

In Defence of a UK Doctrine of Equivalents

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☞ Claim construction; Equivalence; Patents

*This article considers whether the UK Supreme Court was right in *Actavis v Eli Lilly* to introduce a doctrine of equivalents when determining the infringement of patents in the UK. *Actavis v Eli Lilly* is undoubtedly among the most significant patent cases in recent years. It has accordingly attracted considerable academic commentary, which has identified several unsatisfactory elements of the UK's formulation of the doctrine of equivalents. In this article, I argue that these ought not to detract from the force of the argument in favour of a UK doctrine of equivalents. An analysis of the UK's approach to contractual interpretation indicates that determining whether a patent is infringed and construing a patent's claims are logically distinct matters. When the underlining statutory framework is examined, a doctrine of equivalents flows logically from a thorough-going distinction between infringement and construction. I therefore argue that the Supreme Court was correct to adopt a doctrine of equivalents, regardless of the reservations some have with its current formulation.*

Introduction¹

It is frustrating when the simplest answer is not the right one. In this article, I suggest that the elegance of the approach to patent infringement expounded by the House of Lords in *Kirin-Amgen v Hoechst Marion Roussel Ltd*² belies its logical coherence, and that the Supreme Court in *Actavis v Eli Lilly*³ was right to replace it with a doctrine of equivalents when determining infringement of patents in the UK.

In the second section of this article, I argue that Lord Hoffmann's approach to patent infringement in *Kirin-Amgen* is based on a mischaracterisation of the development of the doctrine of equivalents in the UK. The third section suggests that infringement and

construction are logically distinct matters which were conflated pre-*Actavis*. In the fourth section, I argue that the best interpretation of the European Patent Convention (the EPC), and accompanying Protocol on the Interpretation of art.69 of the EPC (the Protocol), is that it requires the introduction of a doctrine of equivalents, and therefore that the Supreme Court was right to do so. In the fifth section, *Actavis* itself is examined. The second of the reformulated Protocol Questions is found to be problematic, while the US's ensnarement rule and the judicial discretion bestowed by the third question offer a possible solution.

Lord Hoffmann's approach to the development of the doctrine of equivalents in the UK

The doctrine of equivalents is the judicial practice of extending the protection conferred by a patent beyond the literal meaning of its claims to equivalent features. Lord Hoffmann's characterisation of the development of the doctrine of equivalents in *Kirin-Amgen* hinges on a case decided two decades prior.

*The case of Catnic Components Ltd v Hill & Smith Ltd*⁴

Catnic held a patent for steel lintels used in the construction of buildings. The patent's first claim stated that the lintels consisted of horizontal plates, with "a second rigid support member extending vertically".⁵ The respondents began producing similar steel lintels, and were sued by Catnic for infringing their patent.

The case was not straightforward because the respondent's lintels did not extend vertically, but rather six to eight degrees from the vertical. At first instance, Whitford J held that although the respondent's lintels were "in truth not vertical",⁶ they nonetheless had "a construction having in my mind all the essential features of claim 1".⁷ Whitford J relied upon the long-standing principle that the protection afforded by a patent extended beyond the claim's wording if the "pith and marrow"⁸ of the invention was infringed (i.e. a form of the doctrine of equivalents). On this basis, Whitford J found the respondent's lintels infringed Catnic's patent because they reproduced the pith and marrow of a lintel with a vertical support. The Court of Appeal reversed the first instance judgment, and the plaintiff appealed to the House of Lords.

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¹ I am grateful to Michal Hain and Susan Mayne for their thoughtful comments and advice. Any errors are, of course, my own.

² *Kirin-Amgen v Hoechst Marion Roussel Ltd* [2004] UKHL 46; [2005] 1 All E.R. 667.

³ *Actavis v Eli Lilly* [2017] UKSC 48; [2018] 1 All E.R. 171.

⁴ *Catnic Components Ltd v Hill & Smith Ltd* [1982] F.S.R. 60 HL.

⁵ *Catnic Components v Hill & Smith* [1982] F.S.R. 60 at 63.

⁶ *Catnic Components Ltd v Hill & Smith Ltd* [1978] F.S.R. 405 Ch D at 440.

⁷ *Catnic Components v Hill & Smith* [1978] F.S.R. 405 at 440.

