#### ARTICLE

# Comparative Perspectives on Specialised Intellectual Property Courts: Understanding Japan's Intellectual Property High Court Through the Lens of the US Federal Circuit

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#### Abstract

This article develops a comparative analysis of specialised courts in intellectual property across both Japan and the US. This article considers the IPHC through the lens of the CAFC to investigate the differing institutional impact and illuminate the most pressing issues in Japanese patent law that have emerged as a result of transplanting this specialised court. Rather than a more conventional analysis of the implementation of these institutions, this article focuses instead on a comparative investigation of the soft law elements that have significantly influenced their effectiveness, providing a different insight on the relationship between these institutions and their broader contextual impact.

The main findings of the comparative analysis are found in two primary areas – the impact of specialised courts on the consistency and reliability of patent law; and secondly, recommendations regarding the potential reform of Japanese patent law as it relates to the role of the IPHC. In terms of reform, this article analyzes the double-track problem in Japanese patent law and the key role that, with some modification to the court/patent office relationship, the IPHC could play in addressing this issue with a more fundamental realignment of patent law with its Continental history.

## **Economic Recovery and Intellectual Property**

Japan and the US are particularly important jurisdictions in international intellectual property because of the policy shifts that occurred as a direct response to economic challenges – as well as their increasingly complex trade relationship through the 1980s<sup>1</sup> – that eventually led both countries to establish specialised courts to deal with intellectual property disputes. The US, through the reforms initiated under the Reagan administration, became strongly aligned with a 'pro-patent' approach to intellectual property, while Japan in the early 2000s underwent a transformation to become an 'IP-based nation' to empower its innovative communities and promote the patenting of technology.<sup>2</sup> These shifts in national policy occurred in an international legal climate that was increasingly promoting harmonisation initiatives, many of which for Japan and the US in particular, were built on a complex web of bilateral projects that originally emerged as a response to trade tensions between the two countries in the 1990s.<sup>3</sup>

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<sup>&</sup>lt;sup>1</sup>Takatoshi Ito & Takeo Hoshi, The Japanese Economy (MIT Press 2020) 490.

<sup>&</sup>lt;sup>2</sup>Yoshiyuki Tamura, 'IP-based Nation: Strategy of Japan', in Frederick M Abbott, Carlos M Correa & Peter Drahos (eds), *Emerging Markets and the World Patent Order* (Edward Elgar 2013) 371.

<sup>&</sup>lt;sup>3</sup>Ove Granstrand, 'Innovation and Intellectual Property Rights', in Jan Fagerberg, David C Mowery & Richard R Nelson (eds), *The Oxford Handbook of Innovation* (Oxford University Press 2005) 273.

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While the intellectual property-focused reforms enacted by the Japanese Koizumi government were an explicit attempt at emulating the success of the US, the differences in soft law dynamics resulted in a substantial disconnect between the two regimes. It is from this perspective that the US provides an important model for developing increasingly specialised dispute resolution fora in a global context, demonstrating that an institutional transplant is not enough to provide a framework that realises a strengthened system of intellectual property rights.

Countries across the world are incorporating specialised courts for intellectual property rights – and, even within this, sometimes narrowing this to just the consideration of patent rights – in a manner that follows a broader trend of specialisation in many legal disciplines. As such, an analysis of the US and Japan experiences of specialisation in intellectual property provides an excellent example of how to address or moderate not just the hierarchical institutional dynamics, but also how changes and trends in legal education can be used to increase the effectiveness of legal reform, and provide guidance for jurisdictions that are looking to introduce their own specialisation.

This paper presents a comparative analysis of the development and implementation of the Court of Appeals for the Federal Circuit (CAFC) in the US with the Intellectual Property High Court (IPHC) in Japan, focusing first on the political and economic context of both countries that led to the national emphasis on intellectual property rights. Analyzing the relationship between Japan and the US also provides a broader lesson for the international development of intellectual property rights, given the sometimes-difficult interactions that shaped their trade dynamic in the 20<sup>th</sup> century and eventual reconciliation.

It highlights some potential courses of action in realising a smoother dynamic with China that could bring a greater degree of integration between China and the US. China's development in terms of intellectual property rights has seen remarkable growth in the last decade and bears similarity to the trade-focused disputes between Japan and the US in the 1980s, presenting a potential model for bilateral negotiations moving forward as a way of deescalating the increasing tension between the two countries.

Part II analyzes the legal reforms in intellectual property that were implemented by the Koizumi government and elements of the Japanese-specific legal environment that distinguished the reforms from the original US ones. Part III considers the development and implementation of the CAFC, with the second half focusing on the interactions between the US Supreme Court and the CAFC.

## Japan and the birth of an 'IP-Based Nation'

## Creating the Intellectual Property High Court in Japan

## Prime Minister Koizumi and legal reform

The national shift in policy towards intellectual property began, in its modern sense,<sup>4</sup> with Prime Minister Koizumi's address to the Diet and subsequent policy outline in 2002.<sup>5</sup> This emphasis on intellectual property rights as intangible assets presented a stark contrast with the areas in which Japan had typically held a significant international advantage such as manufacturing and production.<sup>6</sup> Prime Minister Koizumi's project of reorienting Japan towards intellectual and informational products instead of traditional manufacturing was a strong response to both the economic struggles

<sup>&</sup>lt;sup>4</sup>Japan has a long history of intellectual property and intellectual property-like systems that have been prominent throughout the centuries (and not, in fact, a recent development of the 1980s and 1990s): Christopher Heath, 'Inventive Activity, Intellectual Property, and Industrial Policy', in Wilhelm Röhl (ed), *History of Law in Japan Since 1868* (Brill 2005) 414.

<sup>&</sup>lt;sup>5</sup>Covering the response to Prime Minister Junichiro Koizumi's address to the National Diet regarding the protection of intellectual property rights, February 2002: Shigenori Matsui, 'The Intellectual Property High Court of Japan', in Andrew Harding & Penelope Nicholson (eds), *New Courts in Asia* (Routledge 2010) 86.

<sup>&</sup>lt;sup>6</sup>The decrease in the competitiveness of Japanese manufacturing in East Asia has been a general trend, though it is particularly prominent in the context of computer-related products: PK Wong, 'Globalisation of Electronics Production Networks and the Emerging Roles and Strategies of Singapore Contract Manufacturers', in H Horaguchi & K Shimokawa

of Japan in the 1990s and the rapid development of nearby East Asian economies<sup>7</sup> – in particular, the rapid growth and expansion of China and the technological advancement that has come to define South Korea's international contributions.<sup>8</sup> Japan had already struggled with manufacturing competitiveness in relation to China, particularly in the context of displays, where the higher wages of Japanese workers meant that Chinese manufacturers could be more competitive in their pricing.<sup>9</sup> The biggest shift during the Koizumi government was one that reflected the broader economic reality of a globalised marketplace and a mirroring of the Chinese manufacturing concerns of the 1980s – instead of a strategy that focused on creating innovations that could not be easily replicated in a low-wage environment to retain competitiveness against a single, geographically proximate country, Japan was beginning to contend with a range of countries in which manufacturing could be outsourced to. This, coupled with the successful economic recovery in the US and reversal of the 1980s decline, meant that Japan faced pressure from multiple macroeconomic perspectives.

The shift towards Japan as a nation built on intellectual property was an attempt at reversing the economic decline that came to define the 1990s in Japan,<sup>10</sup> contrasting significantly with the post-war 'economic miracle' of Japan that culminated in the stagflation of the 1990s post-economic bubble.<sup>11</sup> The bursting of the economic bubble in 1990s Japan had a serious negative impact on its businesses and industries specifically because it restricted the ability of companies to invest in manufacturing facilities and production.<sup>12</sup> The sharp economic deterioration was particularly acute in the Japanese experience because of the remarkable growth that it had consistently shown from the 1940s and onwards.<sup>13</sup>

<sup>11</sup>The post-war years under Allied occupation, as well as the redirecting in terms of scientific and engineering priorities, were the start of the Japanese 'economic miracle' in which Japan's GDP grew at a substantial and sustained rate: Bowen C Dees, *The Allied Occupation and Japan's Economic Miracle: Building the Foundations of Japanese Science and Technology,* 1945–52 (Routledge 2013) xi; the economic stagnation of the 1990s was significant because of its severity and its long-term impact: Diego Comin, 'An Exploration of the Japanese Slowdown during the 1990s', in Koichi Hamada, Anil K Kashyap & David E Weinstein (eds), *Japan's Bubble, Deflation, and Long-term Stagnation* (MIT Press 2011) 375.

<sup>12</sup>The capital-intensive nature of the manufacturing industry meant that the bursting of the economic bubble was particularly effective in reducing manufacturing investments (though deindustrialisation trends are part of all developed economies, Japan's decline in manufacturing accelerated significantly during the mid- to late-1990s: Ramana Ramaswamy, 'Identifying the Shocks: Japan's Economic Performance in the 1990s', in Tamin Bayoumi & Charles Collyns (eds), *Post-Bubble Blues: How Japan Responded to Asset Price Collapse* (IMF 2000) 83.

<sup>13</sup>The post-war recovery can be seen as continuing up until the 1992 economic troubles, though is generally further subdivided into three main post-war *phases*: Recovery (1946–1950), Rapid Growth (1950–1973), and Moderate Growth (1976– 1991) – all of which exhibited strong positive trends in terms of GDP growth, making the economic decline of the 1990s much starker by contrast: Mitsuhiko Iyoda, *Postwar Japanese Economy: Lessons of Economic Growth and the Bubble Economy* (Springer 2010) 7.

<sup>(</sup>eds), Japanese Foreign Direct Investment and the East Asian Industrial System: Case Studies from the Automobile and Electronics Industries (Springer 2013) 119.

<sup>&</sup>lt;sup>7</sup>Prime Minister Koizumi's focus was not just a specific subset of intellectual property rights, it was the entire system that was being strengthened (though important to note the emphasis on these political slogans and 'soft power' that underpin the policy shift): Béatrice Jaluzot, 'The Legal Framework of Intellectual Property Rights in Comparative Law', in Yveline Lecler, Tetsuo Yoshimoto & Takahiro Fujimoto (eds), *The Dynamics of Regional Innovation: Policy Challenges in Europe and Japan* (World Scientific 2012) 164.

