Specialist environmental courts: their objective, integrity and legitimacy

The Hon. Justice Brian J Preston *

This paper explores a particular type of adjudicative institution - specialist environmental courts. Specialist courts are established with the objective that they will be better equipped to resolve the particular types of disputes within the court's specialisation. But to endure over time, they must be regarded as having legitimacy as a type of adjudicative institution. A specialist environmental court's responsiveness to the environmental problems it is charged with resolving will foster its legitimacy as an adjudicative institution. This paper explores how the institutional design of specialist environmental courts, with constitutions, competences and expertises tailored to adjudicate environmental disputes, has evolved over time to better achieve responsive environmental adjudication. However, the core function of the court, being adjudication, must also be responsive to environmental problems. I outline the forms and techniques of legal reasoning used in adjudication, the influence of environmental problems on legal reasoning and how specialist environmental courts are better equipped to adapt the process of adjudication to respond to these influences. I propose that specialist environmental courts that are properly designed and engage in responsive environmental adjudication will have legitimacy and are more likely to endure through changing times.

Keywords: specialist courts, specialist environmental courts, institutional design, adjudication, responsive environmental adjudication, legal reasoning

1. Introduction

This is a conference about enduring courts in changing times. Some individual courts have endured over time. Examples include the Court of King's Bench, now part of the King's Bench Division of the High Court of England and Wales, the Supreme Court of the United States and the Supreme Courts of New South Wales and of Tasmania. This conference marks the bicentenaries of the latter two courts. Many other individual courts, however, have not endured as they were originally constituted. Instead, their constitutional and institutional structure has evolved over time. Many of these evolving courts are of a more specialist nature in that they deal with specialist disputes. Unlike general disputes regulated by well-established laws, specialist disputes and the laws regulating them change more frequently over time. In response, the specialist courts established to adjudicate specialist disputes have changed.

While individual specialist courts might not have endured as an adjudicative institution in themselves, specialist courts as a *type* of adjudicative institution have endured over time. Specialist courts are established with the intention that they will be better equipped to resolve the particular types of disputes within their specialisation. The courts' constitutions, competences and expertises are tailored to fit the

particular types of disputes.[1] As these disputes and the laws regulating them change, the courts' constitutions, competences and expertises must also change.

One particular type of specialist disputes involves environmental problems. These may be referred to as environmental disputes. Environmental problems are complex, polycentric, interdisciplinary, uncertain and changing.[2] Fisher refers to them as involving "hot situations".[3] The law that regulates and resolves disputes involving environmental problems, collectively referred to as environmental law, is itself complex, uncertain and changing. Fisher terms it as "hot law".[4]

Specialist environmental courts are a type of specialist court established to resolve environmental disputes. There have been different forms of specialist environmental courts in the common law world for over 800 years.[5] In the last few decades, there has been a rapid increase in the number of specialist environmental courts. By 2021, there were over 2,116 specialist environmental courts in over 26 countries.[6] This paper explores specialist environmental disputes and how the different specialist courts designed to adjudicate these disputes have changed over time so as to endure as a *type* of adjudicative institution.

For specialist environmental courts to endure over time they must be regarded as having legitimacy as a type of adjudicative institution. All courts need to have legitimacy. Citizens and the state alike will accept the authority of courts and their decisions as binding on them if the courts are viewed as having legitimacy.[7] Gageler explained the importance of judicial legitimacy in this way:

> "'Judicial legitimacy' I take to mean the level of public confidence which needs to exist for a competent and impartial judiciary to do its job of deciding controversies according to law without fear or favour. Judicial legitimacy depends on the public maintaining a level of confidence that controversies will in fact be so decided. It depends on the judiciary being able to draw on what has been described as 'a reservoir of goodwill' that runs deeper than the outcome of judicial resolution of the politically charged controversy of the moment."[8]

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[1] See Peter Cane, *Administrative Tribunals and Adjudication* (Hart Publishing, 2009) for a further discussion on the models, forms, functions and purposes of adjudicative institutions in Australia, the United Kingdom and the United States.

[2] Elizabeth Fisher, 'Environmental Law as 'Hot' Law' (2013) 25 *Journal of Environmental Law* 347, 347, 351.

[3] Ibid 350-354.

[4] Ibid 348-354.

[5] Early examples are the Verderers' Courts established in England in the 13th century to resolve forestry disputes, the Stannary Courts established in Cornwall in the 13th century to resolve tin mining disputes and the Special Fire Courts established in London in 1666 to resolve burnt building disputes.

[6] Linda Sulistiawati et al, *Environmental Courts and Tribunals - 2021: A Guide for Policy Makers* (UNEP, 5 July 2022) Appendix A.

[7] Susan Kenny, 'Maintaining Public Confidence in the Judiciary: A Precarious Equilibrium' (1999) 25 *Monash University Law Review* 209, 210 and Shiri Krebs, Ingrid Nielsen and Russell Smyth, 'What Determines the Institutional Legitimacy of the High Court of Australia?' (2020) 43 *Melbourne University Law Review* 605, 607.

[8] The Hon. Stephen Gageler AC, 'Judicial Legitimacy' (2023) 97 *Australian Law Journal* 28, 28.

How can we measure whether specialist environmental courts have legitimacy? Warnock has advanced an 'interactional theory for legitimacy' that links the legitimacy of a specialist environmental court with its responsiveness to the environmental problems it is charged with resolving.[9] I summarise this theory in part 2. Warnock identified four components that enable responsive environmental adjudication. One of these is the institutional design of the court: the constitution, competences and expertises that the court needs to enable it to engage in responsive environmental adjudication. Getting the institutional design right is complex. That has been the experience in New South Wales. The current specialist environmental court, the Land and Environment Court of New South Wales, has endured for 43 years and is considered to be a leading specialist environmental court. But many different institutional designs of specialist environmental courts had been tried before the Land and Environment Court was established. In part 3, I outline the history of institutional design of specialist environmental courts in New South Wales.

Getting the institutional design of the specialist environmental court right is only one component of achieving responsive environmental adjudication. The court, properly designed, must exercise its core function of adjudicating environmental disputes properly. In part 4, I analyse how the process of adjudication of environmental disputes needs to be responsive to environmental problems. I outline first, the forms and techniques of legal reasoning used in adjudication; second, the influence of environmental problems on the forms and techniques of legal reasoning; and third, how specialist environmental courts are better equipped to respond to this influence by adapting the process of adjudication. Through this analysis, I demonstrate that specialist environmental courts which are properly designed and engage in responsive environmental adjudication have legitimacy and are more likely to endure through changing times.

2. Legitimacy from responsiveness

An effective way to measure the legitimacy of specialist environmental courts is to evaluate their responsiveness to the specific environmental disputes that they are established to resolve. Warnock has developed a theory capable of justifying specialist environmental adjudication. The theory proposes that, in order to attract comprehensive support, specialist environmental adjudication must foster normative legitimacy. Normative legitimacy, Warnock explained, "is created by the shared beliefs of the relevant community".[10] These beliefs will vary between different communities and over time. Nevertheless, Warnock identified that one shared belief which attracts near universal support in all communities "is that integrity in adjudication matters." To have integrity, the adjudicative institution "must be able to respond to the legal and factual context" within which it is working, which includes

[9] Ceri Warnock, *Environmental Courts and Tribunals: Powers, Integrity and the Search for Legitimacy* (Hart Publishing, 2020) 5.
[10] Ibid.

the environmental problems in dispute. The theory, therefore, "is that in order to foster normative legitimacy, environmental adjudication must have legal integrity and legal integrity will be promoted if the adjudicatory body responds to rather than ignores the inherent nature of the problems it is charged with resolving."[11]

Warnock termed this theory an 'interactional theory for legitimacy' because responsive environmental adjudication, which is needed for legal integrity and hence normative legitimacy, requires "contextual interaction". Contextual interaction involves an awareness of context, as the adjective 'contextual' signifies, but also communication that facilitates reciprocal feedback and adaptation, as the noun 'interaction' signifies.[12] Warnock identified four factors or components that enable contextual interaction and hence responsive environmental adjudication. The *first* is identifying the distinctive characteristics of environmental problems. The *second* is acknowledging the impact that those characteristics have on the law and dispute resolution, and the challenges they create for adjudication. The *third* is developing environmental law doctrine, procedure and remedies that respond to those challenges. The *fourth* is identifying and implementing particular adjudicative forms and functions to facilitate this process. This includes establishing courts with particular constitutions, powers and expertises that are better able to respond to, and resolve, environmental problems.[13]

These four components of responsive environmental adjudication interact.[14] An adjudicative institution with a constitution, competences and expertises in resolving environmental problems (the fourth component) will be better able to identify the distinctive characteristics of environmental problems (the first component), acknowledge their impact on the law and dispute resolution and the challenges they create for adjudication (the second component) and develop environmental law doctrine, procedure and remedies that respond to the challenges (the third component).[15]

I will explore three of these four components of responsive environmental adjudication. I will start by exploring the fourth component of institutional design. As I have just noted, adjudicative institutions with constitutions, competences and expertises in resolving environmental problems will be better able to achieve the other three components of responsive environmental adjudication. In part 3, I explore the importance of the institutional design by recounting how the institutional design of specialist environmental courts in New South Wales has evolved, culminating with the Land and Environment Court of NSW. Nevertheless, whilst proper institutional design is necessary, it is not sufficient. A properly designed court needs to achieve the other components of responsive environmental adjudication. In part 4, I will discuss how the process of adjudication of environmental disputes can be

[11] Ibid.
[12] Ibid.
[13] Ibid.
[14] Ibid.
[15] Ibid.

adapted to better achieve the first two components of responsive environmental adjudication, being to identify and respond to the distinctive characteristics of environmental problems. In so doing, the court will develop environmental law jurisprudence (the third component). This is the natural consequence of a properly designed court (the fourth component) achieving the first and second components. Whilst the third component of developing environmental jurisprudence is worthy of its own discussion, as it naturally flows from the achievement of the other components, I will not elaborate on it in this paper.

3. The institutional design to achieve responsive environmental adjudication

Of the four components of responsive environmental adjudication, the fourth component of the institutional design of specialist environmental courts has been most studied. For example, the landmark study, *Greening Justice: Creating and Improving Environmental Courts and Tribunals,* identified twelve structural and operational characteristics, termed 'design decisions' or 'building blocks', which contribute to the success of environmental courts and tribunals.[16] A core object is to design an institution that is better equipped to engage in responsive environmental adjudication. That is not easy. Many different designs have been tried and, when found wanting, replaced with other designs. To illustrate this iterative design process, I will outline the evolving institutional designs of specialist environmental courts in New South Wales.

