEA member states therefore play a significant part in shaping the scope of the research exception rule, facilitating the way in which actors of the patent system rely on effective protection whilst enjoying the freedom to further develop and exploit their intellectual property rights.

2.1.3 Incentive to commercialize

The commercial aspect of the patent system is pivotal. As laid out by the patent laws, inventions which are "susceptible of industrial application" are subject to the patent regimes, and thereby inherently entail an aim to commercialize ("obtain the exclusive right to exploit the invention commercially"), cf. the Norwegian Patents Act § 1.

However, the commercial potential of patents is only attractive as long as they are effective. By demanding disclosure of the invention in order to be granted patent rights, the aspect of competition remains central to research and development, and particularly within the field of technology. The patent system protects the economic interests in exploiting the invention commercially, but not the

[6] Nadeau, P. (2010) pp. 325-342
[7] Kumar, K.S et. all. (2010) pp. 1523-1529.

information or knowledge about the invention in itself. Therefore, the establishment of the precise scope of the research exception rule is essential within research and innovation. Striking the correct balance between advancing research and innovation through the experiment on or with patented inventions whilst protecting the economic and commercial interests of exploiting the inventions remains key.

The question remains, however, if researchers and institutions can rely on the research exception rule. If the scope of the rule is unclear, the risk of legal disputes and questions of infringement is capable of hindering the objective of the rule and thereby undermining its very purpose. As UNCTAD has reported on recent law reform on the research exception rule in Australian patent law;

> "[…] "The existing uncertainty is unhelpful to the research community and commercial Organizations. It has the potential to lead to under-investment in basic research and hinder innovation because researchers are concerned that their activities may lead to legal action by patent holders".[8]

Inconsistent enforcement of the research exception rule, as well as uncertainty regarding its scope could potentially jeopardize the systemic interests of the patent system, weakening the incentive to commercialize inventions and thereby undermining the patent system as a whole. The research exception rule thus illustrates one of many complex legal frameworks that require concrete and consistent distinction within patent law in order to define the scope in which the rule applies.

8 Garrison, C. (2006) pp. 46

3 The research exception rule in Norwegian patent law

3.1 The Norwegian Patents Act § 3

3.1.1 The exclusive right

It follows from the Norwegian Patents Act § 1 that any person who has made an invention within any technical field susceptible of industrial application, "[…] have the right on application to be granted a patent for the invention and thereby obtain the *exclusive right* to exploit the invention commercially or operationally" (emphasis added). In other words, the provision grants the patent holder an exclusive and negative right to exclude others from the invention.[9] Patent holders thereby have the right to exploit their patent as their own property and are meanwhile granted the right to exclude all others from exploiting the patent.

The Norwegian Patents Act § 3, section 3 regulates that the "[…] *exclusive right* conferred by a patent shall, with the exceptions referred to in the third paragraph, imply that no one but the patent holder may, without his consent, *exploit* the invention by […exploiting…] the invention in this country with the *means* for carrying out the invention, cf. section 3 (emphasis added). The provision regulates in which instances the patent holder can claim their exclusive right and references the exceptions to the exclusive right as regulated in the third paragraph.

3.1.2 The research exception rule - an exception to the exclusive right

The Norwegian Patents Act § 3, section 3, no. 3 regulates that "[t]he exclusive right shall not include […] [e]xploitation by experiment relating to the subject matter of the invention". The patent holder's exclusive right to exclude the use of his or her invention is therefore exempt in cases where the patented invention is found to be used "by experiment" which is "relating to the subject matter of the invention". The Norwegian Patents Act § 3, section 3, no. 3 thereby regulates the research exception rule.

Although the provision formulates an exception for "experiments", it is clear from the preparatory works that the provision entails an exception from the exclusive right for research and innovation, experiments, trials and other activities in the pursuit of advancing knowledge.[10] Furthermore, the term of limiting the privileged research exempt from the exclusive right to experiments "relating to the

[9] Mosoff, A. (2009)
[10] Prop. 27 L (2009-2010); NIR (2010) p. 20

subject matter" is central to limiting the scope of the research privileged under the rule. A third term for utilizing the research exception rule is, however, highlighted in legal literature.

3.1.3 The term of exploitation for the research exception rule

Stenvik (2020) highlights that the patent system aims to grant the patent holder protection from competing economic exploitation of the invention. It is not, however aimed to protect the information about the invention in itself.[11] Information about the patented invention may therefore freely be used in advancing research and innovation. This entails that the patent holder's exclusive right to exploit the invention is limited to the economic value of the invention, not the researched knowledge based on the invention. This concept is thoroughly established in the preparatory works for the Norwegian Patents Act, as laid out in NU 1963: 6;

> "The term "exploitation" is given certain meaning, by which patent law is limited. By this is meant at the outset that the exclusive right refers to the utilization of the economic value of the invention. The patent right thereby does not protect the use of invention as a source of knowledge or as basis for research and development, experimental or educational purposes. It is noteworthy, however, that if the invention according to its provision is intended to be used specifically for research or for educational purposes, such use falls under patent protection. Thus, a patented measuring device may not be used in a laboratory without the patent holder's permission, nor for example patented demonstration material in vocational education. On the other hand, the use of the invention for the purpose of research in order to achieve a further development falls outside the scope of patent protection, even if the research is carried out professionally" (translation added).[12]

In other words, the term "exploitation" as laid out in the Norwegian Patents Act § 1, although not an explicit term for the application of the research exception rule in § 3, section 3, no. 3, must be interpreted as an integral part of the assessment on whether the research exception rule can be applied in a specific case. As laid out in the SINTEF judgment; "[…] it is natural to anchor the research exception in § 3, section 3, no 3. [and that], the exploitation term shall be used to supplement the research exception assessment".[13] If the research conducted diminishes the commercial exploitation

[11] Stenvik, A. (2020) pp. 289

[12] NU 1963: 6 p. 145, original text: "I uttrycket "utnyttja" inlägges vissa betydelser, genom vilka patenträtten begränsas. Härmed åsyftas till en början, att ensamrätten avser tilgodeogörandet av uppfinningens ekonomiske värde. Patentet skyddar därvid icke uppfinningens begangnande som kunskapskälla eller som grundval för fortsatt forskning, experiment eller undervisning. Det är dock att märka, att om uppfinningen enligt sin bestämmelse är avsedd att brukas just vis forsknig eller undervisning ett sådant bruk faller inn under patentskyddet. Et patenterad mätapparat får således icke användas i ett laboratorium utan patenthavarens tillstånd och ej heller t.ex. patenterat demonstrationsmaterial vid yrkesmässig undervisning. Ett änvandande av uppfinningen i undersökningsyfte för att nå fram till en vidare utveckling faller däremot utanför patentskyddet, även om undersökningen sker yrkesmässigt".

[13] Rt. 2009 s, 1665, paragraph 46

of the invention available to the patent holder, the research invoked under the exception rule is not within the scope of the rule under § 3, section 3, no. 3.

However, the crux of the term of exploitation in regard to the scope of the research exception rule, is that the patent is only protected from the exploitation which utilizes the invention's economic value. Vice versa, the patent holder cannot exclude the use of the invention in instances where the research conducted is merely to gain knowledge or to research the essence and processes of the invention at hand.