<sup>&</sup>lt;sup>8</sup>On China's 'meteoric' economic growth and Japanese response to this: John Wong, Zou Keyuan & Zeng Huaqun (eds), *China-ASEAN Relations: Economic and Legal Dimensions* (World Scientific 2006) 17; also South Korea's interesting post-war economic policy that did not necessarily encourage FDI, but in the last two decades has surged: Min-Hua Chiang, *Post-Industrial Development in East Asia: Taiwan and South Korea in Comparison* (Springer 2018) 19.

<sup>&</sup>lt;sup>9</sup>Though with an important aspect of Japanese FDI in China. See Dong Dong Zhang, *China's Relations with Japan in an Era of Economic Liberalisation* (Nova 1998) 144.

<sup>&</sup>lt;sup>10</sup>While the 'lost decade' language persists and the bursting of the economic bubble was significant, more recently scholars are reassessing the language used to describe this time of great legislative reform and balance the severe economic hardship with the positive legislative reform that occurred at the same time: Andrew Gordon, 'Making Sense of the Lost Decades: Workplaces and Schools, Men and Women, Young and Old, Rich and Poor' in Yoichi Funabashi and Barak Kushner (eds), *Examining Japan's Lost Decades* (Routledge 2015) 77.

The economic development of that period was also tightly integrated with a strong focus on manufacturing precisely because of the legal environment that the post-war years created – with restrictions on the types of technologies that could be developed,<sup>14</sup> Japanese manufacturers and their closely linked supply networks were able to expand production and development of light machinery and consumer electronics.<sup>15</sup> All of this came together to create an economic environment in which the historical strengths of Japanese industry, when considered from a global perspective, were suddenly undermined by an economic depression that made sustainability extremely difficult for Japanese businesses and started the search for some way of jump-starting economic recovery.

## Introducing the Intellectual Property High Court

Before considering the success (or indeed, failure) of the IPHC, it is important to analyze its construction in terms of its introduction and legal foundation. While the IPHC was clearly influenced by the development of the CAFC in the US, certain factors that stem directly from the unique Japanese intellectual property context affected its implementation. Patent law had long been recognised in Japanese intellectual property law as an area particularly sensitive to diverging approaches to the same issue, leading to the de facto (and later, de jure) centralisation of patent disputes in Osaka and Tokyo – and while Japan had never suffered from the starkly different approaches as seen in the US circuit splits, a single court that ensures the harmonisation of patent law was a clear next step in this process of improving the stability of intellectual property rights.

The jurisdiction of the IPHC is the first in which an exclusive subject-matter jurisdiction has been given to a court in Japan,<sup>16</sup> contrasting with the traditional geographic jurisdiction of the other courts.<sup>17</sup> While the subject-matter jurisdiction is a novel development, particularly for patent law, in promoting harmonisation, the legal diversity in patent law decisions specifically had already been significantly reduced because of the reliance on the Osaka and Tokyo District Courts.<sup>18</sup> Osaka and Tokyo have long been important economic centres in Japan, something that impacted not only the centralisation of technology-producing businesses but also the population drain away from smaller towns across Japan.<sup>19</sup> This type of population centralisation has been somewhat reshaped by the shift towards industries that rely more on intangible innovation and less on physical manufacturing that allows individuals in particular industries (like software engineering or design) to work outside of the traditional hubs of Tokyo and Osaka.

Indeed, the IPHC was essentially constructed from the intellectual property divisions of the Tokyo High Court rather than as a court of independent origin. The support of business and industry appears to have been a particularly prominent element in establishing the IPHC. While industry supported the idea of a specialised court that dealt with intellectual property disputes to provide increased harmonisation and stability,<sup>20</sup> there was opposition to the creation of a ninth High

<sup>&</sup>lt;sup>14</sup>With a 'freeing' of academic research from commercial orientation by the Allied Occupation: Nahoko Kameo, *Gifts, Donations, and Loose Coupling: Responses to Changes in Academic Entrepreneurship Among Bioscientists in Japan* (Springer Science and Business Media 2015) 183; also a more general shift away from military technologies and towards private consumption: Kenichi Kumagai, *History of Japanese Industrial Property System* (JPO, Asia-Pacific Industrial Property Centre 2005) 28.

<sup>&</sup>lt;sup>15</sup>Kevin Eugene Thomas Cunningham Jr, 'Two's Company: The Rise in Chinese PCT Participation and What it Means for Japan' (2017) 99 Journal of the Patent and Trademark Society 670, 683.

<sup>&</sup>lt;sup>16</sup>Hiroya Kawaguchi, The Essentials of Japanese Patent Law: Cases and Practice (Kluwer 2007) 266.

<sup>&</sup>lt;sup>17</sup>Jurisdiction is typically geographic, though patent law post-2003 is a major exception to this: Gerald Paul McAlinn, *Japanese Business Law* (Kluwer 2007) 31.

<sup>&</sup>lt;sup>18</sup>The legislative amendments of the IP-based nation eliminated the ability for Japanese claimants to forum-shop beyond choosing Osaka or Tokyo as the venue for their suit: Kyle Pietari, 'An Overview and Comparison of US and Japanese Patent Litigation' (2016) 98 Journal of the Patent and Trademark Society 540, 552.

<sup>&</sup>lt;sup>19</sup>Michael Lewis, Becoming Apart: National Power and Local Politics in Toyama 1868–1945 (Brill 2020) 252.

<sup>&</sup>lt;sup>20</sup>The industry participants who formed part of the IP Lawsuit Review Committee were also broadly supportive of the IP High Court: Ichiro Nakayama, *History and Issues on the Creation of IP High Court* (Japan-China Joint Research Report on Intellectual Property, Institute of Intellectual Property 2014) 62.

Court with subject-matter jurisdiction - the compromise in the implementation being that the IPHC would be created from the existing IP divisions of the Tokyo High Court (which already had significant expertise in intellectual property disputes).

This integration and role in harmonisation go further than simply considering the personnel of these institutions and is fundamentally linked to the jurisdiction of the IPHC itself. The IPHC is important in a patent context because it combines an exclusive subject-matter jurisdiction for patent disputes while also serving as a first-instance court for challenges to decisions made by the JPO.<sup>21</sup> To minimise any potential discrepancies and to promote the harmonisation of these two different tracks of validity and infringement, the same judicial panel will typically hear both.<sup>22</sup>

It is important to note that this tight integration of technically-skilled professionals with the judges of the IP High Court is an essential element in offsetting the technical difficulty of intellectual property and supplementing the general training background typical of judges.<sup>23</sup> While JPO examiners have scientific backgrounds, as well as specific training for building expertise with new examiners, the judges of the IPHC are simply required to have qualified as a judge.<sup>24</sup> One of the organisational hurdles in establishing the IPHC was ensuring that the court would be adequately staffed by appropriately-qualified judges.<sup>25</sup> The extensive use of technical advisors in the Japanese system is a feature that distinguishes the IPHC from other international examples of specialised intellectual property courts and is one of the important ways that the IPHC promotes harmonisation – by introducing technical experts who are there to advise the judge on the technology under discussion, and *not* advocating on behalf of a party or party's interest.

## Distinguishing Japanese Intellectual Property

#### Japan, transplants, and the East Asian context

Since the Meiji Restoration,<sup>26</sup> Japan has consistently employed legal transplants, of both law and institutions, as a way of developing intellectual property policy and bringing a degree of de facto harmonisation internationally. The Meiji approach to intellectual property involved gathering information about other legal systems that appear to be functioning well and then implementing their best practices domestically.<sup>27</sup> Unfortunately, the IP-based national policy that was promoted by Prime Minister Koizumi follows an almost identical trajectory. In this modern context, where the TRIPs Agreement has already substantially harmonised patent law at a global level, the domestic

<sup>24</sup>The technical background of the JPO examiners is also completed through various examiner exchange programs that encourage international communication: Peter Drahos, *The Global Governance of Knowledge: Patent Offices and their Clients* (Cambridge University Press 2010) 174.

<sup>25</sup>One of the significant hurdles in establishing the IPHC, as in other international specialised courts, was securing the number of adequately trained judges: Tomokatsu Tsukahara, 'Intellectual Property High Court of Japan' (JPO, JIPII, Asia-Pacific Industry Property Centre 2013) 8.

<sup>26</sup>While legal transplants had taken place earlier, these were typically in the space of public administration or public law and were much earlier: Michael J Meurer, *Economics of Contract Law* (Duke University 1989) 25; the Meiji Restoration, however, specifically had an intellectual property component: Wei Shi, *Intellectual Property in the Global Trading System: EU-China Perspective* (Springer 2008) 132.

<sup>27</sup>The central contributions of the Iwakura mission in studying various international systems for industrial property were a major part of the Japanese approach to this field: Ian Nish, *The Iwakura Mission to America and Europe: A New Assessment* (Routledge 2008) 41.

<sup>&</sup>lt;sup>21</sup>Takashi B Yamamoto, 'Japanese Court Jurisdiction over International Cases', in Dennis Campbell (ed), *The Comparative Law Yearbook of International Business*, vol 30 (Kluwer 2008) 470.

<sup>&</sup>lt;sup>22</sup>Tomokatsu Tsukahara, 'Intellectual Property High Court of Japan' (JPO, JIPII, Asia-Pacific Industry Property Centre 2013) 6.

<sup>&</sup>lt;sup>23</sup>The technical skill of this other professionals is important in offsetting the potential for 'tunnel-vision' contexts, which was raised in the Hruska Report: William L Reynolds, *Injustice on Appeal: The United States Courts of Appeals in Crisis* (OUP 2012) 171; though important to note that the IPHC does not require any special qualification to its judges, they simply must fulfill the ordinary criteria: Tomokatsu Tsukahara, 'Intellectual Property High Court of Japan' (JPO, JIPII, Asia-Pacific Industry Property Centre 2013) 8.

implementation of institutions found abroad must be contextualised to understand their impact when transplanted. It is by following this older style of legal transplant in a modern and globalised context that the IPHC fails to achieve its objectives in harmonisation.