Before the Land and Environment Court of NSW was established in 1979, there were Local Land Boards, the Land Court of NSW (later renamed the Land Appeal Court of NSW), the Land and Valuation Court of NSW, Valuation Boards of Review, the Board of Subdivision Appeals, Boards of Appeal and the Local Government Appeals Tribunal.[17] These earlier specialist adjudicative institutions were established primarily to resolve three types of environmental disputes: compensation and valuation of land, subdivision, and building and development application disputes. I outline in the following sections the different adjudicative institutions that have been established to resolve these types of disputes and how their institutional design has evolved to better achieve responsive environmental adjudication.

The evolution in institutional design has involved changing three components: the constitution, competences and expertises of the adjudicative institution. The constitution of the adjudicative institution includes the type of institution constituted, such as a court or an administrative tribunal, and

[16] George Pring and Catherine Pring, *Greening Justice: Creating and Improving Environmental Courts and Tribunals* (The Access Initiative, 2009) xiv, 5, 20.
[17] New South Wales, *Parliamentary Debates,* Legislative Council, 21 November 1979, 3345, 3354 (David Landa). See also JG Starke, *Starke's Town and Country Planning in NSW* (Butterworths, 1966) and Murray R Wilcox, *The Law of Land Development in NSW* (Law Book Co, 1967).

its positioning within the judicial hierarchy, such as an inferior court or a superior court of record.[18] The constitution also refers to the institution's jurisdiction and the functions it is authorised to exercise.[19]

The competences of an adjudicative institution include both constitutional and institutional competences. The first refers to the proper role of the institution in the government and governance of the polity. The second concerns the capacity of the institution to exercise its jurisdiction and functions. This includes the processes the institution can use to resolve disputes, such as adjudication, conciliation and mediation.

The expertises of an adjudicative institution are twofold: contributory and interactional expertises. Contributory expertise refers to legal expertise: the set of skills, knowledge and experience that are needed to contribute to the application and development of law.[20] Contributory expertise in environmental law is specialised legal expertise, requiring a broad and deep understanding of environmental law, and the functions and processes of the legal institutions charged with the responsibility of administering environmental law. Interactional expertise refers to the need to interact with other disciplines, including scientific, social, political and economic disciplines, that relate to how environmental problems are conceptualised. There is a need for courts to develop sufficient expertise and literacy in these non-legal disciplines in order to understand and resolve the environmental problems before the courts.[21] The institutional design of a court can incorporate both types of expertise by providing for two types of specialist decision-maker: judges with legal expertise and technical members with expertise in other disciplines of relevance to environmental problems.[22]

Examining the predecessor adjudicative institutions to the Land and Environment Court reveals the changes in the constitutions, competences and expertises of the various institutions, which have been made with the intent to better achieve responsive environmental adjudication.

3.1 Compensation and valuation of land disputes

The first type of dispute involves assessing the compensation payable for the compulsory acquisition of land[23] and valuing land for rating and taxing purposes.[24]

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[18] Brian Opeskin, 'The Relentless Rise of Judicial Specialisation and its Implications for Judicial Systems' (2022) 75 *Current Legal Problems* 137, 145, 153-155 terms this 'hierarchical specialisation'.
[19] Opeskin, ibid 145, 146-147, 151-152 terms these as 'material specialisation' and 'functional specialisation'.
[20] Elizabeth Fisher, 'The Rise of Transnational Environmental Law and the Expertise of Environmental Lawyers' (2012) 1 *Transnational Environmental Law* 43, 48.
[21] Ibid 50.
[22] For a further discussion, see Brian J Preston, 'Chapter 1: The Role of Environmental Courts and Tribunals in Delivering Environmental Justice' in Linda Yanti Sulistiawati, Sroyon Mukherjee and Jolene Lin et al (eds), *ECTs in Asia Pacific* (Brill) (forthcoming).
[23] The current NSW legislation regulating compensation for compulsory acquisition of land is the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW).
[24] The current NSW legislation regulating valuation of land for rating and taxing purposes is the *Valuation of Land Act 1916* (NSW).

The first adjudicative institution established in NSW to resolve compensation and valuation disputes were the Local Land Boards in 1884. [25] The Boards were designed to be Courts of Petty Sessions for the purpose of determining all land and valuation matters previously decided by the Minister for Lands.[26] The institutional design of the Boards was to localise the administration of land law and valuation disputes.[27] Parties had a right to appeal from any decision of a Local Land Board to the Minister for Lands, who could then hear and determine the appeal as in open court.[28] Each Board consisted of three members appointed by the Governor, one of whom was appointed the chairman.[29] Cane identified three bases for appointment of adjudicators: legal qualifications (legal members), specialist knowledge in an area other than law (expert members) and some other basis (lay members).[30] The Local Land Boards were constituted by lay members only, without any contributory or interactional expertise. [31] Although this lack of expertise might have been thought to encourage an impartial perspective, unaffected by expertise in law or other professions relevant to the issues in dispute,[32] it inhibited the Boards' capacity to identify and respond to the distinctive characteristics of the disputes.

In 1889, the Minister's informal court of appeal was replaced by the first specialist court of record, the Land Court of New South Wales.[33] The Land Court was established to ensure the "independence and the freedom from all political control and influence" in the determination of compensation and valuation disputes.[34] The Court was vested with jurisdiction to hear and determine all appeals from Local Land Boards and all matters referred to it by the Minister or the Local Land Boards. In cases of incomplete or new evidence, the Land Court could remit matters back to the relevant Local Land Board with specific orders. The Land Court consisted of a president and two lay members, appointed by the Governor.[35] Despite being a 'court', the president and members were not required to have any contributory or interactional expertise to facilitate their capacity to identify and respond to the distinctive characteristics of the disputes and develop legal doctrine.[36] Questions of law in any case before the Land Court could be referred to the Supreme Court for determination. The Land Court's decision was otherwise conclusive and had the force of a judgment of the Supreme Court of NSW. [37]

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[25] *Crown Lands Act 1884* (NSW) s 11. See also 'Land and Valuation Court' (The Law Reform Commissioner Report 23, 1975) 3.
[26] *Crown Lands Act 1884* s 14.
[27] 'The New South Wales Land Bill 1884' *The Argus* (Melbourne, 16 August 1884) 5. Available at: https://trove.nla.gov.au/newspaper/article/6055472>.
[28] *Crown Lands Act 1884* s 17-19.
[29] *Crown Lands Act 1884* s 11.
[30] Cane (n 1) 91-92.
[31] *Crown Lands Act 1884* s 11.
[32] Cane (n 1) 92.
[33] *Crown Lands Act 1889* (NSW) s 8.
[34] New South Wales, *Parliamentary Debates,* Legislative Council, 28 August 1889, 4521 (Richard O'Connor).
[35] *Crown Lands Act 1889* (NSW) s 8.
[36] New South Wales, *Parliamentary Debates,* Legislative Council, 28 August 1889, 4522 (George Cox).
[37] *Crown Lands Act 1889* s 8 (III)-(VI).

In 1892, the title of the Land Court was altered to the Land Appeal Court of NSW, which better reflected its appellate function.[38] In 1913, the legislature broadened the jurisdiction of the Land Appeal Court.[39] In particular, the Minister could now refer to the Land Appeal Court any decision or recommendation of a Local Land Board, in which the interests or revenues of the Crown may have been injuriously affected, or if it appeared that the Local Land Board had not discharged its duty according to law. [40]

In 1921, the passing of the president of the Land Appeal Court, and a decrease in the number of cases being heard by the Court, prompted the legislature to reconsider the Court's constitution.[41] The Land Appeal Court was abolished and replaced by a new superior court of record with broader jurisdiction, functions and expertise, named the Land and Valuation Court of NSW.[42] The Land and Valuation Court was constituted by a single judge, appointed by the Governor, with the same rank, title, status, precedence, salary and rights as a judge of the Supreme Court.[43] The judge appointed was to be a Supreme or District Court judge, or an experienced practising barrister or solicitor.[44] Cane identified that there is an underlying assumption that a legally trained adjudicator provides "assurance of impartiality and independence of mind".[45] The judge could still elect to sit with court-appointed expert assessors, who had specialised technical expertise and could advise and assist in hearings.[46] Such non-legal expertise is valuable for addressing issues of fact,[47] which are often particularly complex in environmental disputes.[48] The Land and Valuation Court's institutional design thereby incorporated, for the first time, both the benefits of judicial impartiality and legal expertise in determining issues of law and technical expertise in determining issues of fact.[49]

The entire jurisdiction of the Land Appeal Court was transferred to the Land and Valuation Court.[50] Any question of law arising before the Land and Valuation Court could, on the request of the parties or the Court's own motion, be stated for the decision of the Supreme Court, which would be final and conclusive.[51] The Land and Valuation Court was also vested with the jurisdiction to hear all valuation appeals under the *Valuation of Land Act 1916* (NSW), which were previously heard by a judge of the

[38] *Judicial Offices Act of 1892* (NSW) s 2.
[39] *Crown Lands Consolidation Act 1913* (NSW) s 22. The constitution of the Land Appeal Court was set out in s 21 and the Court's general powers and procedures were defined in s 22.
[40] Ibid s 20.
[41] New South Wales, *Parliamentary Debates,* Legislative Assembly, 2 November 1921, 1371 (Edward McTiernan, Attorney-General).
[42] *Land and Valuation Court Act 1921* (NSW) s 3-4.
[43] Ibid s 5.
[44] Ibid s 4(4).
[45] Cane (n 1) 100.
[46] *Land and Valuation Court Act 1921* s 8(f).
[47] Stephen H Legomsky, *Specialized Justice: Courts, Administrative Tribunals and a Cross-National Theory of Specialization* (Clarendon Press, 1990) 9-11.
[48] Fisher (n 2) 351.
[49] Cane (n 1) 92.
[50] McTiernan (n 41) 1371.
[51] *Land and Valuation Court Act 1921* s 17.