3.1.4 The terms for utilizing the research exception rule

Conclusively, the term of exploitation must be viewed as a part of the assessment on whether the research exception can be asserted. However, it is the invention's economic and commercial exploitation which is protected under the patent rights.

Thus, the research exception rule in Norwegian patent law must fulfill three central terms in order to be utilized;

i. There must be conducted a privileged *experiment*,

ii. relating to the subject matter *of* the invention,

iii. which is pursuant to the term of *exploitation*, cf. § 3, section 1

3.1.5 The 1979 law revision and European cooperation on patents

With the 1979 revision of the Norwegian Patents Act, lawmakers included the § 3, section 3 which exhausts the possible exceptions to the patent holder's exclusive rights. Therefore, a right to use a patented invention under the term of "exploitation" is misleading. The use of patented inventions in research and technology must therefore be firmly based on the research exception rule as formulated in section 3, no. 3. However, the requirement of "exploitation" as laid out in section 1 remains useful in assessing whether the use of a patented invention is merely conducted as scientific research, or as a way of bypassing the patent holder's exclusive right.[14]

Furthermore, the provision in the Norwegian Patents Act § 3, section 3, number 3 is considered harmonized with the parallel provision in Art. 27 (b) of the Community Patent Convention (CPC) which exempts "acts done for experimental purposes relating to the subject-matter of the patented invention". It is noteworthy, however, that each contracting state under the EPC and CPC will vary in

[14] NIR (2010), p. 20

which ways the research exception rule is interpreted. Thus, the scope of the research exception rule may not harmonize within the contracting states.[15]

3.1.6 Contributory infringement

In the Norwegian Patents Act § 3, section 2 the subject of contributory infringement was added to the Norwegian patent law through the 1979 law revision in mirroring the European standard through Art. 26 of the CPC. The provision in § 3, section 2 states that the exclusive right implies that no one but the patent holder may "[…] exploit the invention by offering or supplying any person who is not entitled to exploit the invention in this country with the means for carrying out the invention […]".

The provision determines that acts can be deemed as patent infringement independently and regardless of whether the isolated act does not constitute patent infringement if the act enables the recipient to exploit the invention. Such enabling can be done through acts that offers or supplies the means to the invention to recepients who are not entitled to exploit the invention, meaning not entitled to the exclusive rights granted through the patent.[16]

The next chapter aims to demonstrate central case law from Norwegian, German, British and contrastingly American law to illustrate how the scope of the research exception rule vary in different patent regimes. Furthermore, the next chapter examines which cases are relevant for determining how the scope of the research exception rule in Norwegian patent law can be conceptualized.

[15] WIPO SCP/29/3
[16] Rt. 2009 s. 1665

4 Case law on the research exception rule

Although the research exception rule has been codified in patent laws in most countries, the specific content and scope of the research exception rule has been founded and shaped by various case law. This chapter examines the SINTEF judgment as well as recent European case law in order to highlight under which factors European courts have established the scope of the rule for their respective patent systems. The following chapter also includes case law from British and American courts to illustrate contrasting ways in which the research exception rule is utilized through law in order to debate how the scope of the rule is key in order to fulfill the objectives of the patent system.

4.1 Supreme Court Ruling in the SINTEF judgment

In Rt. 2009 s. 1665 the Norwegian Supreme Court decided on whether the research of a software program used for fish counting machines in the maritime and fishing industry was subject to the research exception rule pursuant to the Norwegian Patents Act § 3, section 3, no. 3.

The company Brødrene Wingan hired SINTEF, a Norwegian independent research institution, to carry out research on the software programme invented by the company AquaScan. AquaScan, as a major competitor to Brødrene Wingan, sued SINTEF for patent infringement, upholding that SINTEF had used AquaScan's patent and sold the means to exploit that invention to Brødrene Wingan. SINTEF, on the other hand, upheld that the research they were hired to do was in line with the scope of the research exception rule pursuant to the Norwegian Patents Act § 3, section 3, no. 3. Thus, the Supreme Court had to conclude on whether the research conducted by SINTEF and the delivery of the research results to Brødrene Wingan constituted a patent infringement or if SINTEF, in fact, was conducting its research pursuant to the scope of the Norwegian research exception rule.

4.1.1 A unique case

The case of SINTEF judgment is a unique case in Norwegian patent law, as it has undergone a lengthy and complex battle in the Norwegian court system, making its way through district court, to Court of Appeals and finally to the Supreme Court. The legal dispute originally stood between the inventor of the fish counting program, AquaScan, and their associate turned competitor Brødrene Wingan. However, after costly litigation and compensation claims following the judgment form the Court of Appeals, the company Brødrene Wingan filed for bankruptcy. Therefore, AquaScan sued SINTEF for patent infringement for the delivery of the results of the software program.

In the aftermath of the Supreme Court ruling in the SINTEF judgment, new legal disputes have taken place between Brødrene Wingan successors (Wingtech) and AquaScan.[17] Conclusively, the SINTEF judgment entails a complicated and extensive legal battle which ultimately highlights the uniqueness of the SINTEF judgment. However, the Supreme Court's ruling on the question at hand, namely the scope of the research exception rule, remains the focal point of this thesis.

4.1.2 Commercial interest not of relevance

The majority and minority vote of the SINTEF judgment both concluded that the mere research done by SINTEF in their assignment from Brødrene WIngan constituted a clear example of research exempt from the right to exclusivity. In other words, the scientific research done by SINTEF on the software program for the particular fish counting device in which AquaScan had patented did, in fact, constitute research exempt from the patent holders' exclusivity, cf. The Norwegian Patents Act § 3, section 3, no. 3, cf. section 1.

The Supreme Court therefore needed to conclude on the question at hand; did SINTEF's research results on AquaScan's patented invention constitute research under the scope of the research exception rule or did the research delivered constitute patent infringement?

The Supreme Court concluded that SINTEF's commercial interest in the research on the software program was irrelevant in terms of the use of the research exception rule and held that; "[t]he exclusive right protects against economic exploitation of the invention, so that use of the invention for research and experimental purposes falls outside the exclusive right. The same applies if the research is paid by a client".[18] The court thereby established that commercial interest is not of relevance in determining the scope of the research exception rule. Moreover, Stenvik (2010) emphasizes that the court ruling states that commercial interests in research are irrelevant as long as the research in question constitutes an "experiment".[19]

4.1.3 Research as an "experiment" and the cumulation of knowledge

In the Norwegian Patents Act § 3, section 3, no. 3, the research exception rule is limited to apply to "experiment[s]" which are related to the "subject matter of the invention". In other words, the research

[17] It should be noted that the legal dispute between Aquascan and decendants of Brødrene Wingan has versed in the Norwegian legal system for nearly 20 years, with Aquacans invention recently ordered to pay damages to Brødrene Wingan for issuing misleading statements in the original patent infringement case which were deemed decisive in the original case from 2003. However, the ruling has not been settled, as Aquscan's inventor has appealed the ruling ordering damages of 11 million NOK to be made to Brødrene Wingans decendants. It can therefore be argued that the SINTEF judgment as the central court ruling in the case may not form a clear precedent in the matter of the application and scope of the research exception rule in general in Norwegian patent law. The SINTEF judgment is, however, the only Supreme Court ruling on the matter of the research exception rule, and is therefore of key relevance to this thesis, regardless of the complexity of the underlying legal dispute between the parties.