The technical advisor system is one of the mechanisms that differentiate the IPHC internationally and contribute significantly to the legitimacy of the proceedings from a technical and legal perspective. Rather than adopting the US system of expert witnesses,<sup>28</sup> the IPHC instead uses technical advisors<sup>29</sup> – while the technical advisors are expected to have a similar background of expert knowledge in a specific field as expert witnesses in the US system, they are instead paid from court funds and are there primarily to assist the judge in understanding the technology under discussion. This differs significantly from the US system, where the parties pay their own expert witnesses to testify and essentially advocate on their behalf.<sup>30</sup>

Korea has also taken a similar approach to that of the Japanese IPHC with the recent reform of its specialised intellectual property court. The Korean approach, until the reform in 2016, was indicative of the type of institutional variation that is found in the specialisation of intellectual property courts as it essentially functioned as a centralised venue for administrative disputes from the Korean Patent Office (rather than sitting in an appellate criminal or civil capacity).<sup>31</sup> This was modified in 2016 and recast the function of the court to be much closer to the IPHC and to a more traditional understanding of a 'court' more generally, introducing technical advisors for cases that are exceptional in terms of their technical difficulty rather than the more general usage in the Japanese context.<sup>32</sup>

While the role of the technical advisors is crucial to the institutional function of the IPHC, they are part-time and not involved with every case. Consequently, judicial research officials are the foundation of not just research support in the IPHC but the Japanese court system as a whole. The role of research official in Japan differs from that of their American counterparts, since unlike the recent graduates that make up clerks in the US courts, research officials in Japan are judges who typically have extensive experience.<sup>33</sup> Though a considerable amount of a judicial research official's time is spent in assessing whether a case involves the legal issues of significance that would warrant in-depth assessment by research officials, they are an important resource for judges in both understanding the legal problem under consideration and sometimes functioning as a substantial force in the shaping of the final judgment.<sup>34</sup>

The role of technical advisors, while functionally quite similar to that of research officials, is particularly important for intellectual property in at least two regards – the first of which pertaining to their capacity to act as technical experts for the benefit of the judge. In the shift towards a national intellectual property policy that encourages the creation and exploitation of patent rights for

<sup>&</sup>lt;sup>28</sup>Outlining the role of the expert and their function within the courtroom: Wilson Well, *Forensic Science in Court: The Role of the Expert Witness* (John Wiley & Sons 2009) 71.

<sup>&</sup>lt;sup>29</sup>Outlining the use of technical advisors in the IPHC: Kung-Chung Liu, Annotated Leading Patent Cases in Major Asian Jurisdictions (City University of Hong Kong Press 2017) 29.

<sup>&</sup>lt;sup>30</sup>In the US, the expert witness is cross-examined by the parties whereas in the Japanese system, it is the expert asking questions of the party to truly understand the technology under dispute: Tomokatsu Tsukahara, 'Intellectual Property High Court of Japan' (JPO, JIPII, Asia-Pacific Industry Property Centre 2013) 30.

<sup>&</sup>lt;sup>31</sup>Before the 2016 reforms, the Patent Court of Korea could not hear ordinary civil cases for damages in patent infringement cases (and prior to the 1995 reform, appeals from the Korean Intellectual Property Office went straight to the Korean Supreme Court): Sang Jo Jong, 'Principles and Structure of Patent Litigation', in Kuk Cho (ed), *Litigation in Korea* (Edward Elgar 2010) 224.

<sup>&</sup>lt;sup>32</sup>Court Organization Act of March 1998, art 3(1): '... in-house technical advisor provides presentation on technical issues for judges' better understanding.' Young Sun Cho, Intellectual Property Law in South Korea (Kluwer 2019) 31.

<sup>&</sup>lt;sup>33</sup>David Danelski, 'The Supreme Court of Japan: An Explanatory Study', in Glendon Schubert & David Danelski (eds), *Comparative Judicial Behaviour: Cross-Cultural Studies of Decision-Making in the East and West* (Oxford University Press 1969) 497.

<sup>&</sup>lt;sup>34</sup>ibid.

economic growth, there are industries that generate innovations that are both legally and technologically challenging.

This is not, of course, unique to Japan. Precisely because the judicial research officials tend to be full-time judges with significant legal experience, their experience of these issues that occur at the intersection of law and technology are necessarily based on second-hand accounts – they emerge in the context of a dispute that has since been appealed and deemed significant enough by a research official to devote appropriate resources to investigating. Technical advisors, on the other hand, come from a much wider pool of experts that have a greater likelihood of having first-hand experience with industry and therefore have at least some practical perspectives on the cutting-edge technology under dispute.

It is in this context that the second important role of the technical advisor emerges, though it extends beyond just their competence in frontier technologies of an industry. The technical advisor role, and particularly because they are drawn from *outside* the court and JPO, function as a signal of the institutional identity of the specialised court. Introducing technical advisors from a broad pool of experts that are not full-time employees of the court demonstrates not only an openness in terms of stakeholder engagement but the commitment to assessing the dispute with an emphasis on the correct technical understanding of the patented invention.

By ensuring that technical advisors are brought in to help the court understand technologically challenging inventions, the court is demonstrating that it recognises that intellectual property rights do not exist in a vacuum and their decisions have a profound impact at a practical level for the users of those rights. Even the willingness to not solely rely on the (significant) expertise of the research officials contributes to, at least somewhat, a perception that the IPHC is responsive to industry needs and committed to establishing a legally 'neutral' forum in which the technology itself is of central importance.<sup>35</sup>

This experimentation in the form of a specialised intellectual property court highlights the speed with which jurisdictions have adopted these institutions in recent years and how the US CAFC was a landmark model in creating what is essentially an international standard. It is also a testament to how recent this wave of specialisation in intellectual property is, as an opportunity for jurisdictions to engage in institutional experimentation even though the long-term effects are still unsettled. It is still uncertain to as to the actual effect of patents in promoting economic recovery and how much of the US or Japanese economic growth of the 1980s and 1990s can instead be attributed to the broader political and economic conditions.

While the Japanese development was explicitly informed by the economic and political context in which the CAFC was developed because of its particular relevance to the Japanese economic slowdown, it is difficult to see how contemporary specialisation in other jurisdictions could be developed without first looking to most successful global example that is the CAFC. Part of this prominence is a result of the CAFC being an extremely early example of specialisation in intellectual property, as well as the global prominence of the US in technology and research output.

Considered from the perspective of industry and a system that promotes harmonisation, the development of the technical advisor system is of great benefit. Rather than having cases supported by technical experts in the context of a specific party and their legal claim, the technology is assessed on a more objective basis and is in line with the origins of Japanese patent law.<sup>36</sup> The importance is firmly on the technology itself and whether the technology has been infringed – elements that all focus on the contribution to industry and promote stability and harmonisation over legal persuasiveness in counsel. The value of this kind of harmonisation in patent law, which emphasises the

<sup>&</sup>lt;sup>35</sup> Neutral' in the sense that the court is investigating the technology and how best to reconcile its challenging features with the patent framework, as opposed to the exceptionally polarised atmosphere that existed between the Circuit Courts in the US pre-CAFC: Bruce Abramson, *India's Journey Toward an Effective Patent System* (World Bank Publications 2007) 52.

<sup>&</sup>lt;sup>36</sup>Patent Act of Japan 1959, s 2: 'the highly advanced creation of technical ideas utilizing the laws of nature'.

contribution of innovators and inventions to national economic growth, can be seen throughout the East Asian context with China joining the WTO and Japan agreeing to participate in the Belt and Road Initiative.<sup>37</sup>

The break from the more German style of patent-specific institutions in an important one,<sup>38</sup> especially for Japan and specifically in the context of promoting harmonisation, given the continued influence of German law in patent law and patent law disputes.<sup>39</sup> This is significant because the German approach of constructing the patent grant as an administrative act (that should be only reviewed in an administrative context) has contributed to one of the most significant challenges that face Japanese patent law and the promotion of stability and harmonisation domestically, in the form of the 'double-track' problem.

The issue here is not one of strict dogmatic adherence to either common law or Continental tradition, in which any variation should be constructed as a problem to be corrected. Instead, the objective is to evaluate these institutional modulations from the perspective of national intellectual property policy and its objectives. Does the mixing of legal approaches, as occurs in Japan in its gradual shifts away from its Meiji-era German legal heritage, support the national objective of promoting the effective creation and exploitation of intellectual property rights? Introducing elements from a different legal tradition is not, in itself, a negative feature of an institutional framework. It is when those legal developments run counter to the very objectives that were the basis of introducing a specialised court that an evaluation must be made as to their appropriateness in the broader legal context.

## The innovation of civil court practice

Three landmark cases illustrate the innovative approaches of not just the IPHC, but also the Japanese judiciary more broadly and how these elements are key to understanding the broader impact of an institution beyond its official functions and capacity. It is also important to note that these creative approaches to difficult legal problems are not restricted to intellectual property – the Japanese judiciary has a strong history of addressing important legal (and social) problems with innovative solutions.<sup>40</sup> However, in considering intellectual property law and patent law specifically from the perspective of the promotion of harmonisation that contributes to the development of industry, only two of these cases will be discussed.

Recognising the institutional character of Japanese courts is important because of the general perceptions that exist around both civil law courts and Japanese courts specifically, often

<sup>&</sup>lt;sup>37</sup>China acceding to the WTO: Hui Feng, *The Politics of China's Accession to the World Trade Organisation: The Dragon Goes Global* (Routledge 2006) 70; Japan's changing position and eventual acceptance of the Belt and Road Initiative, while not explicitly an intellectual property agreement, as an international project focused on goods will necessarily have intellectual property implications: Kiyoshi Kodera, 'China's Belt and Road Initiative and Japan, and its Impact on Japan-Central Asia Relations', in Harder S Kohli, Johannes F Linn & Leo M Zucker (eds), *China's Belt and Road Initiative: Potential Transformation of Central Asia and the South Caucasus* (Sage Publishing 2019) 187.

<sup>&</sup>lt;sup>386</sup>The grant of a patent is an administrative act conferring a benefit, that is, substantiating an exclusive right and a right to use. For this solely (in the case of lawful grant) the German Federal Patent Court and the Federal Supreme Court have exclusive examining competence.': Peter Mes, 'Reflections on the German Patent Litigation System', in Wolrad Prinz zu Waldeck und Pyrmont, Martin J Adelmann, Robert Brauneis, Josef Drexl & Ralph Nack (eds), Patents and Technological Progress in a Globalised World (Springer 2008) 405.

<sup>&</sup>lt;sup>39</sup>Initially and explicitly through the legal reforms realising the Meiji Restoration, '[*t*]he transplantation process of German legal rules in Japan and Korea, as an example, can be observed as an information-creating price for future transplantations of rules with a "German Law origin".': Christian Kirchner & David Ehmke, 'Law', in Wolfgang Merkel, Raj Kollmorgen & Hans-Jürgen Wagener (eds), The Handbook of Political, Social, and Economic Transformation (Oxford University Press 2019) 385.