District Court. [52] A primary reason for establishing the Land and Valuation Court, and transferring jurisdiction from the District Court, was to achieve valuation consistency,[53] and address the congestion and delay in the District Court.[54]

In 1961, Valuation Boards of Review were established in each district of NSW as an alternative tribunal to the Land and Valuation Court for routine valuation cases.[55] The Boards were constituted by expert members, who were qualified valuers, appointed by the Minister for a term of 3 years.[56] The Boards were vested with the jurisdiction to hear objections against valuations of land made by the Valuer-General.[57] A right of appeal remained to the Land and Valuation Court.[58] A Valuation Board of Review could also refer the objection directly to the Land and Valuation Court for determination as an appeal.[59] The Boards were established to enable the Land and Valuation Court to focus on more complex matters involving substantial questions of legal principle or valuation practice.[60] However, this constitution of an adjudicative tribunal with multiple boards resulted in jurisdictional duplication and their abolition was recommended in 1967.[61]

3.2 Subdivision of land disputes

Land cannot be subdivided in NSW except with statutory approval. Originally, subdivision approval was required under the *Local Government Act 1906* (NSW) and the *Local Government Act 1919* (NSW)[62] and currently a development consent is required under the *Environmental Planning and Assessment Act 1979* (NSW).[63] Before 1945, an applicant for subdivision approval who was dissatisfied with the local council's decision could file an appeal with the District Court to determine the matter.[64] From 1945, this jurisdiction was transferred to the Land and Valuation Court.[65] However, for various reasons, primarily related to cost, many applicants were reluctant to exercise this right of appeal to the Land and Valuation Court.[66]

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[52] Ibid s 23 and see McTiernan (n 41) 1372.
[53] Justice Else-Mitchell, 'The Role and Work of Valuation Boards and Courts in the Community', XIX *Valuer* (1966) 24, 26, 30.
[54] McTiernan (n 41) 1372.
[55] *Valuation of Land and Local Government (Further Amendment) Act 1961* (NSW) s 2, inserting Part III – 'Valuation Boards ss 36A-36M' into the *Valuation of Land Act 1916* (NSW). See also New South Wales, *Parliamentary Debates,* Legislative Assembly, 29 November 1961, 3312 (Patrick Hills).
[56] *Valuation of Land Act 1916* s 36B.
[57] Ibid s 36G. See also Hills (n 55) 3312.
[58] Ibid s 37-38.
[59] Ibid s 36M(1).
[60] Hills (n 55) (3312). See also, Patricia Ryan, 'Court of Hope and False Expectations: Land and Environment Court 21 Years On' (2002) 14(3) *Journal of Environmental Law* 301, 306.
[61] Ryan (n 60) 306.
[62] Part XII of the *Local Government Act 1919*.
[63] Currently there is also a requirement for a subdivision certificate: see Pt 6 Div 6.4.
[64] *Local Government Act 1919* s 341.
[65] *Local Government Amendment Act 1945* (NSW) *(Amendment Act 1945)* s 12(c)(i).
[66] *New South Wales Parliamentary Debates,* Legislative Assembly, 27 February 1958, 2346 (Jack Renshaw).

In 1958, the Board of Subdivision Appeals was established as a cheaper and quicker tribunal to hear subdivision appeals than the Land and Valuation Court.[67] The Board consisted of five expert members, each appointed by the Governor for a term of three years. The members were each to have a particular qualification, with the chairman being an officer of the Department of Local Government, one member being an officer of the Department of Lands and a registered surveyor, another being an engineer nominated by the Institution of Engineers Australia, another being an officer of a council nominated by the Local Government Association of NSW and the Shires Association of NSW, and the last member being a registered surveyor nominated by the Institution of Surveyors of NSW.[68] The Board had the power to make an award to confirm, amend, vary or disallow any of the council's decisions appealed from.[69]

The Board of Subdivision Appeals did not have legal expertise. It could obtain judicial guidance from the Land and Valuation Court by stating a special case for the opinion of the Court on any question of law arising before the Board.[70] The Land and Valuation Court had supervisory jurisdiction over the Board and could set aside an award of the Board, if the Board had misconducted itself, or remit matters where there was an error of law on the face of the award.[71] From 1971, the Board's jurisdiction was transferred to the Local Government Appeals Tribunal.[72] I will discuss the institutional design of the Local Government Appeals Tribunal in the next section.

3.3 Building and development application disputes

There were originally two separate regulatory regimes for development involving the erection of a building, one for building applications and approvals, and another for development applications and consents. For development not involving the erection of a building, such as the carrying out of a work or the use of land or a building or work, only a development consent was required.

3.3.1 Building applications

The requirement for statutory building approvals commenced with the introduction of the *Sydney Building Act 1837* (NSW), which prescribed minimum standards for the construction of buildings and the appointment of building surveyors to approve and supervise the erection of new buildings. When the *Local Government Act 1919* was passed, it delegated the power to regulate the erection and modification of buildings to municipal councils and enshrined the requirement to obtain the approval

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[67] *Local Government (Amendment) Act 1958 (Amendment Act 1958)* s 7(2), amending the *Local Government Act 1919* by inserting Division 3 s 341 into Part XII. See also, Renshaw (n 66) 2346, and *New South Wales Parliamentary Debates,* Legislative Assembly, 26 March 1958, 3087, 3095 (Jack Renshaw).
[68] Ibid s 341A(1)-(2).
[69] Ibid s 341I.
[70] *Local Government Act 1919* s 341K.
[71] *Arbitration Act 1902* (NSW) s 12-19. See further discussion in Wilcox (n 17) 161-163.
[72] *Local Government (Appeals) Amendment Act 1971* (NSW) s 5(e), inserting s 341 in Part XII of the *Local Government Act 1919*.

of a council for any such works.[73] Part XI of the *Local Government Act* contained the building regulation requirements and introduced various standards and conditions for the council to take into consideration when determining a building application.[74] Any applicant seeking approval to erect, alter or use a building could appeal against a council's decision to a District Court Judge with jurisdiction in the relevant area.[75] From 1945, this right of appeal was transferred to the Land and Valuation Court.[76]

In 1948, a specialised Board of Appeal, limited to the City of Sydney, was constituted to hear and determine appeals from council determinations of building applications.[77] The right of appeal for the rest of the State remained to the Land and Valuation Court. The Board of Appeal was constituted by four expert members appointed by the Governor, one of whom was the chairman, and the other three were an architect, a structural engineer and a master builder.[78] Any party who felt aggrieved by a council decision relating to a building application could appeal to the Board of Appeal.[79] An appeal was deemed to be a submission to arbitration under the *Arbitration Act 1902* (NSW), meaning any decision of the Board was final, subject to being referred to the Land and Valuation Court for determination of a question of law.[80]

In 1958, the Board of Appeal for the City of Sydney was replaced with the Cumberland, Newcastle and Wollongong Board of Appeal,[81] and a new Country Board of Appeal was constituted to hear and determine appeals outside of the Sydney metropolitan area.[82] The Country Board of Appeal had five expert members, appointed by the Governor for three years, who were required to be a council officer or have a particular professional qualification as an architect, structural engineer or master builder.[83] Any party who felt aggrieved by any decision of a council on a building application or a council's delay in deciding the application within 40 days, could appeal to the relevant Board.[84] Both Boards of Appeal were deemed to be an arbitrator within the meaning of the *Arbitration Act 1902* and a final right of appeal remained to the Land and Valuation Court for questions of law.[85] Any party dissatisfied with the decision of the Land and Valuation Court had a right of appeal to the Supreme Court.[86] The Boards of

[73] *Local Government Act 1919* s 305-317.
[74] Ibid s 313.
[75] Ibid s 341.
[76] *Amendment Act 1945* s 12(c)(i).
[77] *Local Government (Areas) Act 1948* (NSW) s 26(m), inserting Division 4C - Appeals into Part XI of the *Local Government Act 1919.*
[78] Ibid s 317M.
[79] Ibid s 317U.
[80] Ibid s 317X.
[81] *Amendment Act 1958* ss 7(1)(c)-(d), 7(1)(q), amending 'Division 4C – Appeals, other than Country Appeals' in Pt XI of the *Local Government Act 1919*.
[82] *Amendment Act 1958* s 7(1)(q), inserting 'Division 4D – Country Appeals' into Part XI of the *Local Government Act 1919*.
[83] *Local Government Act 1919* s 317AC.
[84] Ibid s 317AK.
[85] Ibid s 317AN. New South Wales, *Parliamentary Debates,* Legislative Assembly, 20 March 1958, 2879 (Jack Renshaw), and Renshaw (n 67) 3095.
[86] *Land and Valuation Court Act 1921* s 17.

Appeal achieved wide acceptance as "providing a speedy, inexpensive and informal system of appeal" regarding building matters.[87]

3.3.2 Development applications

The first statutory town and country planning system in NSW was introduced in 1945, when Part XIIA, entitled 'Town and Country Planning Schemes', was inserted into the *Local Government Act 1919*[88] to facilitate the orderly regulation of new and existing development.[89] The legislation established a new statutory body, the Cumberland County Council, to coordinate town planning across Sydney.[90] The Cumberland County Council was directed to prepare and submit to the Minister, within 3 years of its constitution, a town planning scheme to regulate development in respect of all land within the County district.[91] In 1948, further legislation was passed requiring all other councils throughout the State to also prepare and submit town planning schemes.[92]

Any development after the introduction of Part XIIA, but prior to the finalisation of the relevant council planning scheme, was referred to and regulated separately as 'interim development'.[93] All development applications, whether under a prescribed planning scheme or for interim development, were determined at first instance by the relevant council.[94] However, from 1945, there was a bifurcation of the appellate system. For development applications under a prescribed planning scheme, any dissatisfied applicant had a right of appeal to the Land and Valuation Court.[95] Any decision of the Land and Valuation Court was final, subject to the supervisory jurisdiction of the Supreme Court.[96] For interim development applications within council districts without a prescribed planning scheme, any dissatisfied applicant had a right of appeal to the Minister. The Minister's decision was final and had the effect of a decision of the council.[97]

The town planning schemes were complex to prepare and, for many councils, took decades to finalise and enter into force. In 1963, the State Planning Authority of NSW was established to co-ordinate the preparation of schemes and determination of interim development applications.[98] The Authority was