⁸ *Catnic Components v Hill & Smith* [1978] F.S.R. 405 at 436 and 440. The phrase "pith and marrow" was first used by Lord Cairns in *Clark v Adie* (1877) 2 App. Cas. 315 at 320.

Lord Diplock, with whom the rest of the court agreed, held there was no distinction between “‘textual infringement’ and infringement of the ‘pith and marrow’”.⁹ Instead, their Lordships argued that claims should be construed by asking what a reasonable man skilled in the art would consider the patentee to have intended.¹⁰ This gives claims “a purposive construction rather than a purely literal one”.¹¹ Using this approach to construction, their Lordships held that the word “vertical” should be construed as “six to eight degrees from vertical”, and the judgment of Whitford J finding infringement was restored.

*The case of Improver Corp v Remington Consumer Products Ltd*¹²

Improver was heard by Hoffmann J (as he then was). The case (the facts of which are discussed in more detail in the subsection “Lord Hoffman’s consideration of art.2 in *Kirin-Amgen*” below) concerned an invention which was alleged to infringe a patent despite falling outside the literal meaning of the patent’s claims. Hoffmann J held that

“if the issue was whether a feature embodied in the alleged infringement which fell outside the primary, literal or acontextual meaning of a descriptive word or phrase in the claim (‘a variant’) was nevertheless within its language as properly interpreted, the court should ask itself the following questions . . . :

- (i) Does the variant have a material effect on the way the invention works? If yes, the variant is outside the claim. If no: –
- (ii) Would this (i.e.: that the variant had no material effect) have been obvious at the date of the publication of the patent to a reader skilled in the art? If no, the variant is outside the claim. If yes: –
- (iii) Would the reader skilled in the art nevertheless have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention? If yes, the variant is outside the claim.”¹³

Hoffmann J thus unpacked Lord Diplock’s single-step analysis in *Catnic* into what would become known as the “Protocol Questions”.¹⁴ The questions permit a limited notion that a variant not included in the “primary meaning”¹⁵ of a claim may infringe it. This perhaps approaches a doctrine of equivalents—although it must nonetheless be possible to construe the claim purposively to include the variant.

The case of Kirin-Amgen v Hoechst Marion Roussel Ltd

As in *Catnic*, the respondent’s invention in *Kirin Amgen* was alleged to be an infringing variant of the claimant’s patent. In the House of Lords, Lord Hoffmann gave the only reasoned judgment. He contended that, pre-*Catnic*, claims were construed according to their literal, a-contextual meaning.¹⁶ However, according to their Lordships, the courts were frustrated at the constraints of thoroughgoing literalism, which permitted respondents to evade infringement by making immaterial variations to a claimed invention.¹⁷ Lord Hoffmann argued that, faced with the inequity of a-contextual literalism, there were two options:

“One is to adhere to literalism in construing the claims and evolve a doctrine which supplements the claims by extending protection to equivalents. That is what the Americans have done.¹⁸ The other is to abandon literalism. That is what the House of Lords did in the *Catnic* case.”¹⁹

The Protocol (discussed further in the section “Article 69 EPC and the Protocol” below) requires that courts balance “a fair protection for the patent proprietor with a reasonable degree of legal certainty for third parties”.²⁰ Lord Hoffmann argued that the purposive approach to construction in *Catnic* achieves this balance because it avoids pre-*Catnic* literalism which was unfair to patentees, yet also avoids the doctrine of equivalents, which he argued gave rise to uncertainty for third parties.²¹ The purposive approach is itself a kind of literalism, in that it confines the protection a patent affords to the meaning of its claims. However, Lord Hoffmann argued that because this departs from the a-contextual literalism which existed pre-*Catnic*, it introduced the protection for patentees required by the Protocol.²²

⁹ *Catnic Components v Hill & Smith* [1982] F.S.R. 60 at 65.

¹⁰ *Catnic Components v Hill & Smith* [1982] F.S.R. 60 at 61.

¹¹ *Catnic Components v Hill & Smith* [1982] F.S.R. 60 at 61.

¹² *Improver Corp v Remington Consumer Products Ltd* [1990] F.S.R. 181 Ch D.

¹³ *Improver v Remington* [1990] F.S.R. 181 at 182.

¹⁴ Christened in *Wheatley v Drillsafe* [2001] R.P.C 7 CA (Civ Div) at 23.