<sup>&</sup>lt;sup>40</sup>In areas as diverse as environmental law, employment discrimination, and sexual harassment - the judiciary in Japan has demonstrated a degree of legal innovation when dealing with contentious issues, and in those specific instances represent deliberate attempts by separate district courts to adapt the legislative provisions: Daniel H Foote & John O Haley, 'Judicial Law-Making and the Creation of Legal Norms in Japan: A Dialogue', in John O Haley & Toshiko Takenaka (eds), *Legal Innovations in Asia: Judicial Law-Making and Influence of Comparative Law* (Edward Elgar 2014) 85.

characterising them as passive voices of the legal texts.<sup>41</sup> The reality is that Japanese courts, like many other civil law jurisdictions, are complex systems of interaction that involve hierarchical and social dynamics that create a judicial system that is altogether less homogenous than it would first appear to be. This is important specifically for contextualising the introduction of a specialised court for intellectual property because of the often-technical nature of patent disputes and the fact that these disputes can involve nascent technologies that are difficult to frame legally. A specialised court requires, perhaps more than just flexibility, a *responsiveness* to be able to adequately deal with these disputes that stretch or strain the legislative patent framework.

The first of the significant cases is *Ball Spline Bearing* which was the explicit recognition by the Japanese Supreme Court on the applicability of the doctrine of equivalents.<sup>42</sup> While the decision represents a turning point in the development of the doctrine of equivalents in Japan on the basis that it was formally introduced, it followed what had been a lengthy period in which the lower courts had variously approached the issue of indirect infringement but had stopped short of using the language to equivalency to frame the dispute.<sup>43</sup>

From a more institutional perspective, it is clear that the decision of the Japanese Supreme Court to formally recognise a mode of infringement, which had previously, and still for some, been a tacit acceptance that the dispute lacked any direct infringement and was thus a weak claim<sup>44</sup>, was aimed at reconciling differences in an increasingly globalised context of patent law and, particularly given the historical relationship between Japan and the US, suggests an explicit consideration of the common law principles that permit a degree of legal flexibility that has helped develop a responsive institutional response to the specialisation of intellectual property seen in the US. The development of the doctrine of equivalents also demonstrates broader responsiveness of the judiciary in importing or otherwise developing legal approaches that do not rely solely on legislative intervention to address the legal problems of users of the intellectual property system, and contribute to a more informal convergence of patent law at the international level.

The second of the significant cases represented a more explicit break from the construction of a patent grant as an administrative act is the Kilby patent under dispute in *Fujitsu v Texas Instruments*,<sup>45</sup> concluded in April 2000 with the Japanese Supreme Court essentially reversing an established precedent that had been set by the Japanese Supreme Court previously<sup>46</sup> – one that had indirectly affirmed the provisions in the Japanese Patent Act in construing the invalidation of a patent as an exclusive power of the JPO.<sup>47</sup> However, the Japanese Supreme Court stated that a patent can be considered invalid by the court hearing the case when grounds for invalidity clearly exist.<sup>48</sup> The Japanese Patent Act was then amended in 2004 to incorporate this change in position, though the requirement that the invalidity be 'obvious' was dropped.<sup>49</sup>

<sup>&</sup>lt;sup>41</sup>George P Fletcher & Steve Sheppard, American Law in a Global Context: The Basics (Oxford University Press 2005) 31. <sup>42</sup>Ball Spline Bearing H6(O) No 1083 (1998).

<sup>&</sup>lt;sup>43</sup>Toshiko Takenaka, 'Extent of Patent protection in the United States, Germany, the United Kingdom, and Japan: Examination Through the Concept of "person having ordinary skill in the art of the invention", in Toshiko Takenaka (ed), Patent Law and Theory: A Handbook of Contemporary Research (Edward Elgar 2009) 456.

<sup>&</sup>lt;sup>44</sup>Tomokatsu Tsukahara, 'Intellectual Property High Court of Japan' (JPO, JIPII, Asia-Pacific Industrial Property Centre of Japan 2013) 50.

<sup>&</sup>lt;sup>45</sup>Fujitsu, Ltd v Texas Instruments, Inc., Case No (0) 364/1998 (Japanese Supreme Court, 2000).

<sup>&</sup>lt;sup>46</sup>The *Ball Spline Bearing* case is the third of these landmark cases, where the US Supreme Court gave an explicit endorsement of the doctrine of equivalents as a way of finding infringement (validating the approach of many lower courts who had previously hesitated in using the language of equivalency): *Ball Spline Bearing* H6(O) No. 1083 (1998).

<sup>&</sup>lt;sup>47</sup> In doing so, it changed the precedents set by its predecessor court some 85-100 years ago...': Shoichi Okuyama, 'Patent Infringement Litigation in Japan' (JPO, JIPII, Asia-Pacific Industrial Property Centre 2016) 7.

<sup>&</sup>lt;sup>48</sup>The effect of the Kilby decision is that courts could consider the validity of the patent when there were 'obvious' grounds of invalidity: Thomas Cotter, *Comparative Patent Remedies: A Legal and Economic Analysis* (Oxford University Press 2013) 296.

<sup>&</sup>lt;sup>49</sup>The Kilby decision was then incorporated into the Patent Act of Japan in 2004 through Article 104-3 of the Patent Act of Japan 1959, though the requirement that the grounds be 'obvious' was dropped in the codification.

The decision and subsequent codification are particularly indicative of the relationship between the National Diet and the courts of Japan because the process was one of muted dialogue rather than explicit exchange. While the outcome – the codification of a legal development – was the same regardless of the method of communication, the muted dialogue phenomenon raises concerns about institutional transparency from the perspective of users of the intellectual property system. For a specialised court to function properly and address the needs of the users that justify the existence of a specific forum, there needs to be more explicit forms of communication between the main institutions. The US and the CAFC are a key example of this discussed in Part III, though this less implicit communication has often manifested as a quite contentious relationship that nevertheless demonstrates a more open approach to institutional communication that is less apparent in the Japanese context.

The Kilby patent decision is the origin of the 'double-track' issue in patent law,<sup>50</sup> describing the situation by which parallel proceedings on the same patent can be conducted in both the context of a trial for invalidity with the JPO and an infringement lawsuit with the courts.<sup>51</sup> This problem is avoided in jurisdictions with stricter bifurcation and those where the judge is competent to hear both validity and infringement.<sup>52</sup> The potential issues in the double-track system come, particularly in the Japanese context, from the ability of the court to consider an invalidation claim against a patent in infringement proceedings where the decision is only effective *inter partes* and is therefore of a much more limited scope than going through the JPO trial for invalidity.<sup>53</sup>

There are two principal reasons as to why, in the Japanese context at least, the double-track problem is correctly perceived as a *problem* and not as a *feature*. The first aspect relates to the potential for separate venues that consider validity and infringement to unduly extend the time from initial filing to resolution. While judicial backlogs and long cases are problems that emerge in most legal systems around the world,<sup>54</sup> it stands out especially in Japan because the issue of long cases in intellectual property disputes was one of the drivers of tension between the US and Japan in the 1980s and 1990s.<sup>55</sup>

With bifurcated validity and infringement (and particularly in the absence of a legally-mandated automatic stay when proceedings concerning the same patent are filed),<sup>56</sup> the final judgment of an infringement case can be undermined by a challenge to the validity of the patent under

<sup>&</sup>lt;sup>50</sup>Shoichi Okuyama, 'Patent Infringement Litigation in Japan' (JPO, JIPII, Asia-Pacific Industrial Property Centre 2016) 7.

<sup>&</sup>lt;sup>51</sup>The double-track problem is a result of parallel proceedings to challenge the validity of a patent – through the trial for invalidity at the JPO, as well as the possibility of raising it in court through the Kilby provisions: Esther van Zimmeren, 'Revisiting Japanese Exceptionalism Within the Context of "Dynamic Patent Governance": A Comparative Analysis of the Japanese and European Patent System', in Dimitri Vanoverbeke, Jeroen Maesschlalck & David Nelken (eds), *The Changing Role of Law in Japan: Empirical Studies in Culture, Society, and Policy Making* (Edward Elgar 2014) 237.

<sup>&</sup>lt;sup>52</sup>The administrative nature of the patent grant: Christoph Ann, 'Patent Invalidation and Legal Certainty', in Susy Frankel (ed), *The Object and Purpose of Intellectual Property* (Edward Elgar 2019) 269.

<sup>&</sup>lt;sup>53</sup>An invalidation through the Kilby provisions is only effective *inter partes* and does not have effect with regard to third parties: Thomas Cotter, *Comparative Patent Remedies: A Legal and Economic Analysis* (Oxford University Press 2013) 296.

<sup>&</sup>lt;sup>54</sup>Judicial backlogs are a problem at a global level – on the significant delays in the Indian legal system: Vidisha Barua Worley, 'Interview of Judge Manmohan Singh, Delhi High Court, India', in Dilip K Das, Cliff Roberson & Michael M Berlin (eds), *Trends in the Judiciary: Interviews with Judges Across the Globe* (CRC Press 2013) 117; on the negative potential of judicial backlogs in a European context: Cristina Dallara, *Democracy and Judicial Reforms in South-East Europe: Between the EU and the Legacies of the Past* (Springer 2014) 40.

<sup>&</sup>lt;sup>55</sup>Japan had historically emphasised cross-licensing in the event of a dispute and this, in combination with the repetitious cases, was a major source of conflict with the US in the 1980s and 1990s: Dan Rosen and Chikako Tsui, 'The Social Structure of Japanese Intellectual Property Law' (1994) 13 UCLA Pacific Basin Law Journal 45; in the opposite direction, Japan took issue with the use of juries in patent infringement cases in the US: Marvin Motsenbocker, 'Proposed Changes to Japanese and United States Patent Law Enforcement Systems' (1995) 3 Pacific Rim Law & Policy Journal 389, 397.

<sup>&</sup>lt;sup>56</sup>Though in the context of the IPHC at least, there are efforts to ensure that the same panel hears both aspects of the dispute - unfortunately, by occurring at the level of the IPHC, there is a risk that much time has already been wasted in the initial legal proceedings: *When both the infringement lawsuit and lawsuit for the cancellation of the appeal/trial decision regarding the same patent right are brought before the IP High Court, there are arrangements in the assignment of judicial cases* 

consideration, drawing out the dispute even further.<sup>57</sup> Challenging both infringement and attacking the validity of the underlying patent are ordinary legal strategies in common law countries,<sup>58</sup> but since these concerns are raised in a context in which the judge has the power to redraw the patent boundaries (in addition to the power to issue a more fundamental ruling as to the validity of the patent), both validity and infringement are dealt with in the same forum and proceedings are not restarted when a new counterclaim is raised.