[87] *New South Wales Parliamentary Debates,* Legislative Assembly, 18 November 1971, 3043 (Phillip Morton).
[88] *Local Government (Town and Country Planning) Amendment Act 1945* (NSW) s 3, amending *the Local Government Act 1919* by inserting Part XIIA 'Town and Country Planning Schemes'.
[89] *New South Wales Parliamentary Debates,* Legislative Council, 13 February 1945, 1720, 1767 (Minister J Cahill).
[90] *Local Government Act 1919* Division 8, s 342AA.
[91] Ibid s 342AB.
[92] *Local Government (Areas) Act 1948* s 34(1).
[93] *Local Government Act 1919* Part XIIA, Div 7, s 342T.
[94] Ibid s 342U for interim development applications, and s 342N(2) for development applications under a prescribed scheme.
[95] Ibid s 342N(2).
[96] Starke (n 17) 72. See also discussion of the Supreme Court's limited supervisory jurisdiction in *Ex parte Tooth & Co. Ltd.; Re Sydney City Council* (1962) 8 LGRA 273 at 284-5.
[97] *Local Government Act 1919* s 342V(5).
[98] *State Planning Authority Act 1963* (NSW) ss 4(1)(a), 12, and see New South Wales, *Parliamentary Debates,* Legislative Assembly, 10 September 1963, 4856 (Patrick Hills).

constituted by twelve expert members, appointed by the Governor, who were required to be qualified town or country planners, officers of particular government departments, architects or officers of local councils.[99] Due to the high number of interim development applications still being filed, the Authority took over the Minister's appellate jurisdiction in relation to interim development.[100] The Authority had the power to dismiss or allow an interim development application on appeal or, in respect of an application lodged by a government department, submit a report to the Minister containing its recommendations.[101] The decision of the Authority, or the Minister on the Authority's recommendation, was final and had the effect of a decision of the council.[102]

From 1963, there remained two separate appellate jurisdictions regulating development applications: one appeal process in the Land and Valuation Court for appeals under a prescribed planning scheme and another appeal process with the State Planning Authority and the Minister, for interim development appeals. The first process for appeals under a prescribed scheme was unnecessarily costly and time-consuming. Many of the development appeals dealt with by the Land and Valuation Court were not of a legal nature and only required the exercise of an administrative discretion, rather than legal expertise.[103] At the same time, the Boards of Appeal and the Board of Subdivision Appeals were separately adjudicating disputes pertaining to building applications and subdivisions respectively. This fragmented appellate system, and multiple and overlapping jurisdictions for building, development and subdivision applications, created confusion and often resulted in the need to prosecute multiple appeals in different adjudicative institutions in respect of one development.[104]

In 1971, the Local Government Appeals Tribunal was established to replace the appellate jurisdictions exercised by the two Boards of Appeal (for building application appeals), the Board of Subdivision Appeals (for subdivision application appeals), and the State Planning Authority and Land and Valuation Court (for development application appeals).[105] The Tribunal was intended to be accessible, cheap and informal, with enlarged jurisdiction and additional powers, compared to those of the previous Boards and bodies.[106] The Tribunal consisted of expert members, appointed by the Governor, with certain qualifications or expertise as a town or country planner, government official, architect, civil engineer, master builder or surveyor.[107] The Tribunal was vested with the jurisdiction to hear and determine all

[99] Ibid s 4(1)(c).
[100] *Local Government Act 1919* s 342V(5), as amended by *State Planning Authority Act 1963* s 72(v)(i).
[101] Ibid s 342V(3)
[102] Ibid s 342V, as amended by *State Planning Authority Act 1962* s 72(v)(iii).
[103] Morton (n 87) 3043.
[104] Ibid.
[105] *Local Government (Appeals) Amendment Act 1971* (NSW), inserting Part XIIB into the *Local Government Act 1919*. See New South Wales, *Parliamentary Debates*, Legislative Assembly, 23 November 1971, 3137 (Minister Flaherty).
[106] Morton (n 87) 3046.
[107] *Local Government Act 1919* s 342AV(1).

appeals against council decisions under planning schemes,[108] objections against planning schemes,[109] interim development application appeals and objections, [110] building application appeals and objections,[111] and subdivision appeals[112]. Decisions by the Tribunal on questions of fact were final but appeals could be made to the Supreme Court on questions of law.[113] However, the absence of legal expertise amongst the members adjudicating such a broad range of disputes created issues surrounding efficiency and impartiality. The Tribunal was ultimately recommended to be replaced with a specialised superior court with comprehensive jurisdiction across all matters affecting value and development of land and enforcement of planning and related laws, and both legal and technical expertise.[114]

3.4 Rationalization of jurisdiction

In 1979, the remaining specialised adjudicative institutions for resolving disputes about compensation and valuation, subdivision, and building and development applications, being the Land and Valuation Court, Local Government Appeals Tribunal and Valuation Boards of Review, were abolished and replaced by the Land and Environment Court.[115] The Land and Environment Court was established to centralise the broad jurisdiction of its various administrative and judicial predecessors. The Court was established with two principal objectives in mind: rationalisation and specialisation.[116] In relation to rationalisation, there was the desire for a "one stop shop" for environmental, planning and land matters. In relation to specialisation, the Court was vested with wide and exclusive jurisdiction, broader than that exercised by its predecessors, in relation to environmental, planning and land matters.[117] The Court's jurisdiction includes planning, building, land tenure, valuation, pollution, heritage, Aboriginal land claims and mining law. The Court is equipped with many different functions to resolve such a wide range of environmental disputes. This rationalisation and specialisation assists the Court to effectively and efficiently resolve environmental disputes. This enhances the Court's normative legitimacy.

The Court was designed to be a specialist adjudicative institution, with specialist competences and expertises. The Court is constituted with both judges with expertise in the law and commissioners with

[108] Ibid 342N(2).
[109] Ibid s 342NA
[110] Ibid ss 342V, 342VA.
[111] Ibid ss 317L, 317M
[112] Ibid s 341.
[113] Ibid s 342BK.
[114] New South Wales*, Parliamentary Debates,* Legislative Assembly, 14 November 1979, 3047 (William Haigh).
[115] For a comprehensive study of the Land and Environment Court, see Elizabeth Fisher and Brian Preston (eds) *An Environmental Court in Action: Function, Doctrine and Process* (Hart Publishing, 2022). See also Brian J Preston, 'Operating an environment court: The experience of the Land and Environment Court of New South Wales' (2008) 25 *Environmental and Planning Law Journal* 385, Brian J Preston, 'Benefits of Judicial Specialization in Environmental Law: The Land and Environment Court of New South Wales' (2012) 29(2) *Pace Environmental Law Review* 396 and Brian J Preston, 'The Land and Environment Court of New South Wales: A Very Short History of an Environmental Court in Action' (2020) 94(8) *Australian Law Journal* 631.
[116] Preston, 'Operating an environment court: The experience of the Land and Environment Court of New South Wales' (n 115) 387-388.
[117] Ibid and see *Land and Environment Court Act 1979* (NSW) ss 16, 71.

special knowledge and expertise in the scientific and technical aspects of environmental problems.[118] This enables the Court to understand and adjudicate both the legal and technical aspects of environmental problems.[119] The Court is also constituted to combine judicial and administrative dispute-resolution techniques.[120] The Court has adopted different processes for exercising its jurisdictions and functions to resolve environmental disputes.[121] These include not only adjudication but also the consensual mechanisms of conciliation and mediation. This capacity for pluralistic dispute resolution was not a feature of the Court's predecessors. These competences and expertises enable it to better exercise its specialist jurisdictions and functions.[122] This has enabled the Court to achieve responsive environmental adjudication and endure through changing times.[123]

This analysis of the predecessors to the Land and Environment Court provides insight into how the institutional design of the Court (the fourth component) has evolved over time to better enable the Court to implement the other three components of responsive environmental adjudication.[124] It is to the process of adjudication that I now turn.

4. The process of adjudication of environmental disputes

In the preceding part, I discussed the fourth component of responsive environmental adjudication of the institutional design of specialist environmental courts, focusing on the history of various specialist environmental adjudicative institutions that have existed in New South Wales and how the design of those institutions has evolved over time. Designing a specialist environmental court with a constitution, competences and expertises to better adjudicate environmental disputes is necessary for the court to have normative legitimacy but it is insufficient. The design must be operationalised. This requires the specialist environmental court in practice to identify the distinctive characteristics of the environmental problems before the court and the challenges they create for adjudication of these problems; to adapt the process of adjudication to respond to those challenges; and to develop legal doctrine, procedure and remedies that are responsive to the problems through the adjudication of the problems. As I have noted, the third of these components flows from the first two components. In order to develop environmental law doctrine, procedure and remedies, environmental adjudication needs to respond to the

[118] *Land and Environment Court Act 1979* (NSW) ss 8, 12, 38, and see Landa (n 17) 3350.
[119] Cane (n 1) 124-125.
[120] Landa (n 17) 3350.
[121] Brian Preston, 'The Many Facets of a Cutting-Edge Court: A Study of the Land and Environment Court of NSW' in Fisher and Preston (n 115) 25-28. See further Brian Preston, 'The Land and Environment Court of NSW: Moving Towards a Multi-Door courthouse – Part 1' (2008) 19 *Australian Dispute Resolution Journal* 72, Brian Preston, 'The Land and Environment Court of NSW: Moving Towards a Multi-door Courthouse – Part II' (2008) 19 *Australian Dispute Resolution Journal* 144, Mary Walker, 'Alternative Dispute Resolution in the Land and Environment Court of NSW' in Fisher and Preston (n 115) 17-25.
[122] Preston, 'The Many Facets of a Cutting-Edge Court: A Study of the Land and Environment Court of NSW' (n 121) 16-17.
[123] Ibid 9-12.
[124] Warnock (n 9) 54-59, and Ceri Warnock, 'The Land and Environment Court of New South Wales: Normative Legitimacy and Adjudicative Integrity' in Fisher and Preston (n 115) 289-306.

characteristics of the environmental problem to be adjudicated and the challenges that those characteristics create for adjudication. It is to these first two components of responsive environmental adjudication I now turn. I will start by explaining the forms and techniques of legal reasoning used in the process of adjudication of environmental disputes. I will then examine how environmental problems influence each step in the process of adjudication.

4.1 Forms and techniques of legal reasoning used in adjudication

In the preceding parts, I have noted that the adjudicative process needs to respond to the distinctive characteristics of environmental problems. This adaptation of the adjudicative process is particular not general. The adjudication of any environmental dispute employs the same forms and techniques of legal reasoning used in the adjudication of all disputes, but tailors them to the specific dispute. Adaptation does not involve the creation of a new adjudicative process.