¹⁵ *Wheatley v Drillsafe* [2001] R.P.C 7 at 23.

¹⁶ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [27]–[28].

¹⁷ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [41].

¹⁸ The US has recognised a doctrine of equivalents since at least 1853 (*Winans v Denmead* 56 U.S. 330).

¹⁹ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [42].

²⁰ Protocol art.1 (as amended).

²¹ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [39].

²² *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [45]–[48].

Lord Hoffmann's characterisation of the law pre-*Catnic* was doubted by Sir Hugh Laddie, in his influential case comment, "*Kirin Amgen – the end of equivalents in England?*"²³ Through a tour of English patent law history, Sir Hugh establishes that, pre-*Catnic*, claims had typically been construed contextually, often by referring to the patent's specification. Sir Hugh demonstrates that Lord Hoffmann's contention that *Catnic* acted to correct the balance required by the Protocol was incorrect. There is no need to reiterate Sir Hugh's argument—although his point is well illustrated by the first instance judgment in *Catnic* itself.

Catnic at first instance

Lord Hoffmann contended that, pre-*Catnic*, the pith and marrow rule was applied as a last resort when a-contextual literalism proved unfair to the patentee.²⁴ Whitford J's judgment, however, suggests otherwise. He noted that *Catnic*'s patent described an element of its lintel as "inclined" when it was "only inclined at an angle of about 13 degrees".²⁵ It was therefore difficult, in the context of the invention as a whole, for Whitford J to find that "vertical" could mean six to eight degrees from the vertical, but that "inclined" could mean an angle of as little as 13 degrees. The judge reaches this conclusion having considered the claims in the context of the specification.²⁶ He was not shoehorned into the pith and marrow rule out of despair because "vertical" literally meant, as an isolated, atomised word, "90 degrees from horizontal". He applied the rule because, reading the claims and specification together, it was not possible for "vertical" to refer six to eight degrees from the vertical and "inclined" to refer to 13 degrees from the vertical.²⁷

Whitford J states the law regarding patent infringement as he understands it, quoting Lord Reid's remarks in *Rodi & Wienenberger AG v Henry Showell Ltd*²⁸ that

"claims are not addressed to conveyancers: they are addressed to practical men skilled in the prior art, and I do not think they ought to be construed with that meticulousness which was once thought appropriate for conveyancing documents".²⁹

Rather than a-contextual literalism, the law pre-*Catnic* was focused on interpreting the claims as they would be understood by the reader skilled in the art, in the context of the specification and the invention as a whole. Stated like this, it is difficult to distinguish between Whitford J's approach to claim construction and Lord Diplock's approach, save that Lord Diplock eschewed the pith and marrow rule.

Lord Hoffmann therefore erred by suggesting in *Kirin-Amgen* that pre-*Catnic* courts would "treat the words of the claim as having meanings 'in themselves'".³⁰ On the contrary, pre-*Catnic* law, with its contextual construction supplemented by the pith and marrow rule, was more generous to the patentee than post-*Catnic* law, which offered contextual construction alone. Lord Hoffmann thus mischaracterises the purposive approach when he portrays it as an alternative option to the doctrine of equivalents to balance the rights of the patentee with the need for certainty for third parties.³¹ In Sir Hugh's words, "[f]ar from giving both the patentee and the public something, [*Kirin-Amgen*] gives the patentee nothing".³² The significance of this in the context of the Protocol is discussed in the subsection "The pith and marrow rule returns" below.

The distinction between construction and infringement

The judgment in *Actavis* is foreshadowed by Neuberger J's first instance decision in *Kirin-Amgen*, to the extent that Lord Neuberger (as he became) appears to quote from his first instance judgment.³³ Indeed, one observation of Neuberger J's in *Kirin-Amgen* holds the key to understanding his later claim in *Actavis* that "to characterise the issue [of infringement] as a single question of interpretation is wrong in principle".³⁴

Construction as a point of law

In *Kirin-Amgen*, Neuberger J argued that, as "a matter of principle, questions of construction of a claim in a patent, and questions of infringement of that claim are separate".³⁵ In *Glaverbel v British Coal*³⁶ the Court of Appeal had set out seven propositions regarding Lord Diplock's approach to claim construction as described in *Catnic* "which were common ground".³⁷ The first of these was "[t]he

²³ Sir Hugh Laddie, "*Kirin Amgen – the end of equivalents in England?*" (2009) 40 I.I.C. 3, referenced approvingly by Lord Neuberger in *Actavis v Eli Lilly* [2017] UKSC 48; [2018] 1 All E.R. 171 at [57].