[18] Rt. 2009 s. 1665, paragraph 45, original text; «Eneretten beskytter mot økonomisk utnyttelse av oppfinnelsen, slik at bruk av oppfinnelsen til forskning og eksperimentelle formål faller utenfor eneretten. Det gjelder også om forskningen er betalt av en oppdragsgiver».

[19] Stenvik (2020)

which is exempt from the right to exclusivity is limited to experiments which are conducted on the patented invention in itself. The use of the term “experiment” in the provision and in the SINTEF judgment is referred to in matters of research as well. It can therefore be argued that the term “experiment”, and in extension the research exception rule, is not limited to traditional scientific experiments, but also include various forms of research, trials and other methods for testing and quantifying the knowledge which is the subject matter of patented inventions. This is in line with the aforementioned preparatory works of the provision.

However, it is precisely the results of the research in quantifiable knowledge the SINTEF judgment focuses on. As outlined earlier, the research exception rule does not allow the use or exploitation of the subject matter of the invention as a means of delivering the invention. The rule rather allows for the research on the *effects* of the subject matter of the invention and *new methods* or *areas of use* for the patented invention for the purpose of gaining knowledge.[20] Thus, this distinction is key to understanding the scope of the research exception rule.

4.1.4 Majority vote

Both the majority and minority vote in the SINTEF judgment uniformly agreed that SINTEF’s research on Aquascan’s invention in itself was considered exempt from patent protection pursuant to the Norwegian Patents Act § 3, section 3, no. 3. Furthermore, the dissenting opinions both concluded that the commercial interests characterized by SINTEF’s research was irrelevant to the question of the scope of the research exception rule. However, the majority vote concluded on a deviating interpretation than the minority vote of the research exception rule in terms of the delivery of SINTEF’s research data and results to Brødrene Wingan. The main question in the case was therefore whether the research exception rule as laid out in the Norwegian Patent Act § 3, section 3, no. 3 includes the delivery of research results in the form of a software program under contract research. This deviation can be outlined as the key dissenting opinion which resulted in the dissent 3 against 2 in the SINTEF judgment.[21]

The majority vote found that the tool in which SINTEF had delivered the data and results of their research on Aquascan’s invention was of key importance to the question of the scope of the research exception rule. SINTEF had delivered a compact disc containing the data and programme of the Aquascan invention to Brødrene Wingan, and whilst the minority found that the way in which the data was handed off was irrelevant, the majority vote concluded that the knowledge from the invention was developed into “means” to apply the invention by SINTEF’s delivery of the data on the Aquascan technology. Thereby, the majority found that the research results SINTEF had delivered was a software program which “[…] constituted the control unit of the fish counter itself [, and therefore] must

[20] WIPO (2018)
[21] A. Stenvik (2010) “Utviklingen på immaterialrett. 527

be considered as a means – a tool – for practicing the invention" (translation added).[22] By doing so, the majority vote concluded that SINTEF had exploited the economic value of Aquascan's invention.

Furthermore, the majority concluded that it was irrelevant that SINTEF's interest in conducting the experiments on Aquascan's invention was to use the invention in research and to receive payment for that research without commercializing the invention themselves. The majority found that SINTEF, "[…] by charging for the services connected to the delivered software program, SINTEF has directly benefited from the economic value of the invention in competition with Kvassheim [Aquascan]" (translation added).[23] In other words, the majority vote concluded that SINTEF fulfilled the term of exploitation through indirectly benefiting from their commercial research in the delivery of a tool for Brødrene Wingan to exploit the invention. This interpretation arguably remains the central distinction between the majority and minority vote, and thereby the decisive factor for the result in the SINTEF judgment.

It is important to note when discussing the SINTEF judgment, that although SINTEF was found to have fulfilled the terms for contributory infringement, cf. § 3, section 2, it is unclear whether the majority vote also concluded that SINTEF had, in this particular case, conducted research and delivered the results of such research in a matter which did not fulfill the terms of the research exception rule, cf. § 3, section 3, no. 3. Thereby, the majority vote established precedent for the scope of the research exception rule when the research entity directly benefits from the economic value of the invention in a matter which exploits the commercial interest of a competing actor which holds the patent rights. Thus, it is not the commercial interests in SINTEF's research which is of key importance when establishing the scope of the research exception rule, but moreover that the research conducted by SINTEF was viewed as delivering the means of the software program within the invention itself to the patent holder's competitor, in a way which directly benefited SINTEF's economic interests at the expense of the patent holder. By exploiting the economic value of the invention by delivering Brødrene Wingan the means to carry out the subject matter of the invention, the majority vote found that SINTEF could not claim to conduct its research under the research exception rule pursuant to the Norwegian Patents Act § 3, section 3, no. 3.

4.1.5 Minority vote

Interestingly, the minority vote, however, emphasized that the research SINTEF conducted on behalf of Brødrene Wingan were, was in part aimed at solutions which differed from Aquascan's, and in part conducted research in order to create a more precise and effective solution to the fish counting

[22] Rt. 2009 s. 1665, paragraph 50, original text: "SINTEF leverte ved dette fra seg noe mer enn ren informasjon i form av testresultater fra forsøkene, anvisninger på hvordan fisketelleren skulle brukes, algoritmer eller lignende. Dataprogrammet utgjorde selve styringsenheten i fisketelleren og må anses som et middel – et verktøy – til å utøve oppfinnelsen».

[23] Rt. 2009 s. 1665, paragraph 53, original text; "Ved å ta seg betalt for dataprogrammet har SINTEF direkte dratt nytte av oppfinnelsens økonomiske verdi i konkurranse med Kvassheim».

program.[24] Thereby, the minority concluded that SINTEF had conducted research in a developmental manner aimed at gaining knowledge and enhancing the Aquascan invention, and as such fulfilled the terms of the provision in the Norwegian Patents Act § 3, section 3, no. 3.

The minority vote underlined that the main question was whether or not SINTEF had delivered the means to the invention by delivering the software program, entailing that SINTEF had enabled Brødrene Wingan to exploit the invention and thereby fulfilled the terms of the research exception rule, cf. § 3, section 3, no. 3. Judge Tønder of the minority vote emphasized that understanding the patent law provision in § 3 entailed that; "[the] essence of the patent holder's exclusive rights under section 2 is to "offer or deliver funds…", and that when section 3 provides a general exception from the exclusive right for "exploitation by experiment" which also includes the contributory exploitation, it is precisely such a transfer that the exception applies to".[25]

In other words, the minority vote concluded that the system within the provision itself must be understood differently than the way the majority vote concluded that SINTEF could be found to have fulfilled the terms for contributory infringement regardless of whether the research conducted in itself fulfilled the terms of the research exception rule. The minority vote, on the other hand, found that SINTEF's research on Aquascan's invention was conducted on a scientific basis where the objective of obtaining knowledge and experience with the invention remained the crux of SINTEF's endeavors. By clearly fulfilling the terms of § 3, section 3, no. 3, SINTEF therefore could not be seen as having infringed on Aquascan's invention by exploiting its economic value.[26] In essence, the minority vote interpreted differently the way in which section 2 and 3 of the provision in regard to how the term of exploitation in section 1 should be utilized.[27]

Jugde Tønder emphasized that in an instance where SINTEF had made a profit from the exploitation of the improved invention following the delivery of the software program to Brødrene Wingan, then SINTEF would be outside the scope of the research exception rule and thereby infringing on Aquascan's patent. Thus, the minority arguably created a need for a correlation between the results delivered and direct profit gained from such delivery. However, the minority highlighted that as the delivery of the results of the research remains a natural part of SINTEF's contract and SINTEF could not be seen as exploiting the economic value of the invention, the research conducted by SINTEF should be deemed as within the scope of the research exception rule, cf. § 3, section 3, no. 3, cf. section 1.[28]

4.1.6 Clear dissenting opinions – limited precedential value?

[24] Rt. 2009 s. 1665, paragraph 71.
[25] Ibid, paragraph 72
[26] Ibid, paragraph 74
[27] Ibid, paragraph 68-69
[28] Ibid, paragraph 74

By clearly arguing for conflicting interpretations on how section 3 interdepends with section 2 of the Norwegian Patents Act § 3, the majority and minority vote reached widely different solutions in the SINTEF judgment.