The adjudication of environmental disputes involves the same forms of legal reasoning as are used in the adjudication of any other type of dispute. These are the four forms of deduction, induction, abduction and analogy. These four forms all involve drawing an inference from premises, but they differ in how they do so.

Deduction moves from the general to the specific. Deduction starts with a general statement or hypothesis, moves to an observational statement, and draws an inference or conclusion from those statements. A common form of deduction is the syllogism, in which two statements – a major premise and a minor premise – are used to reach a logical conclusion. A deductive conclusion will always be true if the premises are true.

Induction is the converse. It moves from the specific to the general. Induction starts with making observations, discerning a pattern and making a generalisation, then infers a hypothesis or theory that explains those observations. The reliability of an inductive conclusion depends on the quality of the observations.

Abduction, like induction, moves from the specific to the general, but it differs in the evidential relation between the premises and the conclusion. An abduction is an inference to an explanation.[125] Abduction is an argument whose premise is some phenomenon to be explained and whose conclusion is an explanation of that phenomenon.[126] The phenomenon could be an incomplete set of observations and the conclusion could be the best explanation for those observational data. Abductive reasoning can be

[125] Scott Brewer, 'First Among Equals: Abduction in Legal Argument From a Logocentric Point of View' in Mark McBride and James Penner (eds) *New Essays on the Nature of Legal Reasoning* (Hart Publishing, 2022) 281, 299-300.
[126] Ibid 284.

useful in framing the hypothesis to be tested. This could be the hypothesis that is to be used in deductive or inductive reasoning.

Analogy involves a comparison between certain things to identify similarities. The perceived similarities between things are used as the basis to infer some further similarity between the things that is yet to be observed. The reliability of the analogical conclusion is dependent on the relevance of the known similarities to the similarity inferred in the conclusion, the degree of similarity between the things, and the number and variety of instances that form the basis of the analogy.

The overarching form of reasoning used in the adjudication of all disputes is deduction. This takes the form of a syllogism involving finding the law that is applicable to the dispute as the major premise, finding the facts relevant to that law as the minor premise and drawing a conclusion from the premises by deductive reasoning. That syllogism is as applicable to the adjudication of environmental disputes as it is to the adjudication of non-environmental disputes.

The formulation of the premises of the syllogism involves other forms of reasoning. Inductive, abductive or analogical reasoning may be employed in formulating the major premise of the applicable law. Inductive, abductive or deductive reasoning may be used in formulating the minor premise of the relevant facts. Whilst the drawing of a conclusion from the major and minor premises involves deductive reasoning, the determination of what relief or sanction might follow from that conclusion involves abductive reasoning. Again, these forms of reasoning are equally applicable in the adjudication of environmental disputes as they are in the adjudication of non-environmental disputes.

There is a difference, however, in how these forms of reasoning are applied in the adjudication of environmental disputes. The distinctive characteristics of environmental problems impact on the formulation of the premises of the syllogism and any remedies or sanctions flowing from the conclusion drawn from the premises in ways that are different to how non-environmental problems impact on the premises and the remedies or sanctions.

Likewise, the techniques of legal reasoning used in the formulation of the premises of the syllogism, such as the principles of statutory interpretation used to interpret the applicable statutory law that forms the major premise, are the same for environmental and non-environmental disputes. However, the choice and application of the techniques of legal reasoning that are appropriate will be affected by the nature and characteristics of the dispute. The distinctive characteristics of environmental problems may call for the selection of different techniques or for different applications of techniques than would be appropriate for non-environmental problems.

In the next section, I will explain how environmental problems influence the forms and techniques of legal reasoning used in the adjudication of environmental disputes.

4.2 The influence of environmental problems on the forms and techniques of legal reasoning

Adjudication involves the determination of disputes by the reasoned application of the law to the facts of the dispute.[127] At the overarching level, adjudication takes the form of a syllogism with this pattern:[128]

1. All fact situations of type A entail legal consequence B.
2. This is a fact situation of type A.
3. Therefore, the legal consequence is B.

The first step involves formulating the major premise of the rule of law that is to be applied to adjudicate the dispute. This step is necessarily the first step in adjudication as courts are bound to decide cases according to law. The law will be that which is applicable to adjudicate the particular dispute before the court. The second step involves formulating the minor premise of the facts that are relevant to the law found in the first step. This step is necessary because the law cannot be applied in abstract – it must be applied to the particular facts of the dispute. The third step involves drawing an inference or conclusion from those premises by deductive reasoning so as to determine the dispute and craft any appropriate remedy or sanction.

Although this syllogistic form of reasoning applies to the adjudication of all disputes, how each step in the syllogism is undertaken will depend on the particular dispute before the court, including whether it is an environmental dispute. There are choices to be made in the formulation of each of the premises and in the crafting of any appropriate remedy or sanction. Where there are available competing but equally authoritative premises that will lead to different conclusions, a choice needs to be made between those premises. This choice needs to be justified.[129] The choices will be affected by the judge's appreciation of the distinctiveness of environmental problems and the need for responsiveness to those problems.

The existence of these choices leads to uncertainty in predicting how a judge may adjudicate an environmental dispute. Uncertainty does not arise in the deduction from the premises. In a properly framed syllogism, the conclusion will validly follow from the premises.[130] Rather, uncertainty arises in the choices to be made by the judge in the formulation of the premises and in any remedy or sanction that may be granted as a consequence of the conclusion that follows from the premises. Uncertainty is an inevitable consequence of the existence of choices in formulating the premises and granting any remedy or sanction. This explains why judges are more concerned with what should be the premises

[127] Lon L Fuller, 'The Forms and Limits of Adjudication' (1978) 92 *Harvard Law Review* 353, 371.
[128] Patrick J Fitzgerald, *Salmond on Jurisprudence* (Sweet & Maxwell, 12th ed, 1966) 183.
[129] Karl Llewellyn, *Jurisprudence: Realism in Theory and Practice* (The University of Chicago Press, 1962) 70.
[130] Ibid.

and what results those premises bring about than the deductive conclusion that follows from the premises. As Stone observed:[131]

> "What interests lawyers, judges, legislators and others concerned with law, more often than not, is not so much whether a conclusion follows from certain premises. They are concerned, rather, with (1) whether (on the side of finding the facts, and the inquiries which deal with this) those premises are true, that is, correspond to what exists or occurs; or (2) whether (on the side of finding "the law") the premises as formulated are precise, have authority as law, and are the only available premises which have the authority; or (3) whether (on the side of ethics) the results which they bring about are *just*, that is consistent, in contents or objects or effects, with whatever theory of justice is adopted. Even if an argument from certain premises is valid, it does not follow that the conclusion is true, or is law, or is just; the conclusion may still be untrue if the major premise was false; it may still not be law, if the premise was not an exhaustive and precise statement of the law; and it may still not be just if the premise was not just."

In a similar vein, Llewellyn referred to the syllogism as a "a logically perfect structure" and "a sound technical ladder to reach the result" and the two premises of the syllogism as the two feet of the ladder.[132] He warned that uncertainty in either of the premises would make the ladder of logic unstable:[133]

> "Of a truth the logic of law, however indebted it may be to formal logic for method, however nice it may be in its middle reaches, loses all sharp precision, all firm footing, in the two battlegrounds in which the two feet of the ladder stand."

Uncertainty in formulating the two premises of the syllogism may be more pronounced in environmental disputes, due to the complex, polycentric, interdisciplinary, uncertain and changing nature of environmental problems, which affects the formulation of the minor premise, and of the laws regulating them, which affects the formulation of the major premise. In the following subsections, I will elaborate on and illustrate the choices involved in the formulation of the premises and any remedy or sanction that might result from the conclusion drawn from the premises and the uncertainty that those choices raise.

4.2.1 The formulation of the major premise of the law

The first step in the syllogism is formulating the major premise of the rule of law to be applied in the adjudication of the particular dispute before the court. This involves three steps: finding the law to be applied, formulating that law in the form of the major premise and interpreting that law as so formulated. This is not a search "for a rule which holds, at large, but for a rule which holds good *for the matter in hand*."[134] The court can only perform its duty to determine the dispute according to law if the law to be applied to that dispute is first found, formulated and interpreted.

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[131] Julius Stone, *Legal System and Lawyers' Reasoning* (Maitland Publications, 1964) 55-56.
[132] Karl Llewellyn, *The Bramble Bush: On Our Law and Its Study* (Oceana Publications, 1960) 79-80.
[133] Ibid 80.
[134] Ibid 82.

In finding the law to be applied, recourse is first had to the multiple sources of existing law. First, there is the substantive law that has been invoked by the claim before the court. For judicial review claims, this will be the subject matter legislation under which the impugned decision purports to have been made. This might be planning or environmental legislation. To this legislation might be added the common law or statute law imposing public law procedural duties, such as the duty to accord procedural fairness in the exercise of statutory functions under planning or environmental legislation. For criminal law, the law will be the legislation against which an offence has been committed. This might be the particular planning or environmental legislation with which the offender has not complied, and for which non-compliance, an offence is prescribed. It could be generic crimes legislation that prescribes a broad range of offences.