²⁴ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [29].

²⁵ *Catnic Components v Hill & Smith* [1978] F.S.R. 405 at 435.

²⁶ *Catnic Components v Hill & Smith* [1978] F.S.R. 405 at 435.

²⁷ *Catnic Components v Hill & Smith* [1978] F.S.R. 405 at 435.

²⁸ *Rodi & Wienenberger AG v Henry Showell Ltd* [1969] F.S.R. 100 HL.

²⁹ *Rodi & Wienenberger v Henry Showell* [1969] F.S.R. 100 at 104.

³⁰ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [29].

³¹ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [42].

³² Laddie, "*Kirin Amgen – the end of equivalents in England?*" (2009) 40 I.I.C. 3, 32.

³³ G. Harris, "*Actavis v Eli Lilly – should we have seen it coming?*" (2017) 46 C.I.P.A.J. 29, 35.

³⁴ *Actavis v Eli Lilly* [2017] UKSC 48; [2018] 1 All E.R. 171 at [55].

³⁵ *Kirin-Amgen* [2002] R.P.C. 1 at 56.

³⁶ *Glaverbel v British Coal* [1995] F.S.R. 254 CA (Civ Div).

³⁷ *Glaverbel v British Coal* [1995] F.S.R. 254 at 263.

interpretation of a patent, as of any other written document, is a question of law”.³⁸ Neuberger J quoted this proposition in *Kirin-Amgen*, adding that, as a point of law, “the question of construction itself is not a matter for evidence”.³⁹ It was on this basis that Neuberger J treated infringement and construction as separate questions in *Kirin-Amgen*.⁴⁰ The development of the law regarding the interpretation of contracts lends weight to this approach.

The case of Wood v Capita Insurance Services Ltd⁴¹

The Supreme Court has given recent guidance in *Wood* regarding contractual interpretation. Their Lordships held that:

“Some agreements may be successfully interpreted principally by textual analysis, for example because of their sophistication and complexity and because they have been negotiated and prepared with the assistance of skilled professionals. The correct interpretation of other contracts may be achieved by a greater emphasis on the factual matrix, for example because of their informality, brevity or the absence of skilled professional assistance.”⁴²

While the courts could take different approaches to the construction of patent claims and contractual terms, consistency is preferable. There is no reason why a patent claim should be interpreted differently from a contract. One justification often given is that whereas a contract is between two parties, a patent announces the patentee’s legal monopoly to the world.⁴³ However, unilateral contractual offers which may be made to the world are construed in the same manner as offers made to specified individuals. Moreover, where the law regarding the construction of contracts and construction of patent claims diverges there is a risk that one will cross-contaminate the other.⁴⁴ It is therefore submitted that the principles governing the construction of patent claims should, as far as possible, align with those regarding the construction of contractual terms.

Neuberger J’s claim in *Kirin-Amgen* that construction is not a matter for evidence appears inconsistent with the Supreme Court’s approach in *Wood*, where the factual matrix remains an important part of interpreting agreements. However, an examination of the consideration of infringement in *Improver* reveals that, following the logic of *Wood*, infringement should be treated separately from construction.

The consideration of infringement in Improver

In *Improver*, the plaintiffs held a patent for a device called an “Epilady”, which removed hair. The patent’s first claim was for “[a]n electrically powered depilatory device comprising ... a helical spring”.⁴⁵ The defendants sold a device which operated like an Epilady but replaced a spring with a slitted rubber rod. The plaintiffs sued the defendants for infringement of their patent, and Hoffmann J considered whether a “helical spring” should be construed as a “slitted rubber rod”.