The majority vote found that SINTEF acted outside the scope of the research exception rule, cf. § 3, section 2 by delivering the means through tools to use the system for the software program in a manner which made the inventor's competitor able to exploit the economic value of the invention. By delivering the means to exploit the invention through its commercial interest in its contract with Brødrene Wingan, SINTEF was thereby ruled to pay damages and legal fees to Aquascan, the patent holder, for patent infringement pursuant to the provision in the Norwegian Patents Act § 3, section 2.

As discussed below, the clear dissenting opinions indicates that the scope of the research exception in Norwegian patent law is not necessarily clear, and that in cases of research conducted under contract with commercial interests, these factors can cloud the ways in which we utilize the patent rights in each particular case. However, the fact that the minority vote concluded that SINTEF's research "clearly" did not constitute patent infringement, whilst the majority vote conclusively argued that SINTEF's delivery of the software program fufilled the terms of contributory infringement, clearly alludes to the fact that the scope of the research exception objectively must be understood as unclear. The sharp dissenting opinion in the SINTEF judgment, moreover, indicates that the judgment may have limited precedential value for drawing the lines for the scope of the Norwegian research exception rule in cases to come.

4.2 The consultation memorandum

Following the Supreme Court's ruling in the SINTEF judgment, SINTEF as well as other research and educational institutions were faced with the need to alter their terms of service in order to ensure that similar patent infringement cases did not emerge. It can be argued that the SINTEF judgment - although the result of fair trial and a decision on the legal dispute between Aquascan and SINTEF - did not constitute a clarifying decision in terms of the scope of the research exception rule for the Norwegian patent system. Thus, the factors relevant for determining the scope of the rule remains ambiguous for the actors within said system.

In connection to the consultation memorandum 2018-2019 on changes to the Norwegian Patents Act, the actors involved in the SINTEF legal team presented a plea to the Norwegian Ministry of Justice to clarify the research exception rule as follows in provision § 3, section 3, no. 3 in order to establish the concrete content and scope of the rule. In the consultation memorandum, the Ministry of Justice underlined that; "[o]n the basis of the Supreme Court's ruling, SINTEF made a suggestion in 2010 that

the scope of the research exception rule in the [Norwegian] Patents Act § 3, section 3 should be clarified, so that the handover of research results should also be covered" (translation added).[29]

However, the Ministry of Justice highlighted that the Norwegian legal framework for the research exception rule must be considered harmonized with other European countries, and that the Ministry had found no European case law which contradicts the outcome of the SINTEF judgment. On that basis, the Ministry concluded that there was no reason to change or clarify the provision for the research exception rule in the Norwegian Patents Act based on the outcome of the SINTEF judgment.[30]

It can be argued, however, that the consultation memorandum entails an acknowledgement that the current rule of research exception in the Norwegian Patents Act is somewhat ambiguous, which is noteworthy as it confirms that the scope of the rule remains unclear. This thesis argues that the clear dissenting opinion on the scope of the rule in the SINTEF judgment and the following topic of the consultation memorandum entails that the framework of utilizing the rule *should* be conceptualized in Norwegian patent law, and that whilst the majority vote in the SINTEF judgment may be correct, the degree of clarity which the judgment presents for future cases is limited.

Interestingly, several recent cases in Europe sheds light on the scope of the research exception rule, prompting the questions on whether Norwegian patent law should follow the same framework when interpreting the research exception rule in the future. The next chapter aims to highlight some of the most relevant case law from German, British and American law in order to examine the scope of the research exception rule. Furthermore, the next chapter emphasizes contrasting ways for implementing the research exception rule in patent systems and aims to underline the ripple effects these decisions can have for the patent system.

4.3 International case law

4.3.1 Klinische Versuche I

In German patent law, Section 11 no. 2 of the Patentgesetz states that "the effect of a patent shall not extend to […] acts done for experimental purposes relating to the subject matter of the patented invention;".[31] In other words, the German provision presents a similar research exception rule to that

[29] Prop. 52 L (2018-2019) "Endringer i patentloven mv. (forenklinger), punkt 7.7, original text; «På bakgrunn av Høyesteretts dom kom SINTEF i 2010 med et innspill om at rekkevidden av forskningsunntaket i patentloven § 3 tredje ledd nr. 3 burde klargjøres, slik at også overleveringen av forskningsresultatene skal være omfattet».
[30] Ibid
[31] German Patent Act, section 11, no. 2 (Patentgesetz)

fof the Norwegian provision, which is exempt from the exclusive rights of the patent holder. As the Norwegian provision, section 11 no. 2 of the German provision is based on Art. 31 (b) of the CPC.[32]

The judgments of Klinishce Versche I and II deals particularily with the interpretation of the provision, and specifically the scope of the research exception rule.

In the Klinische Versuche I judgment (Clinical Trial I), The German Federal Court of Justice stated that "any systematic procedure aimed at obtaining new information is considered an experiment".[33] Furthermore, the Court found that experiments conducted on humans with the intent to find out whether a patented drug is suitable for curing or alleviating diseases by second indication were found admissible under the research exception rule.[34] The Court thereby conceptualized that the objective of the research or experiment is of significant importance for establishing the scope of the research exception rule.

The Klinische Versuche I judgment, moreover, states that the term "experiment" should be interpreted broadly and should cover all experimental acts irrespective of the motivation and purpose for which the knowledge gained is ultimately intended[35]. This implies that experiments which surpass merely scientific purposes and stribe towards economic interests are applicable under the provision. The Federal Court's decision in Klinische Versuche I clarifies that experiments or other relating acts aimed at removing uncertainty by examining a hypothesis or discovering something new may be considered under the research exception rule and is thereby exempt from the patent holder's exclusive rights.[36] These clarifications by the Court, it can be argued, help conceptualize which factors are relevant when determining if an experiment must be deemed as applicable under the research exception rule in general.

4.3.2 Klinische Versuche II

In Klinische Versuche II, the German Federal Court of Justice confirmed this broad interpretation of the "experiment" term, affirming that commercial interests are not decisive or even relevant for assessing the scope of the research exception rule[37]. In trials conducted in order to obtain data with the aim of gaining authorization for pharmaceutical products, the Court concluded that economic interests as a general rule does not conflict with the applicability of the research exception rule. In Klinische Versuche II, the Court, however, emphasized that exception does not apply if the experiments conducted only serves to establish commercial aspects such as price acceptability, distribution option, market needs and other relevant factors.