Second, there may be overarching substantive law. This might be constitutional law or human rights law, the principle of legality, or the various principles that together make up the rule of law.[135]

Third, there is procedural law. This will include administrative, civil and criminal procedure legislation. There will be the law regulating court practice and procedure, both that which applies in all courts,[136] and that which applies in the particular court.[137] There will be legislation setting out the rules of evidence applicable to the administrative, civil or criminal law proceedings.[138] There will be legislation setting out the applicable rules and principles for the interpretation of legislation.[139]

Fourth, there may be judicial precedents, both authoritative prior decisions that a judge is bound to follow and persuasive precedents that a judge is not bound to follow but may consider and give such weight as seems appropriate.[140]

The judge will look to these sources of existing law to find the rule of law that is adequate and applicable to adjudicate the particular dispute. This may involve fitting the existing sources of law together.[141] Inconsistencies between legislation, both primary and delegated, may need to be resolved, including determining which legislation is to prevail. Legislation may modify the common law, but equally it may accommodate the common law. An example of the latter is where the rules of procedural fairness are presumed to apply to the exercise of statutory powers. The principle of legality and principles of the rule of law may govern the exercise of legislative and executive functions. The interaction of these

[135] Ceri Warnock and Brian J Preston, 'Climate Change, Fundamental Rights, and Statutory Interpretation' (2023) 35(1) *Journal of Environmental Law* 1.
[136] Such as the *Civil Procedure Act 2005* (NSW), Uniform Civil Procedure Rules 2005 (NSW) and *Criminal Procedure Act 1986* (NSW).
[137] Such as the *Land and Environment Court Act 1979* (NSW) and Land and Environment Court Rules 2007 (NSW).
[138] Such as the *Evidence Act 1995* (NSW).
[139] Such as the *Interpretation Act 1987* (NSW).
[140] Fitzgerald (n 128) 145. See also Rupert Cross and JW Harris, *Precedent in English Law* (Clarendon Press, 4th ed, 1991) 165-185 on precedent as a source of law, and Frederick Schauer, 'Precedent' (1987) 39(3) *Stanford Law Review* 571.
[141] Llewellyn (n 132) 89.

principles with exercises of legislative and executive functions may need to be resolved.[142] Prior judicial decisions may have laid down precedents as to the interpretation of the law, especially statute law, which must be applied. The judge extracts a rule of law for the case at hand from previous decisions by induction.[143] Through such a process of reconciling, resolving and fitting together the existing sources of law, the judge finds the rule of law that is to be applied to the case at hand. This overall process may be seen to involve abductive reasoning – fitting the sources of law to the best explanation of the rule of law that is to be used for the adjudication of the case before the court.

If the existing sources of law are not adequate to find the applicable rule of law, the judge must supply a new legal rule to formulate the major premise. The formulation of a new legal rule is not at large or at the whim of the judge. The process of supplying a new legal rule must be done according to orthodox legal method and by extension from existing sources of law. [144] Cardozo identified four methods: the rule of analogy (the method of philosophy); the line of historical development (the method of evolution); the line of customs of the community (the method of tradition); and the lines of justice, morals and social welfare and the mores of the day (the method of sociology).[145]

In using the rule of analogy, the judge may look to other existing law, which although not directly applicable, may be a source from which a new legal rule can be supplied by analogical reasoning. The new legal rule might be found in persuasive domestic precedents on closely related topics.[146] It might be found in persuasive foreign decisions that show how courts in other jurisdictions have solved the problem in question.[147] As Fuller observed, "judges of the common law have always drawn their general rules of law from a variety of sources and with a rather free disregard for political and jurisdictional boundaries."[148] The value of foreign decisions depends on the persuasive force of their reasoning.[149] The increasing globalisation of environmental law and the harmonisation of international and national law make reference to international and foreign sources of law of assistance.[150] It may be found in legal

[142] Warnock and Preston (n 135)d, and Brian Preston and Nicola Silbert, 'Trends in Human Rights-Based Climate Litigation: Pathways for Litigation in Australia' (2023) 49 *Monash University Law Review* (forthcoming).
[143] Cross and Harris (n 140) 191.
[144] Brian J Preston, 'The Art of Judging Environmental Disputes' (2008) 12 *Southern Cross University Law Review* 103, 111-115.
[145] Benjamin Cardozo, *The Nature of the Judicial Process* (Yale University Press, 1921) 30-31.
[146] Fitzgerald (n 128) 185-186.
[147] Ibid 186, and see Aharon Barak, 'A Judge on Judging: The Role of a Supreme Court in a Democracy' (2002) 116 *Harvard Law Review* 19, 114.
[148] Lon L Fuller, *Anatomy of the Law* (Penguin, 1971) 138.
[149] Sir Anthony Mason, 'Future Directions in Australian Law' in Geoffrey Lindell (ed), *The Mason Papers* (The Federation Press, 2007) 17.
[150] Sir Anthony Mason, 'The Influence of International and Transnational Law on Australian Municipal Law', in Lindell (n 149) 269-273, and Brian Preston and Charlotte Hanson, 'The Globalisation and Harmonisation of Environmental Law: An Australian Perspective' (2013) 16 *Asia Pacific Journal of Environmental Law* 1.

academic writing. But for this academic writing to be of assistance, it needs to engage with what judges do and how they adjudicate.[151]

Having considered the existing law on related topics in both domestic and foreign sources of law, the judge develops competing logical extensions of the potentially applicable legal rule to meet the new circumstances of the case at hand and makes a choice.[152] As I have noted, one method of developing logical extensions is to reason by analogy. Levi suggested that the basic pattern of legal reasoning is reasoning by example, that is reasoning from case to case.[153] Levi described analogical reasoning as "a three-step process described by the doctrine of precedent in which a proposition descriptive of the first case is made into a rule of law and then applied to a next similar situation. The steps are these: similarity is seen between cases; next the rule of law inherent in the first case is announced; then the rule of law is made applicable to the second case."[154]

Where no binding precedent applies, a rule of law described in an earlier case or line of cases might be extended so as to apply to the case at hand because of "resemblances which can reasonably be defended as both legally relevant and sufficiently close".[155] It is the judge's task to determine the legally relevant similarities and differences. Analogical reasoning has a logic about it in that it follows "the line of logical progression".[156] The new legal rule will be a step in an "evolutionary process or continuum".[157] The new legal rule should maintain "the logic or the symmetry of the law"[158] and uphold integrity in law.[159]

Apart from using the rule of analogy, Cardozo identified other methods to guide the selection of a new legal rule to be applied to the case at hand. One of these is what Cardozo termed the method of sociology, selecting the new legal rule along the lines of justice, morals, social welfare or the mores of the day. Salmond stated that, in cases involving novel points of law, the judge must look not only at existing law on related topics (so as to apply the rule of analogy), but also at "the practical social results of any decision [the judge] makes and at the requirements of fairness and justice".[160] Similarly, Mason stated that judges "must have an eye to the justice of a rule, to the fairness and the practical efficacy of its operation in the circumstances of contemporary society".[161] Earlier, Mason had observed: "Our

[151] Lord Burrows, 'Judges and Academics, and the Endless Road to Unattainable Perfection', The Lionel Cohen Lecture (2021) 5-7.
[152] Louis L Jaffe, *English and American Judges as Lawmakers* (Clarendon Press, 1969) 36.
[153] Edward H Levi, *An Introduction to Legal Reasoning* (University of Chicago Press, 1949) 1.
[154] Ibid 1-2. See also Cross and Harris (n 140) 192-196.
[155] H.L.A Hart, *The Concept of Law* (Oxford University Press, 2nd ed, 1994) 127.
[156] Cardozo (n 145) 30.
[157] Sir Anthony Mason, 'The Role of the Judge at the Turn of the Century', in Lindell (n 149) 56-57.
[158] Albert Venn Dicey, *Lectures on the relation between law and public opinion in England during the nineteenth century* (Macmillan, 2nd ed, 1963) 364.
[159] Ronald Dworkin, *Law's Empire* (Hart Publishing, 1998), see ch 7 in particular.
[160] Fitzgerald (n 128) 188.
[161] Mason (n 149) 21.

courts have an obligation to shape principles of law that are suited to the conditions and circumstances of Australian society and lead to decisions that are just and fair."[162]

Lord Goff stated that the most potent influence upon a court in formulating a statement of principle is the desired result in the particular case before the court. The desired result "consists of the perception of the just solution in legal terms, satisfying both the gut and the intellect." He continued: "It is in the formulation, if necessary, the adaptation, of legal principle to embrace that just solution that we can see not only the beneficial influence of facts upon the law, but also the useful impact of practical experience upon the work of practising lawyers in the development of legal principles."[163]

Sometimes, the factors raised by these methods to supply a new legal rule point to the same conclusion. Other times, the methods point to different conclusions. In this event, the judge will need to weigh the factors one against the other and decide between them. Salmond noted that "the rationality of the judicial process in such cases consists in fact of explicitly and consciously weighing the pros and cons in order to arrive at a conclusion".[164] This involves abductive reasoning, drawing an inference from these competing factors to the best explanation of the new legal rule.

The judge's formulation of the major premise of the syllogism, by applying the existing law or supplying a new legal rule, cannot be derived from legal materials only. By legal materials, I mean materials that are wholly internal to the law. This is evident in supplying a new legal rule. That new legal rule cannot be formulated by deductive reasoning from the existing law, as factors external to the law influence the choice and framing of the new legal rule.[165] But it is also true in applying an existing legal rule. The selection of one or more legal rules from existing sources of law is an evaluative one. True, there are accepted rules of legal method guiding that selection, but choices still need to be made. In making this choice, the judge will be guided not only by the legal materials but also by societal influences. The choice of which existing legal rule is appropriate cannot be made by deductive reasoning from the legal materials themselves.

This was the insight of the legal realists. They challenged the law's autonomy. Oliver Wendell Holmes insisted that the premises on which legal conclusions rely are not wholly internal to the law but depend on the prevailing social attitudes at a particular time and place. These attitudes shape the formulation of the premises of legal argument. For this reason, a large part of the law "is open to reconsideration upon

[162] 'Swearing in of Sir Anthony Mason as Chief Justice' (1987) 162 CLR x. For a further discussion, see Barbara McDonald et al (eds), *Dynamic and Principled: The Influence of Sir Anthony Mason* (Federation Press, 2022) 2, and Stephen Gageler, 'The Coming of Age of Australian Law' in McDonald et al (eds) 8-37.
[163] Robert Goff, 'The Search for Principle' in William Swadling and Gareth Jones (eds) *Essays in Honour of Lord Goff of Chieveley* (Oxford University Press, 1983) 325.
[164] Fitzgerald (n 128) 188.
[165] Julius Stone, *The Province and Function of Law* (Harvard University Press, 1961) 139-140.

a slight change in the habit of the public mind."[166] The law to be applied cannot be derived from the legal materials alone or by logical method:

> "Behind the logical form lies a judgment as to the relative worth and importance of competing legislative grounds, often an inarticulate and unconscious judgment, it is true, and yet the very root and nerve of the whole proceeding."[167]

For Llewellyn, the key to law's certainty was the recognition that these factors external to the legal materials themselves were legitimately part of the law. He conceived the law as consisting of not only "*rule*-stuff, the word-clad and word-limited authoritative formulas", but also a "body of ideals and idealizations which the lawmen often use without putting or seeing them in words at all."[168]