The question of infringement in *Improver*, in Hoffmann J’s words, “turn[ed] upon a short but undoubtedly difficult point of construction, namely whether the rubber rod is a ‘helical spring’”.⁴⁶ Intuitively, “helical spring” does not mean “rubber rod”. To hold that it could stretch the term “helical spring” beyond what it sensibly means. Indeed, Hoffmann J held that “helical spring” did not, in the context of *Improver*’s patent, mean “rubber rod”; although he did so after applying the Protocol Questions. Because “helical spring” does not mean “rubber rod”, if the question of infringement is truly one of construction, there is *ipso facto* no infringement, and therefore no need for the Protocol Questions. Applying the Protocol Questions to assess infringement, rather than dismissing the notion outright, suggests that Hoffmann J was not concerned with “a difficult point of construction” but with a different matter altogether.

The distinction between infringement and construction

Hoffmann J relied extensively in *Improver* on expert evidence to ascertain the material effect of the invention.⁴⁷ He similarly relied on expert evidence as to the knowledge of the reader skilled in the art at the date of the publication of the patent.⁴⁸ This is unsurprising, because the Protocol Questions concern matters which cannot be answered without evidence.

There are two reasons why the process of answering the Protocol Questions is distinct from the approach to construction described in *Wood*. First, while the “factual matrix” can be an important part of interpretation in *Wood*, evidence is necessary to answer the Protocol Questions. In other words, evidence is a necessary part of assessing infringement, whereas it is not necessary to consider evidence when construing terms, although evidence may sometimes be important. The Protocol Questions are therefore *about* the factual matrix, whereas the interpretation of contractual terms is merely *informed*

³⁸ *Glaverbel v British Coal* [1995] F.S.R. 254 at 263.

³⁹ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [56].

⁴⁰ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [162]–[163].

⁴¹ *Wood v Capita Insurance Services Ltd* [2017] UKSC 24; [2017] A.C. 1173.

⁴² *Wood v Capita* [2017] UKSC 24; [2017] A.C. 1173 at [14].

⁴³ For example, by Arnold J in *Generics (UK) Ltd v Yeda Research and Development Co Ltd* [2017] EWHC 2629 (Pat); [2018] R.P.C. 2 at [138].

⁴⁴ As argued by Lord Neuberger in *Actavis v Eli Lilly* [2017] UKSC 48; [2018] 1 All E.R. 171 at [56].

⁴⁵ *Improver v Remington* [1990] F.S.R. 181 at 187.

⁴⁶ *Improver v Remington* [1990] F.S.R. 181 at 188.

⁴⁷ *Improver v Remington* [1990] F.S.R. 181 at 191–192.

⁴⁸ *Improver v Remington* [1990] F.S.R. 181 at 192–193.

by the factual matrix. Secondly, reliance on the “factual matrix” is considered in *Wood* to be most appropriate when agreements are informal, whereas sophisticated terms drafted by legal professionals can generally be construed without reference to external evidence. Patent claims clearly fall into the latter category, and by the logic of *Wood*, the construction of a patent claim is unlikely to require reference to evidence. Infringement, however, is directly concerned with the factual matrix concerning both the variant and the invention. If the principles regarding construction in *Wood* are applied to patent claims, infringement should therefore be treated separately from construction.

Lord Hoffmann’s and Lord Diplock’s proposition that the protection a patent affords is contained squarely within its claims is straightforward. It oversimplifies the matter, however, by merging the logically distinct questions of construction and infringement. Neuberger J grasped this in *Kirin-Amgen*, although bound as he was by precedent, he could do little more than indicate his discomfort. In *Actavis*, he was free from such restriction, and the judgment has thus fittingly been described as “Neuberger’s revenge”.⁴⁹

Article 69 EPC and the Protocol

The UK is a signatory to the EPC. According to its Preamble, the EPC aims to create a consistent approach to patents among EPC states “by the establishment of certain standard rules governing patents”. The growing likelihood of a Unified Patent Court makes it increasingly important for EPC states to develop a more harmonised approach to patent infringement. Improving convergence between EPC states should be an overriding concern of the courts. The most effective way to achieve this is to ensure both the letter and spirit of the EPC are expressed in UK law.