The second element that suggests this institutional arrangement is more properly characterised as a problem rather than a feature is the legal reach of a determination as to the validity of the patent in Japanese courts. As noted earlier, invalidity can be raised in the context of infringement – though the decision as to the validity of the patent only extends *inter partes*. The effectiveness of a validity decision reached in this way relies, again, on the muted dialogue between parties and institutions – the structure of the underlying patent remains intact and there is no guarantee that any subsequent disputes concerning the same patent, but with different parties, would result in a similar conclusion by the court. This approach maximises the autonomy of the court and permits the court to intervene with particularly dubious patents but does little for the broader interests of the industry. The patent itself remains legally intact. While the dispute between those specific parties may be resolved, considered from the perspective of industry more broadly, there is no significant benefit to this intervention because that patent right still exists as it did before validity was raised in the dispute.

The IPHC and the issue of bifurcation highlight one of the institutional problems that can occur with the introduction of a specialised court. The reality is that in the broader institutional landscape there are now two actors who have significant intellectual property expertise and carry legitimacy in their perspectives, namely the IPHC and the JPO. While the capacity of the IPHC to consider both infringement appeals and validity disputes is important in that it brings them within the same legal forum, this occurs relatively late in the lifecycle of a dispute. Instead, rearranging the Japanese framework so that validity returns as a sole function of the JPO means that, with a more comprehensive system for identifying validity and infringement disputes that concern the same patent, the end-users can benefit from earlier intervention instead of waiting for a convergence at the level of the IPHC.

This multipolarity in terms of legitimate expertise was somewhat incorporated in the recent decision of *Apple v Samsung* in Japan, whereby an informal, court-originated process that approximates the amicus curiae system of the US was used and indicates the important potential of the IPHC as a dispute resolution forum.<sup>59</sup> In this case, the IPHC had instructed both parties to obtain perspectives on the legal issue of the case and to file these with the court, which then rendered the documents part of the official court record and a part of the trial.<sup>60</sup> Beyond the trial focus on issues around

where in the same judicial panel... hears both cases in order to avoid conflicting judgments.': Tomokatsu Tsukahara, 'Intellectual Property High Court of Japan' (JPO, JIPII, Asia-Pacific Industrial Property Centre of Japan 2013) 5.

<sup>&</sup>lt;sup>57</sup>That the District Court and the JPO could come to different conclusions: David W Hill & Shinichi Murata, 'Patent Litigation in Japan' (2007) 1 Akron Intellectual Property Law Journal 141, 183; raising the possibility of allowing a retrial if the JPO decides the patent was invalid *after* the conclusion of infringement proceedings: Masabumi Suzuki and Yoshiyuki Tamura, 'Patent Enforcement in Japan' (2011) 3 Zeitscrift für Geistiges Eigentum 435, 464.

<sup>&</sup>lt;sup>58</sup>On the complexity of challenging patent validity and infringement in a unified forum in a European context: Klaus Grabinski, 'Cross-Border Injunctions in Patent Litigations Following the ECJ Decision in GAT v. LuK - Life After Death?', in Wolrad Prinz zu Waldeck und Pyrmont, Martin J Adelman, Robert Brauneis, Josef Drexl & Ralph Neck (eds), *Patents and Technological Progress in a Globalized World* (Springer 2009) 572.

<sup>&</sup>lt;sup>59</sup>Samsung Electronics Co, Ltd. v Apple Japan Godo Kaisha (2014) Intellectual Property High Ct, No 10043.

<sup>&</sup>lt;sup>60</sup>The court announced an invitation of public comments on restrictions of injunctions and damages of SEPs. It is similar to an amicus brief... for the sake of formality, public opinions were submitted to attorneys of both plaintiff and defendant, and they presented them to the court.': Ashish Bharadwaj & Tohru Yoshioka-Kobayashi, 'Regulating Standard Essential Patents in Implementer-Oriented Countries: Insights from India and Japan', in Ashish Bharadwaj, Vishwas H Devaiah & Indranath Gupta (eds), Multi-Dimensional Approaches Towards New Technology: Insights on Innovation, Patents, and Competition (Springer 2018) 197.

standard-essential patents and their licensing, this IPHC innovation represents an important, if conservative, approach to maximising the range of perspectives that are heard in particularly important disputes.

Such an 'amicus-lite' process, in which parties are instructed to cross-file solicited opinions from other stakeholders, would be an important way of strengthening disputes that concern technologically or legally significant points of law.<sup>61</sup> The lack of communication or a suitable avenue through which to communicate in the process of a dispute has been a recurring feature of patent law, albeit specifically in earlier disputes between businesses in the US and Japan,<sup>62</sup> with the IPHC providing an important way of improving methods of communication between the parties of a dispute and the broader industry perspective or response without the administrative burden that a more fully-realised amicus system faces.

## The Origin of the Court of Appeals for the Federal Circuit

#### The Joining of Two Courts

#### United States Court of Customs and Patent Appeals / Court of Claims

The development of the jurisdiction of the CAFC, in its shift away from geographic jurisdiction and towards subject matter, had to contend with the issue of how the intersection of patent law and competition law or bankruptcy should look and the extent to which the CAFC can legitimately incorporate these disciplines in accepting appeals or deciding cases.<sup>63</sup> The jurisdiction of the IPHC has created a less complex dynamic, primarily because the court was established as a new entity that did not have to reconcile two already existing legacies of precedent. In terms of jurisdictional reach, the IPHC already deals with issues beyond patent law but that are still broadly within intellectual property, while the CAFC manages more complex interactions between different legal fields. The CAFC is a symbol of a commitment to the development of intangible assets and technology, but more directly as an institutional representation of a commitment towards intellectual property as a national priority and becoming a 'pro-patent' nation.<sup>64</sup> The introduction of the IPHC and the CAFC had a similar impact in terms of patent applications,<sup>65</sup> generating a surge of applications that can be seen as the result of the increased legal certainty for patent owners that their rights would be properly enforced, as well as the stability that this centralised system offers in contrast to the preceding fragmentation.<sup>66</sup>

<sup>&</sup>lt;sup>61</sup>In the US, METI submitted an amicus brief in support of the Japanese defendants in one of the *TFT-LCD Flat Panel Antitrust Litigation* cases, though importantly it was the exact same brief that was submitted in an earlier case in 2004 (*F Hoffmann-la Roche, Ltd v Empagran SA*, (2004) 542 US 155) and demonstrates that the Japanese government is aware of the benefits of such a process.

<sup>&</sup>lt;sup>62</sup>The system of post-grant opposition that Japan implemented after the bilateral talks between the US and Japan had its own problems, specifically concerning the *ex parte* nature of the process - the challenging party is then excluded from participation which fuelled the sense that their perspectives were not being heard: Haitai Sun, 'Post-Grant Patent Invalidation in China and the United States, Europe, and Japan: A Comparative Study' (2004) 15 Fordham Intellectual Property, Media & Entertainment Law Journal 273, 297.

<sup>&</sup>lt;sup>63</sup>The CAFC has exclusive jurisdiction of cases 'arising under' patent law, and this has sometimes raised issues with when exactly this occurs when the parties are also raising antitrust claims (notably with allegations of invalidity of expired patents in the early case of *Christianson v Colt Industries Operating Corp* (1988) 486 US 800: BA Section of Antitrust Law, *Antitrust Law Developments* (5th ed, American Bar Association 2002) 1109.

<sup>&</sup>lt;sup>64</sup>Nahoko Ono, 'Legislative Reform Related to IP Enforcement in Japan', in Christoph Antons (ed), *The Enforcement of Intellectual Property Rights: Comparative Perspectives from the Asia-Pacific Region* (Kluwer 2011) 103.

<sup>&</sup>lt;sup>65</sup>An identifiable surge in patent applications that appeared to be a direct result of the stronger protection established by the introduction of the CAFC: Samuel S Kortum, 'Research, Patenting, and Technological Change' (1997) 65(6) Econometrica 1391.

<sup>&</sup>lt;sup>66</sup>In 2004, there were 423,081 patent applications, while this number increased to 427,078 in 2005 (which subsequently dipped to 408,674 in 2006): JPO Annual Report 2004, 2005, 2006.

This legal context of fragmentation before the introduction of the CAFC had come to define the patent enforcement dynamic of the US, and the circuit diversity in terms of their appeal outcomes was a primary reason for the introduction of the CAFC.<sup>67</sup> While Japan had, and still retains, a degree of variance in the outcomes of the courts that consider intellectual property, it never reached the degree at which forum shopping became a substantial problem that undermined the enforcement of patents.<sup>68</sup> The geographic allocation of jurisdiction for the circuit appeal courts that had created an institutional context in which experimentation could lead to innovative legal technique in the adjudication of patent disputes, yet had also provided a forum for courts that appeared highly cynical towards the interests of patent owners.<sup>69</sup> Japan lacked these more obvious splits between courts that would be sympathetic or unresponsive to patent owners' interests, though this is also linked to the geographic distribution of courts, since technological development and output are highly heterogenous in Japan.<sup>70</sup> This meant that patent disputes progressed exclusively through the two technological centres of Japan and presented a legal forum that was familiar with, if not explicitly supportive of, the current issues in technology and patenting.

The introduction of the CAFC also shifted the dynamic in terms of the international enforcement of patent rights, something that Japan had benefited from substantially through the 1980s and 1990s, to the more modern approach of aggressive enforcement.<sup>71</sup> Before this, the economic growth that Japan had shown in the post-war period had afforded the economic conditions in which patent rights could be overlooked – something that had characterised the difficult relationship between Japanese and American businesses in which patents were considered as a tool for companies who were not competitive enough in the market with their products.<sup>72</sup> The choice of Japan to create a specialised court that was modelled on the CAFC is particularly clear when considered in the broader economic context of that period, in which Japanese growth had slowed dramatically and the US economy experienced a strong recovery. The Japanese government had been given a prominent and successful example of the type of growth that a focus on intellectual property could bring in the returning economic strength of the US post-CAFC.