For Frank, lying behind the formal legal rules enunciated in the courts' decisions, the "paper rules", are the "'real rules' descriptive of uniformities or regularities in actual judicial behaviour".[169] Frank explored "the stimuli which make a judge feel that he should try to justify one conclusion rather than another."[170] The existing rules and principles of law are one class of stimuli but "there are many others, concealed or unrevealed...".[171] The "political, economic and moral prejudices" of the judge are others, although Frank considered these categories to be "too gross, too crude, too wide".[172] The judges are also influenced by "the hidden factors in the inferences and opinions of ordinary men", factors which are "multitudinous and complicated" and depend on "peculiarly individual traits of the persons whose inferences and opinions are to be explained".[173]

In the various ways I have discussed, there can be seen to be leeways of choice in developing the law. But judges are not free to use these leeways as they please. Judges are controlled by the tradition of their office, the legal system and accepted legal method with regard to how they use these leeways. As Llewellyn pointed out, judges "operate in and respond to traditions, and especially to such traditions as are offered to them by the crafts they follow. Tradition grips them, shapes them, limits them, guides them…".[174] Judges can only use leeways of choice "*as permitted* by the law".[175]

Cardozo spoke poetically of these constraints on judicial freedom of choice:[176]

> "The judge, even when he is free, is still not wholly free. He is not to innovate at pleasure. He is not a knight-errant roaming at will in pursuit of his own ideal of beauty or of goodness. He

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[166] Oliver Wendell Holmes, 'The Path of the Law' (1897) 10 *Harvard Law Review* 457, 466.
[167] Ibid.
[168] Karl Llewellyn, *The Theory of Rules* (University of Chicago Press, 2011) 50.
[169] Jerome Frank, *Law and the Modern Mind* (Stevens & Sons, 1949) Preface to Sixth Printing, viii.
[170] Ibid 104.
[171] Ibid 104-105.
[172] Ibid 105.
[173] Ibid 105-106.
[174] Karl Llewellyn, *The Common Law Tradition: Deciding Appeals* (Little, Brown and Co, 1960) 53.
[175] Llewellyn (n 132) 187.
[176] Cardozo (n 145) 141.

> is to draw his inspiration from consecrated principles. He is not to yield to spasmodic sentiment, to vague and unregulated benevolence. He is to exercise a discretion informed by tradition, methodized by analogy, disciplined by system, and subordinated to 'the primordial necessity of order in the social life'."

In a similar vein, Mason observed that "judicial freedom of choice is restrained by our efforts to ensure that judicial development of the law, though responding dynamically to the needs of society, is principled, orderly and evolutionary in character."[177]

Once the law is found, the second step is to formulate a rule of law as the major premise. This is necessary to avoid presentation of an argument whose logical form is not explicit. This would be an enthymeme – an argument in which one premise is not explicitly stated.[178] The explicit articulation of the major premise as the rule of law to be applied is critical to the judge's determination of the case according to law. From that premise, proceeds the chain of reasoning to the conclusion. The finding of the facts of the minor premise is framed by the explicit formulation of the major premise. The deductive conclusion derives from the major and minor premises. Hence, if the major premise is defective, "because it misstates or assumes an incorrect or incomplete proposition of law", the conclusion may be erroneous.[179]

The form of the rule of law that is the major premise is often conditional, with an 'if… then' structure. Consider this formulation: if {A, B, C, D, E}, then F. This formulation could describe different rules of law. One rule might be that if a person occupying position A interacts with a person occupying position B, in circumstances C, and they perform acts D and E respectively, legal consequence F follows.[180] A formulation of the rule of law for the major premise in this conditional form would frame the finding of the facts of the minor premise. In the example I have given, factual findings would be required of whether the particular persons are in the positions A and B respectively, the particular circumstances fall within circumstances C and the particular persons have performed or are performing acts D and E respectively. If these factual findings arise, then a finding of legal consequence F follows.

Another rule described by the formulation (if {A, B, C, D, E}, then F) might describe this environmental offence: if a person in position A performs act B in relation to substance C with a state of mind D, in a manner that has factual consequence E, legal consequence F will follow. This formulation would describe the rule of law for the offence of disposal of waste under s 115(1) of the *Protection of the Environment Operations Act 1997* (NSW). That offence is:

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[177] McDonald et al (n 162) 2.
[178] Brewer (n 125) 281, 290.
[179] William Gummow and Aryan Mohseni, 'The selection of a defective major premise' (2023) 53 *Australian Bar Review* 11, 11.
[180] Sundram P Soosay, 'Thinking Like a Lawyer: An Introduction to Common Law Method' in Mark McBride and James Penner (eds) *New Essays on the Nature of Legal Reasoning* (Hart Publishing, 2022) 201, 212-213.

> "If a person wilfully or negligently disposes of waste in a manner that harms or is likely to harm the environment –
>
> (a) the person, and
>
> (b) if the person is not the owner of the waste, the owner,
>
> are each guilty of an offence."

The formulation of a rule of law may generate the need to formulate a subsidiary rule of law. For example, the formulation of a rule of law that is an offence might give rise to the need to formulate a rule of law that is a defence to the offence. In the example of the offence of disposal of waste, a defence of lawful authority may arise. Section 115(2) of the *Protection of the Environment Operations Act 1997* provides:

> "It is a defence in any proceedings against a person for an offence under this section if the person establishes that the waste was disposed of with lawful authority."

This defence may be formulated in this form: if a person in position A establishes that performing act B in relation to substance C had legal status D, legal consequence E will follow.

Again, it can be seen how these formulations of the offence and the defence frame the fact-finding for the minor premise. For example, for the offence, the facts to be found are that the person who is in position A, performed the act of disposal that is act B in relation to waste that is substance C, wilfully or negligently that is state of mind D, and in a manner that harms or is likely to harm the environment that is factual consequence E. For the defence, the facts to be found are that the person in position A performed the act of disposal that is act B in relation to waste that is substance C but with lawful authority that is legal status D.

The formulation of the rule of law as the major premise involves, among other things, selection of the appropriate level of abstraction. Selecting the level of abstraction at which the rule of law, and its component terms, are to be characterised involves normative considerations.[181] These normative considerations may suggest characterisation at different levels of abstraction. The judge needs to make a choice as to what level of abstraction is appropriate.

The existence of choices in the formulation of the major premise reveals that the "directive force of logic does not always exert itself… along a single and unobstructed path".[182] As Stone observed, "the mere fact that the conclusion can be drawn from them [the premises] does not *necessarily* even then mean that the conclusion is the *only* one that can be law… For the nature of 'law'…may be such that other premises equally adequate were also available, which could lead to different conclusions".[183]

[181] Gummow and Mohseni (n 179) 14.
[182] Cardozo (n 145) 40.
[183] Stone (n 131) 56.

The third step, after the applicable law is found and formulated as the major premise, is to interpret the law in order to determine its meaning and scope. Settling the meaning of the legal rule is necessary in order to frame the facts that need to be found to form the minor premise.[184] The interpretation of the law is a necessary task in every adjudication for at least five reasons.[185]

First, all legal rules involve classifying particular cases as instances of general terms. For any rule it is possible to distinguish a clear central case, where the rule certainly applies, and cases where there is doubt as to when the rule applies. As Hart observed, "[n]othing can eliminate this duality of a core of certainty and a penumbra of doubt when we are engaged in bringing particular situations under general rules. This imparts to all rules a fringe of vagueness or 'open texture'...".[186]

Second, indeterminacy arises from the need to use ordinary English words. Drafters of legislation, however expert, have no special resources to express the core meaning of both substantive and definitional provisions, except those available to any user of the English language. The English language is indeterminate and "irreducibly open textured".[187] Just like the legal rules, words used to formulate the rules can be seen to have a core of certainty and a penumbra of doubt.[188]

Third, legislators can have no knowledge of all the possible combinations of circumstances which the future may bring. Hart noted that "this inability to anticipate brings with it a relative indeterminacy of aim".[189] It is impossible to have "a complete legislative provision in advance covering every case, and authoritative extra-judicial interpretation".[190]

Fourth, the legal rules, whether in legislation or the common law, may use very general standards, such as reasonableness, fairness or what is just and equitable, thereby incorporating extra-legal norms into the law. Stone noted that these standards are predicated "on fact-value complexes, not on mere facts".[191] The use of these standards enables changes in society's values to be "taken bodily into the law".[192] The standards are therefore "relative to time and place".[193] The result is that "in such cases if these standards are properly administered the 'propositions of law' will vary in content from time to time".[194]

[184] Cross and Harris (n 140) 189, citing HLA Hart, *Proceedings of the Aristotelian Society*, suppl. 29. 260.
[185] More fully explained in Preston (n 144) 121-124.
[186] Hart (n 155) 123.
[187] Ibid 128.
[188] Ibid 123.
[189] Ibid 128.
[190] Roscoe Pound, *The Spirit of the Common Law* (Transaction Publishers, 1999) 179.
[191] Stone (n 131) 264.
[192] Stone (n 165) 144.
[193] Pound (n 190) 172.
[194] Stone (n 165) 144.

Fifth, there is indeterminacy inherent in the common law system of precedent, the doctrine of stare decisis.[195] Hart identified three reasons.[196] First, there is no single method of determining the rule for which a precedent is an authority. Second, there is no authoritative or uniquely correct formulation of a rule to be extracted from cases. Third, any authoritative status that a rule extracted from precedent might have is compatible with the exercise by courts bound by it of two types of creative or legislative activity. One is the process of distinguishing the earlier case by finding some legally relevant difference between it and the present case. However, the class of differences can never be exhaustively determined. The other is the process of widening the rule, by discarding a restriction found in the rule as formulated from the earlier case, on the ground that the restriction is not required by any rule established by statute or earlier precedent.[197]

In undertaking the task of interpreting statutory law, the judge will be guided by accepted principles of statutory interpretation.[198] There are different approaches to statutory interpretation. The three main approaches are the literal rule (textualism), the golden rule (contextualism) and the mischief rule (purposive interpretation).[199] The choice of approach, and how the chosen approach should be applied, involves interpretive abduction.[200] The judge will also be guided by other accepted techniques of legal reasoning, such as the doctrine of stare decisis, the principle of legality[201] and the rule of law.[202] This too involves interpretative abduction.