[32] WIPO «Research Exception in Germany"
[33] BGH, judgment of 11 July 1995 – X ZR 99/92 - Klinische Versuche I
[34] WIPO "Research Exception in Germany"
[35] WIPO (2009) pp. 12-13
[36] WIPO "Research Exception in Germany"
[37] BGH, judgment of 17 April 1997 – X ZR 68/94 – Klinische Verusche II

These clarifications, in turn, entails that the scope of the research exception rule does not exclude experiments conducted to obtain economic or commercial interests. However, if the only objective of the research conducted on a patented invention is to enhance the product in terms of commercial competitiveness, the exception is not applicable. In fact, by clarifying the scope of the research exception rule in terms of the objective of the experiment, it can be argued that the research exception rule becomes more aligned with the objectives of the patent system in general. By protecting the economic interests of the patent holder by excluding experiments to exploit the commercial competitiveness of the invention, the incentive to utilize the patent system is upheld. Meanwhile, clarification on the scope of the term experiment entails that utilizing the research exception rule by actors within patent systems become more predictable when conducting research on patented inventions. However, it is not necessarily apparent or clear which objectives any given experiment has, making determinations in often complex and technical cases more challenging.

In the Klinische Versuche II judgment, the Court clarified that when interpreting the term “experiment”, it was essential that the experimental act(s) and the technical subject matter of the patented invention must be related. The Court emphasized that the experimental act and the subject matter of the invention are not related if the experiment which is conducted is performed “[…] on such a large scale that it is no longer justifiable by the experimental purpose”.[38] By clarifying that the scale of the experiment is of relevance in interpreting the term “experiment”, the Court thereby adds further clarification to the specific scope of the research exception rule. Thus, arguably, clarifying in which cases experiments or research can be invoked by third parties within patent regimes.

German case law as illustrated with the Klinische Versuche I and II-judgments entail similar codification of the research exception rule as within the Norwegian patent system. Furthermore, the Klinishe Versuche-judgments point to similarities with the legal outlines as evident in the SINTEF judgment in terms of the interpretation of experiments and irrelevance of commercial interests. Moreover, the German case law shows that the legal systems and application of research exception rule are similar within German and Norwegian patent law, and in turn has greater precedential value when transferred between the two legal systems. However, the German decisions in Klinsche I and II goes significantly further in clarifying the scope of the rule as compared to the SINTEF judgment. By affirming the broad interpretation of the term “experiment” whilst emphasizing that commercial competitiveness and scale of experiment are significant in establishing the scope of the research exception rule, the rulings from the German Federal Court of Justice is arguably of key relevance for clarifying the scope of the research exception rule, also within Norwegian patent law.

4.3.3 Monsanto Co v. Stauffer Chemical Co.

According to the United Kingdom Patents Act § 60 (5) (b), an act which would constitute an infringement of a patent for an invention “shall not do so […] if it is done for experimental purposes

[38] WIPO «Research Exception in Germany”, cf. Klinishe Versuche II

relating to the subject-matter of the invention". Thereby, the provision for the research exception rule is in line with the aforementioned provisions in respectively Norwegian and German patent law. Thus, the UK provision is harmonized with the EU/EEA area. However, the specific interpretations and scope of the research exception rule may differ for each legal system.

As evident in the Monsanto Co v. Stauffer Chemical Co, the Court found that the research exception rule covers activities which seek to generate "genuinly new information" and does not apply for activities which seek to verify existing knowledge. The Court specified in the Monsanto judgment that trials, experiments, research etc. carried out to discover something unknown, test a hypothesis, research different modifications, or examine whether the invention could be manufactured commercially in accordance with the patent could "fairly be regarded as experiments[39]. Moreover, the Court underlined that activities assessed as relating to the subject matter would apply to;

> "experiments directed to the patented invention as such, experiments such as testing whether a patented product can be made, or a patented article made to work, as described in the patent specification, or experiments to see whether the patented invention can be improved or testing the effect of the modification in some particular to see whether it is an improvement or not. But the limitation would […] exclude from the exemption […] use of a patented article or process in experiments to test or evaluate some other product or process"[40].

The Court, however, underlined in the Monsanto judgment that experiments conducted to satisfy third parties such as customers or regulatory bodies or to demonstrate the invention to a third party, is not applicable under the research exception rule for activities conducted for experimental purposes. The Court's emphasis on genuinely advancing new scientific knowledge therefore remains the crux of the scope of the research exception rule in the UK.

The UK patent system holds that experiments conducted with commercial interests are applicable under the research exception rule, similar to the stance in Norwegian and German case law. However, the limitation to the scope of the research exception rule that lies within the Court's decision to limit experiments which verify existing knowledge is noteworthy compared to the stance of German courts. Notwithstanding, the UK scope of the research exception rule does not differ too greatly from that of the Norwegian and German patent systems in terms of relying heavily on the term "subject matter of the invention" when specifying the true scope of the research exception rule. It is, however, important to note that when assessing whether a specific experiment is conceived as relating to the subject matter of the invention, the UK Court has emphasized that the court must consider the entire patent document, including its aim.[41]

4.3.4 Madey v. Duke ruling in American patent law

[39] Monsanto Co. v. Stauffer Chemical Co. (1985) RPC15, referenced in Jaenichen, H-R and Pitz, J. (2015)
[40] Monsanto Co. v. Stauffner Chemical Co.
[41] Auchinloss v Agricultural & Veterinary Supplies Ltd [1999] RPC 397, referenced in ALRC Report 99 (13)

In the case of Madey v. Duke, US Federal Court found that Duke University had infringed on the patent rights of Madey by conducting research on Madey's laser invention without its consent.[42] The Court stated that although no statutory research exception provision exists within US patent law, a "truly narrow" exception exists in regard to experimental activities developed by case law.[43] The Court found that in the case of Madley v. Duke, "any use which has the slightest commercial implication or is in keeping with the legitimate business of the infringer" cannot qualify for the experimental use defense".[44] The Court thereby sharply narrowed the scope of the research exception rule, ultimately limiting most researcher's possibility of conducting research and innovation under the research exception rule as most research foundations rely on commercial interest.

In the aftermath of the Madey v. Duke ruling, universities and other research insitutions became increasingly reluctant to carry out research on patented inventions in their own endeavours.[45] In fact, critics of the Madey v. Duke ruling argue that "the decision effectively ends a 170-year old practice [in US case law] allowing scientists to freely borrow patented technologies for limited use in basic research that isn't aimed at commercial ventures", where universities pleaded with the US Supreme Court to overturn the decision in the belief that the ruling will hinder research on patented knowledge in American universities.[46]

Some critics of the exceptions from the patent holder's exclusive right such as the research exception rule argue, however, that patent rights do not prohibit research on inventions and thereby halter technical advancements;

> "[…] they merely add to the costs of doing research, since the researcher must pay monopoly prices in order to use the patented invention. In essence, [critics] argue that an efficient allocation of resources – which provides the appropriate level of investment incentives for all researchers – requires researchers to pay the full cost of any inputs they use. […] Thus, [critics] argue that the existence of a research exemption would have an adverse effect on innovation"[47].