The balance the Protocol requires

Catnic concerned a patent governed by the Patents Act 1949, whereas in *Improver* the relevant statute was the Patents Act 1977, which incorporated certain terms of the EPC into UK law, among them, art.69 of the EPC.⁵⁰ Article 69 provides that the scope of a patent’s protection is determined by “the terms of the claims”. The Protocol gives further guidance. It stated (prior to amendment) that “the extent of the protection conferred by a European patent is [not] to be understood as that defined by the strict, literal meaning of the wording used in the claims” (the a-contextual literalism perceived to be the UK’s approach to construction). Nor should art.69 be construed to mean that “the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description

and drawings by a person skilled in the art, the patentee has contemplated” (the perceived German practice of treating the claims merely as the *Ausgangspunkt*, or “starting point”). Instead, the Protocol continues, art.69 EPC “is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of certainty for third parties”. Described shortly after publication as a “masterpiece of ambiguity”,⁵¹ the Protocol leaves unenviable discretion to national courts to balance literalism on the one hand with uncertainty on the other.

Although the EPC was not considered in *Catnic*, Hoffmann J held that Lord Diplock’s purposive approach was consistent with art.69 and the Protocol. Under the EPC as before, “the question is always whether the alleged infringement is covered by the language of the claim”.⁵² Lord Hoffmann would later argue in *Kirin-Amgen* that this was consistent with the Protocol, because a-contextual literalism was replaced with contextual literalism. As suggested in the section “The distinction between construction and infringement” above, this mischaracterises the law pre-*Catnic* and, as such, Lord Hoffmann’s approach is not a compromise position, but decisively favours legal certainty over protecting patentees. In this way, UK law pre-*Actavis* was inconsistent with the Protocol.

Article 2 of the Protocol

The Protocol was amended in 2000. The most major change was the introduction of a new art.2, which reads:

“For the purpose of determining the extent of protection conferred by a European patent, due account shall be taken of any element which is equivalent to an element specified in the claims.”

The motivation behind the amendment was explained by the Basic Proposal for the Revision of the EPC, submitted to the Munich Diplomatic Conference held in November 2000, which states:

“Article 69 EPC and the Protocol on its interpretation, have turned out not to achieve, to the extent desired, the goal of ensuring as uniform an application and interpretation as possible. In particular, this is the case regarding the treatment of so-called equivalents”

A doctrine of equivalents was recognised by EPC states such as Germany, France and the Netherlands, and art.2 was intended to ensure that the UK introduced its own doctrine of equivalents. At the time, the UK delegation to the Munich Diplomatic Conference published comments stating that art.2 involved “a radical change to the legal position in the United Kingdom ... [because]

⁴⁹ Attributed to the President of the Swiss Federal Patent Court by Professor Sir Robin Jacob in “Equivalents: K=Na. Is the genie out of the bottle?”, a panel discussion hosted by UCL (1 November 2017).

⁵⁰ Patents Act 1977 ss.60 and 130(7).

⁵¹ I.C. Baillie, “Where goes Europe? The European Patent” (1976) 58 J.P.T.O.S. 153, 167.

⁵² *Improver v Remington* [1990] F.S.R. 181 at 189.

UK law did not adopt the classical doctrine of equivalents⁵³. When it was first drafted, art.2 was therefore understood to require a doctrine of equivalents.

Lord Hoffmann's consideration of art.2 in Kirin-Amgen

Although art.2 was not yet in force in *Kirin-Amgen*, it is referenced in the judgment.⁵⁴ Lord Hoffmann pre-empted suggestions in *Kirin-Amgen* that his approach to infringement was inconsistent with art.2 by stating that “there is no reason why [equivalence] cannot be an important part of the background of facts known to the skilled man which would affect what he understood the claims to mean”.⁵⁵ This twists the meaning of art.2 to something rather nebulous: requiring the courts to consider alternative interpretations of a term in the claims. While it is unfortunate that art.2 was not more clearly drafted, its intended effect was to introduce a doctrine of equivalents and alternative interpretations feel strained.

Article 2 requires equivalents to be considered for the purposes of determining the protection conferred by a patent (i.e. infringement), whereas Lord Hoffmann proposes to consider equivalents when determining what the claims mean. This is no problem to Lord Hoffmann's mind because he argues that infringement is determined entirely by construction. As has been suggested in the section “Article 69 EPC and the Protocol” above, however, construction and infringement ought to be treated as logically distinct questions. If they are, then Lord Hoffmann's interpretation of art.2 takes no account of equivalents for the purposes of determining the protection a patent affords: it only takes account of equivalents when assessing construction. When infringement and construction are not conflated, art.2 requires the court to take account of elements equivalent to the terms of the claims when assessing the protection a patent affords. Article 2 leaves “equivalent” undefined, and creative interpretations can always evade its straightforward meaning. However, the natural interpretation of extending the protection a patent confers to features which are deemed equivalent is a doctrine of equivalents. In other words, if infringement and construction are treated as distinct, the best interpretation of art.2 is that it requires a doctrine of equivalents.