#### Opposition to specialisation

The specialisation of an institution in respect of intellectual property was debated throughout the implementation of the CAFC and the IPHC, generally focusing on the trade-off between extremely specialised judicial staff who would, therefore, be competent to hear disputes but potentially disconnected from broader legal trends outside their field. <sup>73</sup> The concerns over the isolation of intellectual property, specifically patent law, are particularly acute for the CAFC rather than the IPHC because of the strong system of precedent in the US system, and the distinctly more informal sense of

<sup>&</sup>lt;sup>67</sup>Bruce Abramson, India's Journey Toward an Effective Patent System (World Bank Publications 2007) 52.

<sup>&</sup>lt;sup>68</sup>Nahoko Ono, 'Legislative Reform Related to IP Enforcement in Japan', in Christoph Antons (ed), *The Enforcement of Intellectual Property Rights: Comparative Perspectives from the Asia-Pacific Region* (Kluwer 2011) 103.

<sup>&</sup>lt;sup>69</sup>Specific circuits had developed a more 'pro-patent' reputation than others in their treatment of patent law disputes: Bruce Abramson, *India's Journey Toward an Effective Patent System* (World Bank Publications 2007) 52.

<sup>&</sup>lt;sup>70</sup>Tokyo and Kyoto in particular: UNDP, *Human Development Report 2001: Making New Technologies Work for Human Development* (Oxford University Press 2001) 45.

<sup>&</sup>lt;sup>71</sup>That low levels of enforcement were at least partly due to the institutional and linguistic difficulties of enforcing patent rights: International Peace Research Institute, *Intellectual Property Rights: U.S. Companies' Patent Experiences in Japan* (DIANE Publishing 1993) 63.

<sup>&</sup>lt;sup>72</sup>Speaking of the 1980s and the economic success of Japan, 'many Japanese businessmen ridiculed their American counterparts for their aggressive attempts to enforce their patents. A preoccupation with patents was seen as a loser's response to superior manufacturing competition.': Lee Rousso, 'Japan's New Patent Attorney Law Breaches Barrier Between the "Legal" and "Quasi-Legal" Professions: Integrity of Japanese Patent Practice at Risk?' (2001) 10 Pacific Rim Law & Policy Journal 781, 812.

<sup>&</sup>lt;sup>73</sup>One of the central issues raised in the Hruska Report was the risk that specialisation and the creation of a specialised court would isolate the judges and divorce them from the general legal dynamic: Japan Federation of Bar Associations, *Opinion Concerning the Establishment of an Intellectual Property High Court* (2003) 3.

precedent in the Japanese system that makes the development of a federal strand of patent law that somehow diverges from the broader legal climate more difficult to combat.<sup>74</sup>

Rather than the focus on the institution itself, however, one of the most important considerations when implementing a specialised institution – whether in intellectual property or another discipline – is the demographic of the legal profession that supports it. For both the CAFC and the IPHC, the legal professionals who support the functioning of the courts are an overlooked, yet fundamental, component of how effective this specialisation would be over simply hearing issues of intellectual property in a generalised court. Indeed, as seen in the international development of arbitration, the makeup of the community of legal professionals is fundamentally connected to the legitimacy of the specialisation. This is apparent when selecting arbitrators who would have the commercial or legal skills to deal more appropriately with the issue under arbitration rather than in a general court, but the technical and scientific complexity of patent law means there is a particularly important relationship between legal personnel, legitimacy, and the specialised forum.

The major difference between the Japanese and US systems from a judicial perspective is the training of judges, which is particularly significant for the legal development of intellectual property and intellectual property disputes. Judges in the US typically have a broader disciplinary back-ground because law is positioned as a postgraduate discipline and therefore requires additional previous (and generally non-legal) study,<sup>75</sup> with judicial appointment coming only after a significant period of practice that results in a judiciary that has a different dynamic to that of the Japanese judiciary.<sup>76</sup> Even from the perspective of practicing lawyers, the structure of legal education has resulted in a system in which Japanese patent attorneys specifically are considered to have a narrower technical background that necessarily has an impact how intellectual property disputes are approached.<sup>77</sup>

Beyond the historical and technical dimensions of the term 'patent attorney' which contributed somewhat to the difficulties in the trade relationship of the US and Japan, there is some element of caution that should apply when comparing the technical proficiency of US attorneys with Japanese lawyers. While *any* discipline would necessarily broaden the technical background of an attorney, the rate of advancement in science and technology means that, though a scientific undergraduate degree and professional legal experience may help with an attorney's initial orientation on what exactly is under dispute in a case, it is unlikely that this knowledge would extend to a technically sufficient working of the patent and would therefore still rely on the expertise of third parties. The Japanese reforms of 2004 that require a postgraduate law degree also go some way to offsetting the potentially narrower scope of an undergraduate legal education, though the distinct role of the Japanese Bar Exam and its time limits for qualification do little to promote non-legal education.<sup>78</sup>

<sup>78</sup>Even before the 2004 reforms, Bar Exam cram schools were often prioritised over undergraduate law classes (which were generally seen as training grounds for bureaucrats and civil servants): Mayumi Saegusa, 'Why the Japanese Law School

<sup>&</sup>lt;sup>74</sup>Ichiro Nakayama, 'History and Issues on the Creation of the IP High Court', Japan-China Joint Research Report on Intellectual Property (IIP 2014) 64; also on the nuances of precedent in Japan: Hiroshi Oda, *Japanese Law* (Oxford University Press 2009) 52.

<sup>&</sup>lt;sup>75</sup>Pre-law majors are less common than in the past and there have been concerns around the narrowing of law specialisation so early on, with students now generally studying various disciplines ('it is recommended that your undergraduate course of study be academically rigorous, emphasizing critical thinking and writing skills. The depth and breadth of your undergraduate experience is more important than a narrowly tailored or vocation-oriented program of study.': David W Neubauer & Stephen S Meinhold, *Judicial Process: Law, Courts, and Politics in the United States* (5th ed, Cengage Learning 2009) 134.

<sup>&</sup>lt;sup>76</sup>On the important mix of practicing and law-school based learning (as well as the historically important role of Bar Associations in the development of legal education in the US): Albert J Harno, *Legal Education in the United States: A Report Prepared for the Survey of the Legal Education* (Lawbook Exchange 2004) 74.

<sup>&</sup>lt;sup>77</sup>The lack of technical qualification requirements for patent attorneys in Japan has been criticised, but the role of *benrishi* has gradually expanded without requiring additional formal qualification: H H Stephen Harris Jr, 'Competition Law and Patent Protection in Japan: A Half-Century of Progress, a New Millennium of Challenges' (2002) 16 Columbia Journal of Asian Law 71, 81.

The use of third parties in patent disputes is also one of the major differences between the US and Japanese approaches to intellectual property law disputes. The extensive use of expert witnesses in intellectual property law trials in the US is a way of offsetting the subject matter complexity, though these experts are fundamentally *witnesses* – which is significant in that it subjects them to court procedural rules and have been criticised, through their expert testimony, as essentially functioning as a way of strengthening a specific party's legal argument.<sup>79</sup> The Japanese use of technical advisors fulfil a similar overall role to expert witnesses but their positioning within the trial framework is very different.

The technical advisors contribute significantly to the legitimacy of the trial because not only are they court-appointed rather than party-appointed, their role is to investigate the nature of the technology under consideration with the aim of more accurately assisting the judge in understanding the technology rather than supporting a specific party's perspective.<sup>80</sup> This also promotes a more 'neutral' construction of patent law, whereby a trial is predicated on a comprehensive understanding of the technology and allowing the judge to receive technical assistance that is not biased towards either party. As discussed earlier, while the technical advisors are a prominent and important aspect of the support system for judges, it is the law clerks and the judicial research officials that are the actual foundation of this system in the day-to-day operation of the court.

The judges of these specialised courts in Japan and the US are also significant because they are shaped by their legal education and the variety of their caseload. The Japanese system, though there have been important shifts towards a more US-style approach to legal education in the 2004 reforms,<sup>81</sup> still retains a more close-knit career judiciary and raises concerns about the scope of judicial innovation and autonomy. <sup>82</sup> The Japanese legal education system is gradually beginning to place more emphasis on stronger science and technology knowledge which will improve over time, though it is important to recognise that this reframing of legal education for patent attorneys is happening in a context in which professional boundaries can be redrawn and the role of patent professionals appears to be expanding (without a corresponding shift in the requirements for additional professional accreditation or qualification).<sup>83</sup>

## Dynamics and Institutions of a Hierarchy

#### Reliability and consistency in patent law

Patent law has an exceptionally important relationship with consistency and reliability that impacts not only the rights-holders and users of the intellectual property systems, but also the perception of the courts themselves in a way that a specialised court amplifies. While obviously clarity and

System Was Established: Co-optation as a Defensive Tactic in the Face of Global Pressures' (2009) 34(2) Law & Social Inquiry 371.

<sup>&</sup>lt;sup>79</sup>Susan Haack, 'The Expert Witness: Lessons from the U.S. Experience' (2015) 28 Humana Mente Journal of Philosophical Studies 41.

<sup>&</sup>lt;sup>80</sup>Esther van Zimmeren, 'Revisiting Japanese Exceptionalism Within the Context of 'Dynamic Patent Governance': A Comparative Analysis of the Japanese and European Patent System', in Dimitri Vanoverbeke, Jeroen Maesschalck, David Nelken & Stephan Parmentier (eds), *The Changing Role of Law in Japan: Empirical Studies in Culture, Society and Policy Making* (Edward Elgar 2014) 235.

<sup>&</sup>lt;sup>81</sup>Mayumi Saegusa, 'Why the Japanese Law School System Was Established: Co-optation as a Defensive Tactic in the Face of Global Pressures' (2009) 34(2) Law & Social Inquiry 370.

<sup>&</sup>lt;sup>82</sup>That the Japanese career judiciary is defined in contrast to the individual and collective autonomy of American judges, with a career judiciary creating a structure in which '[s]enior judges who have known and worked together throughout the judicial system for decades are not only in charge of the central administration controls but sit along with their junior colleagues on every trial and appellate bench.': Daniel H Foote & John O Haley, 'Judicial Law-Making and the Creation of Legal Norms in Japan: A Dialogue', in John O Haley & Toshiko Takenaka (eds), *Legal Innovations in Asia: Judicial Law-Making and Influence of Comparative Law* (Edward Elgar 2014) 110.