However, the case of Madey v. Duke and its aftermath illustrates how single judgments and the following limitations on the freedom to operate has serious ramifications for the way in which researchers, universities and research institutes alike utilize patented inventions. Although the US legal system's reliance on case law is to an extent in contrast to the Norwegian legal system, the applicability and scope of the research exception rule within the two legal regimes is apparent. It is, however, interesting to illustrate how court decisions on the scope of the research exception rule directly effects the way in which research and innovation are affected by court decisions.

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[42] Madey V. Duke University, No. 01-1567, Federal Circuit Court of Appeals, 3 October 2002
[43] Roche Prods., Inc v. Bolar Pharm. Co., 773 F.2d 858, 863 (Fed. Cir. 1984)
[44] WIPO, Annex, pp. 16. (Ibid).
[45] Malokoff, D. (2003) "Universities ask Supreme Court to reverse patent ruling", Science 03 Jan 2003: Vol. 299, Issue 5603
[46] Ibid
[47] WIPO, Annex paragraph 60-61, cf. Gans, J. (2005)

4.3.5 Lessons from similar and contrasting case law

Case law from Norwegian, German, British and American patent systems illustrate the various ways in which the research exception rule is applied and moreover, in which ways the scope of the rule is interpreted. Although there are important variations in the way each legal system assesses the research exception rule and its scope, it is also evident that the existence of the research exception rule as a statutory provision is far more founded within European countries. To a large extent, the content and framework for applying the research exception rule within European countries such as Norway, Germany and England must be considered harmonized. However, key variations apply for the specific ways in which the scope of the research exception is applicable remains evident between the countries.

Meanwhile, the common law system in the US has in recent years narrowed the application of the research exception rule further, spiking critics to argue that recent court rulings not only hinder the advancement of research on patented invention, but also "fails to recognize adequately that the purpose of the patent system include facilitating research into the patented subject matter by persons other than the patent holder" and thereby undermining the patent system in itself.[48]

The next chapter aims to highlight some of the key factors relevant for determining the scope of the research exception in Norwegian patent law based on the Norwegian provision and preparatory works in light of relevant case law from European countries. By relying on the fundamental objectives of the patent system, this paper aims to highlight in which ways the research exception rule in Norway should be conceptualized in order to utilize the provision in a clearer manner, cf. the consultation memorandum.

[48] Sampson, T. (2004)

5 Discussion

The Norwegian Patents Act § 3, section 3, no. 3 explicitly allows for the use of patented inventions in privileged experiments without consent from the patent holder under the terms that the experiment is conducted on the subject matter of the invention. However, the provision gives limited guidance on the specific scope of the rule. So how can actors in the patent system utilize the research exception rule if it is unclear? How do actors know when their research is covered by the provision and can continue their research without fear of legal disputes? When is the specific research conducted privileged under the research exception rule pursuant to the Norwegian Patents Act § 3, section 3, no. 3? These questions warrant whether the current provision should be clarified in order for actors to utilize the research exception rule more consistently. Guidelines for the specific scope of the research exception rule, which is laid out in recent court decisions, can be useful to clarify the content and scope of the research exception rule.

One of these recent court decisions is the SINTEF judgment. The precedential value of the SINTEF judgment for establishing the scope of the research exception rule is, however, limited as the SINTEF judgment is the result of a unique case of a specific decision in part on the research exception rule, and part contributory infringement. On the other hand, the Norwegian Supreme Court clearly specified in the SINTEF judgment that the commercial interests in research conducted is not relevant for the applicability of the exception rule as long as the experiment or research is, by closer interpretation, considered a privileged experiment conducted in order to obtain new knowledge. In other words, the purpose of the research is key for establishing the scope of the rule.

Although the ruling in the SINTEF judgment has limited clarity as to the scope of the research exception rule in general, several recent court decisions in European case law illustrates clearer guidelines on establishing the scope of the research exception rule. These judgments give guidance on how actors within the patent system can utilize the research exception rule in general. These guidelines will be examined further in this chapter, and present an answer to this thesis' research question, namely;

> *Should the research exception rule in the Norwegian Patents Act be clarified in order to achieve the fundamental goals of patent law in advancing knowledge, and if so, in which ways should the rule be clarified?*

Under each guideline, a section is used to debate whether or not the suggested guideline should be incorporated into the Norwegian Patents Act § 3, section 3, no. 3.

5.1 The purpose of the research

It follows from the Norwegian Patents Act § 3, section 3, no. 3 that "[t]he exclusive right shall not include […] exploitation by experiment relating to the subject matter of the invention". In its natural

meaning the term «experiment» can be interpreted as scientific experiments, typically within laboratories. In other words, the term can naturally be interpreted as limited to “experiments” in the traditional sense of the word. However, it is clear from coherent case law that the term “experiment” is not limited to laboratory activity. In fact, the Supreme Court clearly established a broad interpretation of the term in the SINTEF judgment, as well as the German Federal Court of Justice which in the Klinische Versuche I-judgment concluding that the term “experiment” also includes trials, research, tests and other various activities as long as its aim is to gain knowledge about the subject matter of the invention.

Notwithstanding, the experiment or research must be interpreted in regard to its purpose. This is the crux of the assessment when determining whether the specific experiment conducted is applicable under the research exception rule. If the activity performed is to be considered conducted in order to achieve knowledge about the invention, in determining or verifying the properties of the invention, determining the scope of a claim related to the patented invention, testing modifications or improvements to the invention, determining the validity of the patent or of a claim related to the patent, testing a hypothesis related to the invention, and other systematic procedure aimed at obtaining new knowledge or information, the experiment is considered privileged, cf. Klinische Versuche I and SINTEF judgment.[49]

Thus, it is the underlying purpose behind the experiment, and not the formal or physical form the experiment takes which is of importance in establishing a general rule for the scope of the research exception rule. However, it can often be difficult to pinpoint subjective goals in complex activity such as within the business of contract research, making the conclusive task of determining an experiment’s underlying purpose often difficult. In the Klinische Versuche I judgment, the German Federal Court, nonetheless, established that a conducted experiment is still applicable under the research exception rule even though the intended purpose of the knowledge gained from the experiment is not fully in order to obtain new knowledge.[50] Interests other than new knowledge such as strategic goals, market interests and other commercial interests can be acquired as long as the experiment conducted is partly to genuinely obtain new knowledge, cf. the Monsanto-judgment.

5.1.1 Experiments conducted in part to obtain new knowledge can prevent legal disputes

The term “experiment” entails that the actors within the patent system must conduct experiments or research which at least partly is founded on the objective to obtain new knowledge about the invention, a part of the invention or a claim of the invention. In securing an effective and predictable application of the research exception rule, the specific researchers therefore need to conduct research in a conscientious manner where the purpose of the experiment appears transparent, not only for the researchers themselves, but for actors within the patent system. When utilizing the research exception

[49] WIPO Annex 29, pp. 11-13; BGH Klinische Vesuche I; Rt. 2009 s. 1665, paragraph 49
[50] BGH Klinische Vesuche I and II

rule, the risk of legal dispute could arguably be limited if experiments or research is designed in a manner which makes the objectives of the research clear.