This was art.2's intended effect, and brings the UK into line with the approach in other important EPC states including Germany, France and the Netherlands, which currently all recognise their own versions of the doctrine of equivalents. There is therefore no need to consider whether the doctrine of equivalents is the most effective method of balancing, in the words of the amended Protocol, “a fair protection for the patent proprietor with

a reasonable degree of legal certainty for third parties”. The best interpretation of art.2 is that it requires the UK to implement a doctrine of equivalents, and it presumes that to do so is fair. UK courts must strike the balance the Protocol requires, but within the confines of the doctrine of equivalents.

The doctrine of equivalents in *Actavis*

The law pre-*Actavis* was based on a mischaracterisation of the history of patent interpretation and conflated the issues of infringement and construction. By favouring certainty over patentees' rights and by not recognising a doctrine of equivalents the law was also inconsistent with a sensible interpretation of the Protocol. The Supreme Court in *Actavis* was therefore right to introduce a doctrine of equivalents into UK law—but the form of the doctrine of equivalents adopted is not without difficulties.

The pith and marrow rule returns

In the Supreme Court, Lord Neuberger (as he had become) delivered the unanimous judgment. Their Lordships considered, among other things, whether the *Actavis* products directly infringed Eli Lilly's patent. Infringement depended upon whether the references to “pemetrexed disodium” in Eli Lilly's patent⁵⁶ should be construed to include the other pemetrexed compounds in *Actavis*' products.⁵⁷ After reviewing *Catnic*, *Improver* and *Kirin-Amgen*,⁵⁸ Lord Neuberger explained the updated position regarding infringement claims:

“[A] problem of infringement is best approached by addressing two issues, each of which is to be considered through the eyes of the notional addressee of the patent in suit, ie the person skilled in the relevant art. Those issues are: (i) does the patent infringe any of the claims as a matter of normal interpretation; and, if not, (ii) does the variant nonetheless infringe because it varies from the invention in a way or ways which is or are immaterial?”⁵⁹

The law has therefore returned to its pre-*Catnic* position where textual infringement and infringement of the “pith and marrow” were treated as distinct. The assessment of whether variants infringe is now no longer a matter of construction, and the protection afforded by a patent may thus extend beyond the meaning of the words in its claims. In other words, the UK once more has a doctrine of equivalents.

⁵³ Quoted from Harris, “*Actavis v Eli Lilly – should we have seen it coming?*” (2017) 46 C.I.P.A.J. 29, 36. The comments concerned an earlier draft of art.2 of the Protocol.

⁵⁴ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [49].

⁵⁵ *Kirin-Amgen* [2004] UKHL 46; [2005] 1 All E.R. 667 at [49].

⁵⁶ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [21].

⁵⁷ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [21].

⁵⁸ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [35]–[43].

⁵⁹ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [54].

The reformulated Protocol Questions

As with many legal paradigm shifts, some areas of the law which seemed clear before *Actavis* are now hazy. Much uncertainty relates to the scope of the doctrine of equivalents, such as whether it extends to novelty in validity claims,⁶⁰ or to claims with numerical limits.⁶¹ One problem, however, relates to the internal consistency of *Actavis*'s formulation of the doctrine of equivalents.

Lord Neuberger recognised that “if one departs from ordinary language, it is necessary to have some guidance”,⁶² otherwise “that would mean there was no legal certainty”.⁶³ The guidance Lord Neuberger developed for assessing equivalents draws on the Protocol Questions, which he reformulated as follows:

- “i) Notwithstanding that it is not within the literal meaning of the relevant claim(s) of the patent, does the variant achieve substantially the same result in substantially the same way as the invention, ie the inventive concept revealed by the patent?
- ii) Would it be obvious to the person skilled in the art, reading the patent at the priority date, but knowing that the variant achieves substantially the same result as the invention, that it does so in substantially the same way as the invention?
- iii) Would such a reader of the patent have concluded that the patentee nonetheless intended that strict compliance with the literal meaning of the relevant claim(s) of the patent was an essential requirement of the invention?”⁶⁴