<sup>&</sup>lt;sup>83</sup>The expansion of the *benrishi* role has concerned scholars, particularly for the potentially negative impact this will have for industry professionals who use their services: Ruth Taplin, 'Japanese Intellectual Property and Employee Rights to Compensation', in Keith Jackson & Phillippe Debroux (eds), *Innovation in Japan: Emerging Patterns, Enduring Myths* (Routledge 2013) 83.

reasonable expectations of the law are important in all fields, intellectual property and patent law within that are particularly nuanced because of the broader economic role that intellectual property rights play – nowhere is this clearer than in both the reality of the economic recovery of US and Japan through their respective economic slumps, and the *expectation*. For both countries, patent law and the patents that it grants and protects are beyond private property rights and are instead pieces of a broader macroeconomic recovery that places a significant emphasis on consistency that is not as apparent in other areas of law.

The CAFC and the IPHC have had their problems with maintaining consistency in patent law and have generally originated in both jurisdictions from a focus on the appropriate scope of inventive step and how the perspective of the patent office can differ from that of a specialised court. Within patent law, inventive step is particularly important for technologies that are in emerging industries or represent challenging forms of invention – of which an early example would be biotechnology and the patentability of gene sequences and more recently, the patentability of algorithmic inventions and how inventive step should be construed in that context.

The Japanese context has seen a gradual reconciliation between the approaches of the patent office and IPHC on the issue of inventive step, though the US provides an example of when the divergence is between two courts rather than a court and an administrative agency - highlighting how the difference in approach was instead between the CAFC and the US Supreme Court, in which the CAFC was deemed to have applied the standard for inventive step too liberally.<sup>84</sup> This shift in institutional context highlights two dimensions that are particularly relevant for the development of specialised courts, the first of which is the potential for a power struggle between administrative and judicial functions in which each institution takes a broad construction of their legitimate scope of action.<sup>85</sup>

The second relates to the hierarchical arrangement and shows that, despite the significant expertise of the specialised court and its staff, the court above it in the hierarchy (including the institution that reviews the validity of the patent in the Japanese example) will not automatically show deference to the decisions of the specialised court. For an area of law like patent law that is specifically used with the intent of stimulating economic growth and promoting a strong innovation ecosystem,<sup>86</sup> the tension between fundamental institutions of the system like a terminal court of appeal and a specialised court can undermine the broader stability of patents as a legal instrument and the legitimacy of the specialised court.

The relationship between the CAFC and the US Supreme Court has been impacted by what appears to be a clear idea of how patent law should develop from the CAFC's perspective that has occasionally been met with vigorous disagreement from the US Supreme Court. Again, an area of intense activity in this regard has been computer-implemented inventions, but even the jurisdictional reach of the CAFC has been shaped by the US Supreme Court. *Holmes Group, Inc.* from 2002 was an attempt at limiting the jurisdiction of the CAFC by ruling that the CAFC did not have jurisdiction when the dispute was created through a counterclaim or when the original dispute was not in patent law.<sup>87</sup>

<sup>&</sup>lt;sup>84</sup>A prominent example would be the US Supreme Court's rejection of a strict application of the teaching, suggestion, or motivation (TSM) approach created by the CAFC: Frederick M Abbott, Thomas Cottier & Francis Gurry, *International Intellectual Property in an Integrated World Economy* (Kluwer 2019) 217.

<sup>&</sup>lt;sup>85</sup>Gino Cheng, 'Doubling up the Horses in Midstream: Enhancing US Patent Dispute Resolution by the PTO's Adoption of the JPO's Hantei Request System' (2008) 9 Cardozo Journal of Conflict Resolution 489, 516.

<sup>&</sup>lt;sup>86</sup>Through the expansive intellectual property reforms that both countries have enacted, but also in the explicit linking of intellectual property and GDP growth to demonstrate economic strength (which itself can be seen across Japan, the US, and the EU): Christine Greenhalgh & Mark Rogers, *Innovation, Intellectual Property, and Economic Growth* (Princeton University Press 2010) 76.

<sup>&</sup>lt;sup>87</sup>Holmes Group Inc, v Vornado Air Circulation Systems Inc, (2002) 535 US 826.

This was eventually corrected by the America Invents Act of 2011 and returned exclusive jurisdiction to the CAFC when the case is a patent appeal<sup>88</sup> – regardless of whether it originated as a counterclaim or from another field of law.<sup>89</sup> The tension here demonstrates the expansive nature of patent law and the difficulty in balancing interests when the direction of intellectual property law becomes a national objective. The US example presents an overt reallocation or rebalancing of the role of the specialised court that emerges from explicit conflicts and provides solid resolutions, whereas Japan and the National Diet are engaged in a typically more muted process of affirmation or rejection.<sup>90</sup>

However, it is not simply the terminal court of appeal in an institutional capacity that impacts the functioning of the specialised court, but the broader legal context and how defined or explicit principles such as precedent are in that legal system. With the revision to the Japanese Code of Civil Procedure in 1996, Japan adopted a certiorari system for appeals to the Japanese Supreme Court that aligns both Japanese and US practices and allows a much more manageable caseload for the terminal court of appeal.<sup>91</sup> In the Japanese context, despite lacking a strict system of precedent, the lasting impact of judicial decisions on the broader legal system can still be observed even when these judgments are either never incorporated officially through codification or never explicitly overruled.<sup>92</sup>

This approach of muted dialogue that stands in contrast to the more overt tone of the US institutions suggests that not only are explicit judgments or pieces of legislation important in understanding the role and function of the specialised court, but the *dialogue* between institutions – itself a combination of direct and implied communication between the Japanese Supreme Court, the IPHC, and the National Diet – is also a fundamental component in moderating the stability and consistency of Japanese patent law.

## Institutions of the hierarchy

The CAFC and the US Supreme Court have a particularly interesting connection because of the way that it extends beyond a strict understanding of the roles of the specialised court and apex court in a way that impacts the broader patent system. This has been especially clear in cases involving software or computer-implemented inventions and is one of the strongest indicators of the importance of stability in patent law, particularly from the perspective of industry users. Coming first to the broader dynamic of the two courts, the CAFC has a reputation, however inaccurate this statistically is<sup>93</sup>,

<sup>95</sup>While the 6th Circuit is the most overruled court, '[a]n empirical analysis of the last decade of the United States Supreme Court dispositions reveals that the Court reversed the decisions of this judicial experiment more than any other federal appellate court.': Christopher Nofal, *How the JPML Can Benefit from the Federal Circuit and Vice-Versa* (IvyLaw 2011) 405.

<sup>&</sup>lt;sup>88</sup>Leahy-Smith America Invents Act (AIA), Pub L No. 112-29, 125 Stat 284 (2011).

<sup>&</sup>lt;sup>89</sup>The CAFC actually recognised in a later case that the pre-AIA version of 28 U.S.C. §. 1295(a)(1) meant that their exclusive jurisdiction did come entirely from the complaint and not from a counterclaim, though this was amended post-2011: *Wawrzynski v HJ Heinz Co*, Case No. 12-1624 (Fed Cir, 2013).

<sup>&</sup>lt;sup>90</sup>On observing a more muted dialogue between the judiciary and the National Diet, where some important decisions (such as the corporate disregard doctrine in *Yamayoshi Shokai v Hoshihara*) remain influential yet uncodified: Daniel H Foote & John O Haley, 'Judicial Law-Making and the Creation of Legal Norms in Japan: A Dialogue', in John O Haley & Toshiko Takenaka (eds), *Legal Innovations in Asia: Judicial Law-Making and Influence of Comparative Law* (Edward Elgar 2014) 85.

<sup>&</sup>lt;sup>59</sup>Code of Civil Procedure, Article 318 (Petition for the Acceptance of a Final Appeal); On the functioning of certiorari in the US as a system of application for review by the US Supreme Court, the vast majority of paid and *in forma pauperis* are rejected (and thus an appeal to the US Supreme Court can never be guaranteed): John G Koeltl, *The Litigation Manual: Special Problems and Appeals* (American Bar Association 1999) 380.

<sup>&</sup>lt;sup>92</sup>Perhaps one of the most significant cases would be the *Ball Spline* decision, where the lower courts (specifically the Osaka High Court explicitly endorsing the approach of equivalents in *Genentech Inc v Sumitomo Pharmaceutical C Ltd*, No 3292 [1996] had long discussed the idea of infringement through the doctrine of equivalents: *Tsubakimoto Seiko v THK KK* [1998]; Yoshiyuki Tamura, 'IP-Based Nation: Strategy of Japan', in Frederick M Abbott, Carlos M Correa & Peter Drahos (eds), *Emerging Markets and the World Patent Order* (Edward Elgar 2013) 383.

that its decisions are overwhelmingly overruled by the US Supreme Court.<sup>94</sup> This not only contributes to a sense of uncertainty or a lack of faith in the specialised court itself, but also suggests that the issues of over-specialisation or 'tunnel vision' that were discussed in the implementation of the CAFC may have manifested in a way that is outside the strict confines of disputes and appeals and instead speaks to the broader institutional dynamic between the US Supreme Court and the CAFC.

Even considering the type of language that the CAFC has used in judgments, there appears to be a difference in attitude between the CAFC and the US Supreme Court, cementing the perception that the CAFC is a broadly pro-patent court.<sup>95</sup> It is within this function, of modulating or filtering the severity with which the US Supreme Court can approach patent dispute, that the CAFC provides substantial value as a specialised court that sits directly below the apex court. It is also from this perspective that we can see the CAFC and its understanding of the broader industry impact a decision, most evidently in the *Alice* decisions.<sup>96</sup> The subsequent cases that were heard by the CAFC post-*Alice* not only had the effect of minimising or modulating the impact of *Alice* but also in limiting the practical impact of the case for industry more broadly.