In the SINTEF judgment, the majority and minority vote regarded the purpose of SINTEF's experiment in different manners. Whilst the majority vote found that SINTEF had researched Aquascan's invention and delivered the result of that research in order to indirectly exploit the economic value of the invention, the minority vote found that the purpose of the research conducted by SINTEF as such was viewed as developing the technology within the software program itself.[51]

Moreover, the minority argued in their dissenting opinion that SINTEF's research on Aquascan's invention was to obtain knowledge about the fish counting technology in order to develop further the knowledge and technology that Aquascan's invention was based on.[52] The central assessment in the SINTEF judgment, was however, that the majority vote regarded that SINTEF's delivery of the results of the research conducted under the research exception rule as "tools" to indirectly exploit the invention that went beyond the delivery of pure information. Thereby, the dissenting opinion in the SINTEF judgment can be viewed as the majority vote interpreting the purpose of SINTEFs research in their delivery of tools to perform the invention as something other than genuinly obtaining new knowledge, cf. the Monsanto judgment. Interestingly, and as Stenvik (2010) highlights, the Supreme Court did not, however, take into account if pure information such as algorithms or guidelines for the software program under the specific circumstances would have constituted an infringement pursuant to § 3, section 3, no. 3. This question therefore remains unclear.

Although the majority and minority vote in the SINTEF judgment represents partly contradicting opinions, the judgment clearly illustrates the complexity in dealing with the scope of the research exception rule in specific circumstances. This thesis argues that this complexity necessitates clearer guidelines for establishing a general scope of the research exception rule to clarify in specific cases if the experiment at hand constitutes an infringement or if it is considered privileged pursuant to § 3, section 3, no. 3. By identifying and interpreting the purpose of the experiment, as the majority vote primarily focuses on in the SINTEF judgment, clear and transparent factors can be established that enabled the scope of the research exception rule to be conceptualized and transferred to all instances.

5.1.2 The term "experiment" in the Norwegian Patents Act

It can be argued that the aforementioned examination of what the term "experiment" in the Norwegian Patents Act § 3, section 3, no. 3 entails is not covered within the natural meaning and interpretation of the term in the provision. Based on the conceptualization of the term through national and European case law and the suggested factors for specifying the scope of the research exception rule, it can be

[51] Rt. 2009 s. 1665, paragraph 49, 71
[52] Ibid, paragraph 71

argued that a clarification of the content of the term “experiment” in the Norwegian provision could be expedient.

Thus, a clarification within the provision that the term “experiment” shall be interpreted broadly, and that the purpose of the experiment in terms of obtaining new knowledge is the crux of the term when invoking the research exception rule, cf. the Norwegian Patents Act § 3, section 3, no. 3. Such a clarification in the provision could make the utilization of the rule more precise and in that way covers the scope of the rule in a much clearer manner, making the application of the research exception rule more effective for actors within the patent system. By extension, the objectives of the patent system in advancing knowledge through the research exception rule could more effectively be achieved with actors more confident that the experiment conducted is privileged under the provision.

It is, however, not obvious how a specific clarification of the experiment term should be devised. Furthermore, the fact that coherent case law, both in Norwegian case law through the SINTEF judgment and in the German and British case law reviewed in this thesis, clearly established a broad interpretation of the term experiment, suggests that a clarification of the term in the provision would be redundant. However, the concept of identifying and interpreting the purpose of the experiment remains a key factor for establishing the scope of the research exception rule and can be useful for understanding and utilizing the research exception rule regardless of whether the factor is codified in the Norwegian Patents Act. Establishing the purpose of the experiment is therefore argued to be one of the main factors for identifying the scope of the research exception rule in general.

5.2 Commercial interests

Following the SINTEF judgment, both the majority and minority vote clearly emphasize that experiments pursuant to the Norwegian Patents Act § 3, section 3, no. 3 are privileged regardless of whether the specific experiment is conducted with commercial intent.[53] In Norwegian patent law, it is thereby established that the provision can be applied for experiments which aim to achieve commercial interests, and therefore has no relevance for the application of the research exception rule. The same principle is emphasized in other European case law, as evident in the Monsanto judgment, as well as Klinische Versuche I and II. It can therefore be argued that the second factor relevant for conceptualizing the research exception rule is the applicability of the rule for experiments founded on commercial interests.

Although it is not expressly laid out in the Norwegian Patents Act § 3, section 3, no. 3, case law discussed in this thesis clearly substantiates that commercial interests do not exclude the application of the research exception rule. However, it is not evident if all experiments with various commercial objectives are permitted under the scope of the research exception rule. For example, the British court

[53] Rt. 2009 s. 1665, p. 45

found in the Monsanto judgment that the research exception rule could cover experiments with commercial interests, but that not all experiments with commercial interests would fall within the research exception rule. The German court, however, established a broad interpretation of the research exception rule in Klinische Versuche I, and affirmed its position in Klinische Versuche II stating that as a general rule, the pursuit of economic interests in experiments conducted does not conflict with the application of the research exception rule.[54]

The ways in which the factor of commercial interests in experiments pursuant to the research exception rule are applied in European case law, illustrates how establishing a clear interpretive factor is key to obtaining a coherent application of the rule. The ways in which the German patent system allows commercial research as opposed to some limitations in British law emphasize the importance of transparency in how to conceptualize the scope of the research exception rule in general. In line with the Supreme Court ruling in the SINTEF judgment, it seems clear that the scope of the research exception rule in terms of the factor of commercial interests is aligned with the German patent system, where a broad interpretation of the applicability of commercial interests under the rule is the predominant position.

5.2.1 Commercial interests specified in the Norwegian Patents Act

The second factor for clarifying the scope of the research exception rule, namely the factor of commercial interest, is arguably established in a clear and unambiguous manner in the SINTEF judgment. The question remains, however, whether the utilization of the research exception rule within the Norwegian patent system is served with implementing this factor explicitly in the Norwegian Patents Act.

On the one hand, it can be argued that such a clear factor which has significant impact on the scope of the rule could easily be codified into the provision. By expressly allowing experiments conducted in aim of commercial interests, the scope of the research exception rule would be much more transparent. Such a clarification of the provision could in turn make the assessment of whether a specific experiment is privileged much less complicated for actors within the patent system.

On the other hand, the concept that commercial interests do not hinder the applicability of the research exception rule is not a universal concept applicable in all instances. Although the scope of the research exception rule in Norwegian patent law must be understood as encompassing experiments with commercial intent, the concept will not necessarily apply for all experiments with various degrees of commercial intent. In each specific instance, the relevant experiment must be considered in terms of its purpose and to which extent the commercial intent affects the experiment. Therefore, a codification of the allowance of commercial intent to experiments to the Norwegian Patents Act § 3, section 3, no. 3 may be misleading, creating an impression that all commercial

[54] BGH Klinische Versuche II

research is applicable under the scope of the research exception rule, which is not necessarily the case.