The second of the reformulated Protocol Questions and the prior art

The second question is the most substantially altered. Previously, the Protocol Questions asked whether it was obvious to the person skilled in the art reading the patent at the date of publication that the variant had no material effect on the invention.⁶⁵ The reformulated Protocol Questions presume that the reader knows that “the variant achieves substantially the same result as the invention”,⁶⁶ asking instead whether it would be obvious that the variant achieves the same result “in substantially the same way as the invention”.⁶⁷

The scope of a patent's protection is therefore liable to widen over time as the ever-increasing knowledge of the person skilled in the art makes variants more likely to be obvious. This leads to some practical difficulties in

that the changing scope of the second of the reformulated Protocol Questions could mean that declarations of non-infringement may subsequently become inaccurate as a variant which was previously not obvious becomes so in light of new discoveries. It may also make it harder for practitioners to reliably predict how a court will apply the reformulated Protocol Questions. Advice may have to be caveated to the extent that what courts might consider not to be “obvious” today may subsequently become obvious because of discoveries which are as yet unknown. More importantly, however, it is conceivable that a prior art embodiment which was not obvious at the priority date later becomes obvious and therefore constitutes an infringement pursuant to the doctrine of equivalents. This goes to the heart of the function of a patent: to create a monopoly for an inventive concept. If a patent can be infringed by a prior art embodiment, the monopoly protected is not truly inventive. The second of the reformulated Protocol Questions may therefore erode the fundamental purpose of a patent.

The ensnarement rule and the third of the reformulated Protocol Questions

The third of the reformulated Protocol Questions is the least altered from the position in *Improver*. The court retains wide discretion to determine when the reader skilled in the art would hold that strict compliance with the literal meaning of the relevant claim was intended by the patentee.⁶⁸ US courts have adopted the “ensnarement rule”, which is the principle that the doctrine of equivalents cannot extend to variants which form part of the prior art.⁶⁹ If it is held that the person skilled in the art reading the patent would naturally presume that claims were not intended to extend to prior art embodiments, then the ensnarement rule could be imported into the UK via the third of the reformulated Protocol Questions. This would prevent the second of the reformulated Protocol Questions from expanding the scope of protection conferred by a patent to prior art embodiments, and thus ensures that only inventive concepts are protected by patents. Incidentally, introducing the ensnarement rule would also mean that the doctrine of equivalents does not apply to considerations of novelty when assessing the validity of a patent.

Conclusion

The US ensnarement rule could remedy difficulties with the second of the reformulated Protocol Questions. Indeed, other jurisdictions' treatment of the doctrine of equivalents is likely to be fertile ground for inspiration

⁶⁰ Considered by Arnold J in *Generics v Yeda Research and Development* [2017] EWHC 2629 (Pat); [2018] R.P.C. 2.

⁶¹ A question which was to be considered by the Supreme Court in *Smith & Nephew v Convatec* [2012] EWCA Civ 1638 had the case not settled.

⁶² *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [53].

⁶³ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [53].

⁶⁴ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [66].

⁶⁵ *Improver v Remington* [1990] F.S.R. 181 at 182.

⁶⁶ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [66].

⁶⁷ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [66].

⁶⁸ *Actavis* [2017] UKSC 48; [2018] 1 All E.R. 171 at [66].

⁶⁹ *Wilson Sporting Goods v David Geoffrey & Associates* 904 F. 2d 677 (Fed. Cir. 1990).

as to how to fine-tune the reformulated Protocol Questions. The third question appears to offer sufficient judicial discretion to make these adjustments.

The EPC was intended to harmonise the treatment of patents across its signatories, and the UK had historically disregarded it. Pre-*Actavis*, UK law favoured legal certainty over the rights of the patentee, and was therefore inconsistent with the Protocol. Contrary to Lord Diplock's approach in *Catnic*, the development of UK law regarding

the interpretation of contracts suggests strongly that construction and infringement are logically distinct. The straightforward reading of art.2 of the Protocol was always that it required a doctrine of equivalents. When art.2 of the Protocol is considered in light of the distinction between construction and infringement, any other interpretation is difficult to sustain. The Supreme Court therefore had little choice but to introduce one in *Actavis*.