The US Supreme Court decided the landmark case of *Alice* in 2014 and caused what amounted to a crisis of faith in the software industry.<sup>97</sup> Academics and practitioners were quick to declare that patents for computer-implemented inventions had been ended and that the approach set out by the US Supreme Court in *Alice* presented an extremely high bar to patentability.<sup>98</sup> The tension between the CAFC and the US Supreme Court, as well as the underlying dialogue happening in *Alice*, comes from the interpretation and application of subject matter eligibility and inventive step.<sup>99</sup> The US Supreme Court had set out a more critical vision for the approach to whether abstract ideas could be patented than that which was seen in the test for inventive step in the earlier case of *Mayo Collaborative Services*, but it took until *Alice* for the US Supreme Court to make a more definitive application specifically in terms of software inventions.<sup>100</sup>

While the US Supreme Court outlined a particularly strict approach in *Alice* through the application of the *Mayo Collaborative Services* framework, the CAFC did not simply accept this narrower standard.<sup>101</sup> Instead, while in the initial aftermath of the *Alice* decision there were certainly much fewer cases that met the standards outlined by the US Supreme Court, the CAFC gradually

<sup>&</sup>lt;sup>94</sup>There is a particularly critical perception of the CAFC (as well as its judges) for its difficult relationship with the US Supreme Court, but also in terms of the stability of its decisions in the frequency with which its decisions are overruled: Adam Feldman, 'Empirical SCOTUS: The Heightened Importance of the Federal Circuit' (SCOTUS Blog, 13 Dec 2018) <www.scotusblog.com/2018/12/empirical-scotus-the-heightened-importance-of-the-federal-circuit/> accessed 28 Sep 2020.

<sup>&</sup>lt;sup>95</sup>Although drawing from much earlier cases, the language of patent law has been much more focused on the idea of 'monopoly holders', rather than 'patent holders': Janice M Mueller, *Mueller on Patent Law: Patentability and Validity* (Kluwer 2012) 1346.

<sup>&</sup>lt;sup>96</sup>Alice Corp v CLS Bank International (2014) 573 US 208.

<sup>&</sup>lt;sup>97</sup>Though it is important to note that both *Alice* and the earlier 2010 US Supreme Court decision in *Bilski v Kappos* did not specifically discuss software patents.

<sup>&</sup>lt;sup>98</sup>'It is clear that the effect of Alice on the landscape of software-related patents, and in particular business method patents, was gargantuan... it became clear immediately after the [US] Supreme Court decision in Alice that the legal position on software and business methods patents changed markedly.': Noam Shemtov, *Beyond the Code: Protection of Non-Textual Features of Software* (Oxford University Press 2017) 172.

<sup>&</sup>lt;sup>99</sup>In Alice Corp v CLS Bank International (2014) 573 US 208, 222, The US Supreme Court established a two-part test, first asking whether the patent under consideration is related to the typically unpatentable fields (such as abstract ideas, mathematical formula). If it is, then the second part of the test considers whether the patented invention contributes, either through its individual elements or through the organisation of the whole, something beyond that unpatentable field and renders it patentable.

<sup>&</sup>lt;sup>100</sup>In *Mayo Collaborative Services v Prometheus Laboratories Inc* (2012) 131 S CT 3027, the US Supreme Court actually did not provide much guidance through the lineage of the 'abstract idea' caselaw, adjusting its position and merely affirming *Diamond v Diehr* and onwards that patent-eligibility would not be denied just from the presence of software in its implementation: Howard B Rockman, *Intellectual Property Law for Engineers, Scientists, and Entrepreneurs* (John Wiley & Sons 2020) 283.

<sup>&</sup>lt;sup>101</sup>Sinan Utku & Alain Strowel, 'Developments Regarding the Patentability of Computer-Implemented Inventions Within the EU and the US: Part I - Introduction and the Legal Problem of Patenting Computer-Implemented Inventions' [2017] European Intellectual Property Review 507.

expanded this approach in subsequent cases to rework the *Mayo Collaborative Services* framework into its present, much more liberal, form.<sup>102</sup> The four subsequent cases that the CAFC dealt with in the same area came to define the now-accepted standard for computer-implemented inventions,<sup>103</sup> but it also had the effect of calming tensions in industry which had increased significantly in the post-*Alice* context.<sup>104</sup>

This emergence of a strong institutional identity of the CAFC can also be found in the IPHC, which had its own struggles in developing an identifiable and separate strong identity, though the process was slightly different to that of the CAFC. Beyond the legal impact of the decisions, the process by which these cases are decided is a significant element of the institutional trajectory of the IPHC. For the IPHC, the Grand Panel system – which itself is reminiscent of the *en banc* hearings of the CAFC – involves cases that are chosen for their technical difficulty or other characteristics to be heard by a panel with the maximum number of judges.<sup>105</sup>

This is an important mechanism for reconciling strands of jurisprudence that are in conflict or are beginning to diverge in some way, though this of course occurs in a context in which there is generally limited variety given the centralised nature of patent appeals in Japan. A dimension of the Grand Panel system that speaks to the institutional identity of the IPHC is that it effectively functions in the same way as in a common law system, endowing a decision with an intangible weight that distinguishes it from other decisions. This effect is especially prominent because of the lack of an explicit precedent system in Japan, and creates a pressure to follow such a case decided by a Grand Panel without a formal framework to deal with how diverging perspectives that emerge can be navigated.

#### Conclusion

The implementation of the IPHC is one of the most significant developments in Japanese intellectual property, not only because of the specialised court it introduced, but also because of the national shift towards the exploitation and protection of intellectual property that it represented. The legal impact in Japan that comes from the IPHC has remained generally limited to supporting the stability of patent rights and creating a space whereby decisions and appeals from other courts and the JPO can be brought together.

This is perhaps more indicative of a legal system in which, particularly for intellectual property rights, there has been a strong current of centralisation that, with the implementation of the IPHC, became more explicit. The soft law contributions of the IPHC have, however, been significant and involve activities that are outside of a dispute context, such as the extensive outreach and educational events that the IPHC is responsible for. The IPHC is a central institution in maintaining the stability of Japanese intellectual property and is fundamental in communicating to both domestic and international businesses a commitment to the robust protection of intellectual property rights.

<sup>&</sup>lt;sup>102</sup> The 2016 Federal Circuit cases discussed above suggest that the Federal Circuit views the Mayo framework in a manner that is more liberal regarding patent eligibility than might otherwise be understood based on just the Mayo and Alice decisions.': *ibid* 508.

<sup>&</sup>lt;sup>103</sup>DDR Holdings LLC v hotels.com LP, (2014) 772 F 3d 1245; Enfish, LLC v Microsoft Corp, (2016) 822 F 3d 1327; Bascom Global Internet Services Inc v AT&T Mobility LLC, AT&T Corp, (2016) 827 F 3d 1341; Amdocs (Israel) Ltd v Openet Telecom Inc, (2016) 841 F 3d 1288; McRo Inc v Bandai Namco Games America Inc, (2016) 837 F 3d 1299.

<sup>&</sup>lt;sup>104</sup>Sinan Utku & Alain Strowel, 'Developments Regarding the Patentability of Computer-Implemented Inventions Within the EU and the US: Part I - Introduction and the Legal Problem of Patenting Computer-Implemented Inventions' [2017] European Intellectual Property Review 507.

<sup>&</sup>lt;sup>105</sup>With the IPHC typically hearing cases with three-judge panels, the Grand Panel sits with five to realise the objective of a *'unified decision in early-stage*': Katsumi Shinohara, 'Outline of the Intellectual Property High Court of Japan' (AIPPI 2005) 131, 145; the CAFC has a system by which a party can request a rehearing of the case *en banc*, which is reserved for cases in which the issues under discussion are particularly important or the court is being requested to depart from established precedent: Federal Rules of Appellate Procedure, rr 35 (a)–(b).

The CAFC is essential in understanding not only why the impact of the IPHC tends to skew towards a more soft-law dynamic, but also how the intra-court relationships can support or undermine the development of patent law generally. The recent cases of the IPHC present an institution that is ready to respond to the needs of technically challenging cases and a sense of judicial innovation – something that extends beyond a strictly constructed patent dispute, high-lighted most recently in the *Apple v Samsung* dispute and the creation of a process that is essentially an interpretation of an amicus curiae system seen in the US. The developments in court procedure also suggest a push towards the type of broader stakeholder engagement that is typical of the US context, encouraging actors from outside the legal profession to broaden the perspectives in the development of intellectual property policy. This becomes increasingly necessary as patent law continues to be of significant national importance and seen as a crucial element of economic development.

The broader stakeholder engagement also has a positive impact on the legitimacy of the decisions rendered by the IPHC, because it can show that decisions are from a more well-rounded process that incorporates the views of the actual users of the intellectual property framework. An explicit approach to the amicus process would also reduce some of the difficulties in the Grand Panel process, which in itself is an important way of ensuring there are no significant divergences between divisions of the court, but suffers from the lack of an explicit framework that outlines criteria for when a Grand Panel should be convened. In the absence of such criteria, there remain concerns over the necessity and effectiveness of these Grand Panels – whether they represent a clarification or are simply a manifestation of internal court politics.

The double-track problem is the last remaining significant threat to further harmonisation in Japanese patent law and its impact extends far beyond the existence of multiple disputes concerning the same patent. The fact that invalidity can now be raised as a consideration in the context of infringement proceedings but only with *inter partes* effect means that the Japanese system now, from a macro perspective, occupies an awkward position that lies between the traditional Continental European tradition of a patent as an administrative function and the more recent influence of US common law and education.

Either approach presents a suitable alternative to the current state of the law and it is simply important that a choice is made. Germany is a clear example of a system that functions well with an exclusive competence for the patent granting authority in considering validity, and the US is perhaps the most prominent jurisdiction in which the judge can redraw the boundaries of the patent as well as invalidate specific elements of a patent claim. The technical expertise of the JPO suggests that a return to the exclusive competence to rule on the validity of the patent with a more developed system of communication between the courts and the JPO would provide the most stability with the minimum of legal upheaval.

The CAFC, as one of the original specialised patent courts, highlights some of the important considerations for the IPHC in its future development. The difference in approach between the IPHC and the JPO regarding inventive step was a close mirror of the US context, where it again highlighted the soft law dynamics that are essential in supporting a functioning patent system. While inventive step appears to be settled in both jurisdictions currently, the most obvious example of institutional tension in the Japanese context is between the JPO and the IPHC in terms of being able to consider the validity of a patent.

The relationship between the CAFC and the US Supreme Court is a clear indication of the importance of maintaining the relationships between institutions because of the negative impact that significant divergences can create. The lessons of the CAFC extend beyond just the Japanese context. The historical, economic, and institutional contexts in which the CAFC was introduced are important for any jurisdiction considering a specialised intellectual property court because simply introducing the court does not ensure that the users of the system will benefit from increased stability or a more technically experienced judiciary. Instead, it is the relationships

and dynamics between the institutions, as well as the staff that sustain them, that have the greatest potential in justifying the implementation of a specialised court in terms of legitimacy and effectiveness.

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