Regardless of whether the allowance for commercial intent in privileged experiments is expressly added to the provision, the conceptualization of the commercial intent remains a key factor in establishing the scope of the research exception rule in general. The Supreme Court's ruling in the SINTEF judgment clearly establishes the factor, which must be viewed as harmonized with European case law. Furthermore, it should be noted that the factor of allowing commercial interests pursued in privileged experiments encompasses the development for research and innovation in the modern world. The allowance of commercial interests in privileged experiments causes the patent system to be better equipped to meet the plethora of commercially based research and educational institutions, non-governmental institutions and other joint ventures within research societies. In fact, the fundamental purpose of advancing knowledge through the patent system will realistically be easier achieved through such an admission. As Misati and Adachi (2010) emphasizes;

> "A research exception grounded upon the commercial/non-commercial distinction appears to be less workable as it has become increasingly difficult to distinguish research that is commercial and research that is non-commercial. Deciding what research falls under the exception based on the commercial/non-commercial character of the research has paved the way for courts to narrow the scope of the exception, at least in certain common law (and even some statutory) jurisdictions".[55]

As evident in the Madey v. Duke ruling, the U.S Federal Court has, arguably, breached the contract between patent holders and society which is the fundamental keystone to the patent system through its narrowing of the scope of the research exception rule. By narrowing the scope of the research exception rule to only apply for research conducted "[…] solely for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry", it remains clear that the US Federal Courts have swiftly limited the access to utilize the research exception rule. Although strictly scientific research through a narrow scope is still possible in the US patent system, it remains clear that the Madey v. Duke ruling has limited the access to research and innovation on patented inventions at least until the patent term expires after 20 years.[56]

Although the US ruling does not affect the scope of the research exception rule as applicable in European patent systems, the ruling illustrates the central role courts play in determining and evolving the scope of the research exception rule in pace with modern society. A central argument from this thesis is therefore that courts must be conscious of their role in the way the scope of the research exception rule as laid out in specific court decisions, and how their rulings can affect the way we conceptualize the scope of the research exception rule in general. Specifically, the factor of clarifying that the scope of the research exception rule in Norwegian patent law is applicable for research with commercial intent is central in order to obtain a coherent application of the rule.

[55] Misati, E. and Adachi, K. (2010) p. 7
[56] 35 U.S.C. § 154(a)(2)

5.3 Experimental acts related to the patented invention

Moreover, the scope of the research exception rule is in large part limited to relate to experiment conducted on “the subject matter of the invention”, cf. the Norwegian Patents Act § 3, section 3, no. 3. Thus, the scope of the rule only applies in instances where the experiment conducted focuses on the patented invention or into the effects of the patented invention. Exploring unknown effects of the patented invention or further developing the invention must therefore be considered to fulfill the term of conducting experiments on the “subject matter of the invention”.

However, it is not necessarily an uncomplicated task for courts, lawmakers nor actors utilizing the patent system to determine whether a specific experiment is considered to relate to the subject matter of that invention. In fact, most experiments conducted will have combined objectives in complex situations, making a clear identification of what the experiment is aimed at challenging. Thus, the term requiring experiments on the subject matter of the invention can be considered the most complicated assessment when determining whether the specific experiment at hand is privileged under the scope of the research exception rule. The specific experiment must, based on a global assessment, be considered related to the subject matter of the invention by determining specifically if the research conducted is aimed at gaining knowledge on the patented invention itself, or into the unknown effects of the invention.

From the Klinische Versuche I and II judgments, the factors for interpreting specific research as privileged have been focused on whether the scale of the experiment or research is justifiably for its aim of gaining knowledge as a key factor of relevance. If research is to be exepmt under the research exception rule, the specific circumstances for such research must be considered, etablishing that research conducted on such a large scale which is commercially operative to a large degree, should indicate that the research conducted is not on the subject matter relating to the invention. Furthermore, the Klinische Versuche I and II judgments also underline the factors of operative control and contractual agreement for the contracting part of the research as relevant when determining if the research is conducted within the subject matter of the invention and with the purpose of gaining knowledge. If the contracting party has no control of the research and its progress with limited contractual regulation of the hand over of such research results, these factors could indicate that the specific research conducted should not be deemed as privileged pursuant to the research exception rule.

5.3.1 The term of experiments relating to the subject matter in the Norwegian Patents Act

The formulation of the provision in the Norwegian Patents Act § 3, section 3, no. 3 explicitly allows for the research exception rule to apply to experiments conducted “relating to the subject matter of the invention”, which clearly indicate that the provision does not apply for research on or with the patented

invention.[57] This distinction is central when conceptualizing the scope of the research exception rule, because it entails a demarcation between privileged experiments and non-privileged experiments pursuant to the Norwegian Patents Act.

Furthermore, in the Klinische Versuche I- and II-judgments, the German court established specific factors for determining whether experiments must be interpreted as within the scope of the research exception rule by emphasizing that the scale of the experiment is of relevance. Thus, the scope of the research exception rule can be conceptualized by examining whether the specific experiment is performed on such a large scale that it is no longer justifiable under the purpose of obtaining knowledge, making the scale of the experiment relevant for determining whether there remains a relation to the subject matter of the invention[58]. The same conclusion would apply if the specific experiment was conducted using the patented subject matter merely as a tool within the scope of the experiment.[59]

These guidelines from European case law serve to offer guidelines for defining the scope of the research exception rule within the Norwegian patent system as well, which in turn contribute to a coherent and consistent application of the research exception rule in European patent law. All the while the Norwegian Patents Act § 3, section 3, no. 3 is interpreted as applying only for experiments "relating to the subject matter of the invention", there is no need for further clarification in terms of the third factor in clarifying the scope of the research exception rule. However, in applying the rule in each specific case, actors within the patent system should rely on the factors from European case law, such as scale and the underlining assessment of unreasonable exploitation of the invention when determining if their research falls within the scope of the research exception rule. It is, however, interesting to note if future case law on the scope of the research exception rule interprets the Norwegian rule to apply to experiments conducted on or with the patented invention as outlined in the WIPO report.[60]

[57] Ellingsen, E. (2013), pp. 94
[58] WIPO SCP/29/3, pp. 19
[59] Ibid
[60] Ibid

6 Conclusion

Although the research exception rule clearly allows for research to be conducted on patented inventions, legal disputes related to the scope of the rule has serious ramifications for the willingness of researchers and institutions to, in fact, utilize the research exception rule. As evident from the Madey v. Duke judgment, the way in which the legal system frames the scope of the rule, the contract of the patent system in general is at stake. If courts and provisions limit the scope of the rule insofar as the utilization of the rule becomes limited or even futile, the demand for inventions to become public knowledge with the objective to further knowledge becomes redundant. Hence, all actors in the patent system are served if the scope of the research exception rule is clear and coherent. However, the same is true if the scope of the research exception rule is applied inconsistently within Norwegian patent law.

The SINTEF judgment, although a unique case within Norwegian patent law, in many ways establishes a clear understanding of the general scope of the research exception rule in Norwegian patent law. However, the judgment - with its dissenting opinion and limited precedential value - fails to give adequate clarification on how actors within the patent system must assess the experiments conducted, and which factors are relevant for such an assessment. This thesis examines these questions and present three main factors which arguably could help establish a coherent application of the research exception rule. Through examining i) the term “experiment” in regard to the purpose of the experiment, ii) the commercial intent of the experiment, as well as to which degree iii) the experiment relates to the subject matter, a consistent application of the research exception rule can be conceptualized. This thesis conclusively highlights these three factors to emphasize possible factors for establishing the scope of the research exception rule pursuant to the Norwegian Patents Act § 3, section 3, no. 3.

Thus, this thesis claims that allowing inventors, investors and institutions alike to rely on a coherent research exception rule will incentivize the use of the rule. In doing so, the contract which is fundamental to the patent system is upheld and the aim of creating an incentive to invent, invest and commercialize is far more likely.

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