4.2.2 The formulation of the minor premise of the facts

Having formulated the major premise of the law to be applied in adjudicating the claim before the court, the next step is to formulate the minor premise of the facts. The formulation of the applicable law typically states that in a given factual situation certain rights, duties, obligations or liabilities exist. The applicable law thereby fixes the facts that need to be found in order to determine whether the claimed breach of law has been established or not. In a criminal case, the formulation of the offence and any

[195] Frank (n 169) ch XIV, 148-159, and Llewellyn (n 174) 62, 77-91.
[196] Hart (n 155) 134-135. See also Fitzgerald (n 128) 148-158 on the circumstances destroying or weakening the binding force of precedent, and Cross and Harris (n 140) 125-164 on the exceptions to stare decisis.
[197] Ibid.
[198] Diggory Bailey and Luke Norbury, *Bennion, Bailey and Norbury on Statutory in Australia* (LexisNexis, 8th ed, 2020); Perry Herzfeld and Thomas Prince, *Interpretation* (Thomson Reuters, 2nd ed, 2020), and Dennis Pearce, *Statutory interpretation in Australia* (LexisNexis, 9th ed, 2019).
[199] James Spigelman, 'The Common Law Bill of Rights' (2008 McPherson Lectures on Statutory Interpretation and Human Rights, University of Queensland, Brisbane, 10 March 2008). For a more comprehensive discussion of these and other approaches to statutory interpretation, see Elizabeth Fisher 'Administrative Law, Pluralsim and the Legal Construction of Merits Review in Australian Environmental Courts and Tribunals' in Ole Pedersen et al (eds) *Administrative Law in a Changing State: Essays in Honour of Mark Aronson* (Hart Publishing, 2008). For a further discussion of the purposes of statutory interpretation, see Frank Cross, *The Theory and Practice of Statutory Interpretation* (Stanford University Press, 2008).
[200] Brewer (n 125) 285.
[201] Warnock and Preston (n 135).
[202] Brian J Preston, 'The enduring importance of the rule of law in times of change' (2012) 86 *Australian Law Journal* 175.

defence to the offence as the major premise, such as the offence of disposal of waste and the defence of lawful authority referred to earlier, will frame the facts that must be found for the offence or defence to be proven. In a judicial review claim, the law relevant to each ground of judicial review of the administrative action claimed in the summons will fix the facts that need to be found in order for the plaintiff to succeed on that ground. That is evident where the ground of review is a failure to consider certain relevant matters that the legislation requires the decision-maker to consider in the exercise of a statutory power. Those relevant matters fix the facts which the court needs to find that the decision-maker considered in order to adjudicate the ground of review.

The task of the judge in finding the facts is to exercise their intellectual judgment on the evidence in order to ascertain what the judge thinks is the truth.[203] There are three steps in exercising this intellectual judgment: first, evaluating and selecting the evidence; second, finding and interpreting the facts from the evidence that has been selected; and third, classifying the facts for their legal significance after their fact-meaning has been found.[204]

The first step is required because each finding of fact must be based on the evidence before the court. Primarily, the parties are responsible for adducing the evidence necessary to enable the judge to find the relevant facts. The evidence may be testimony of lay witnesses or experts; documentary evidence; answers to interrogatories or notices to admit facts; or admissions of the parties. In limited circumstances, the court or tribunal may be able to inform itself,[205] such as by observations made on a site inspection, provided procedural fairness is accorded to the parties in doing so.

The judge needs to evaluate the evidence, especially where conflicting, in order to ascertain where the judge thinks the truth lies on any fact in issue. The judge selects that evidence as the basis upon which the relevant fact will be found. The judge will use different techniques for evaluating and selecting evidence. Different techniques are used for evaluating oral evidence than are used for evaluating documentary evidence, and for evaluating lay evidence than expert evidence. Sometimes, the rules of evidence, rules of civil or criminal procedure, or rules of court will assist the judge in fact-finding. Sometimes, evidentiary presumptions assist – a fact is presumed unless a party rebuts that presumption by adducing evidence to the contrary. That evidentiary presumption may have a statutory basis, or it may have a basis in the common law.

In evaluating whether a lay witness is being truthful or not, Bingham suggests that the main tests are:[206]

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[203] Fitzgerald (n 128) 70-71. See also Tom Bingham, *The Business of Judging: Selected Essays and Speeches* (Oxford University Press, 2000) 4.
[204] Llewellyn (n 132) 80.
[205] The Land and Environment Court of NSW can inform itself in determining statutory appeals: *Land and Environment Court Act 1979* (NSW) s 38(2).
[206] Bingham (n 203) 6.

"(1) the consistency of the witness's evidence with what is agreed, or clearly shown by other evidence, to have occurred;

(2) the internal consistency of the witness's evidence;

(3) consistency with what the witness has said or deposed on other occasions;

(4) the credit of the witness in relation to matters not germane to the litigation;

(5) the demeanour of the witness."

The evidence of a lay witness, although honest, may nevertheless be unreliable. Bingham identified three sources of unreliability: the witness did not observe or register mentally exactly what happened; loss of recollection; and wishful thinking.[207]

The techniques for evaluating an expert witness's evidence are different to those used for evaluating a lay witness's evidence. The four most common tests used to evaluate expert evidence are the relevance or helpfulness test, the specialised knowledge test, the qualifications test and the basis test.[208] The relevance test is fundamental to adjudication. Any evidence, whether of fact or opinion, is only admissible in proceedings if it is relevant.[209] Evidence is relevant if it could rationally affect, directly or indirectly, the assessment of the existence of a fact in issue in the proceeding.[210] If evidence cannot rationally assist the court in finding a fact in issue in the proceedings, it is irrelevant and non-helpful.[211] The specialised knowledge test requires the opinion to be one of "specialised knowledge".[212] This requires the subject matter of the opinion to be part of a body of knowledge or experience that is sufficiently organised or recognised to be accepted as a reliable body of knowledge or experience.[213] The qualifications test requires the witness expressing the expert opinion to be qualified as an expert in a recognised field of knowledge and have acquired specialised knowledge by reason of the person's "training, study and experience".[214] The basis test evaluates the basis for the opinion expressed by the expert witness. The basis for the opinion must be established in two ways. First, the opinion must be wholly or substantially based on the witness' specialised knowledge.[215] Second, the factual basis of the opinion must be disclosed and proven by admissible evidence.[216]

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[207] Ibid 15-18.
[208] Brian J Preston, 'Science and the law: Evaluating evidentiary reliability' (2003) 23 *Australian Bar Review* 263.
[209] *Evidence Act 1995* (NSW) s 56.
[210] Ibid s 55(1).
[211] Preston (n 208) 266-267. See *Dasreef Pty Ltd v Hawchar* (2011) 243 CLR 588 at [31] and *Honeysett v The Queen* (2014) 253 CLR 122 at [25].
[212] *Evidence Act 1995* (NSW) s 79(1).
[213] Preston (n 208) 268-291. See *Clark v Ryan* (1960) 103 CLR 486 at 491; *HG v The Queen* (1999) 197 CLR 414 at [58]; *Makita (Australia) Pty Ltd v Sprowles* (2001) 52 NSWLR 705 at [85]; *Honeysett v The Queen* (2014) 253 CLR 221 at [23].
[214] *Evidence Act 1995* (NSW) s 79(1). See also Preston (n 208) 291-292, *Makita (Australia) Pty Ltd v Sprowles* (2001) 52 NSWLR 705 at [85] and *Honeysett v The Queen* (2014) 253 CLR 221 at [23].
[215] *Evidence Act 1995* (NSW) s 79(1).
[216] Preston (n 208) 292-294. See *HG v The Queen* (1999) 197 CLR 414 at [39], [41], [44]; *Makita (Australia) Pty Ltd v Sprowles* (2001) 52 NSWLR 705 at [64], [85]; *Dasreef Pty Ltd v Hawchar* (2011) 243 CLR 588 at [32], [37], [41], [42], [91], [102], [127], [129]-[134] and *Honeysett v The Queen* (2014) 253 CLR 122 at [24].

Another technique judges employ in evaluating expert evidence is to identify and apply some authoritative standard or criterion. These might be authoritative standards or guidelines published by recognised institutions, including standards published by standard-setting institutions, such as Standards Australia; [217] guidelines published by regulatory agencies with portfolio responsibility, such as a noise policy for industry published by the NSW Environment Protection Authority;[218] or authoritative reports published by respected scientific institutions, such as the Intergovernmental Panel on Climate Change (IPCC) on climate science.[219] A judge deploys such standards or criteria in much the same way as legal rules are deployed. The selected standard or criterion is applied to evaluate and select the expert evidence to be used for fact-finding.

The second step involves finding the relevant facts from the evidence that has been selected. This involves the judge offering an explanation of the relevant factual phenomenon in the selected evidence. This explanation is an inference of fact drawn from the evidence. The drawing of the inference involves induction or abduction, depending on the confidence with which the inference is drawn from the evidence. Where the evidence before the court is an obviously incomplete data set, such as would exist where it is based on specific and limited observations, an inference could only be the likeliest possible explanation for the data. This inference would involve abduction. Where the evidence is more robust, an inference may be able to be more confidently drawn by induction.

The judge's explanation of the factual phenomenon is the judge's construction of the truth rather than a discovery of the truth. As postmodern theory explains, there is no absolute or non-perspectival truth that can be objectively discovered; rather truth is constructed from the perspective of the viewer.[220] A specialist environmental court will be better equipped to construct the truth, by drawing inferences of fact from the evidence, because of its contributory expertise and interactional expertise. Specialist environmental courts such as the Land and Environment Court have both legal and expert members, who can inform themselves, using their expertise, in finding the relevant facts from the evidence.[221]

The third step involves classifying the facts found into the "abstract fact-categories" of the rule of law that forms the major premise.[222] The rule of law that is the major premise will be formulated in terms of fact-categories. This process of selecting, arranging and categorising the facts can provide structure to even the most complex cases.[223] This is evident with a major premise with an "if… then" structure.

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[217] As was considered in *Telstra Corporation Ltd v Hornsby Shire Council* (2006) 67 NSWLR 256 at [91]-[106], [184]-[186].
[218] As was considered in *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and another* (2013) 194 LGERA 347 at [296]-[316], [327]-[385].
[219] As was considered in *Gloucester Resources Ltd v Minister for Planning and another* (2019) 234 LGERA 257 at [431]-[435].
[220] Brian Bix, *Jurisprudence: Theory and Context* (Sweet & Maxwell, 5th ed, 2009) 281; Terry Eagleton, 'Does marmalade exist?' (2022) 44(2) *London Review of Books* 31.
[221] Preston (n 121) 11-12.
[222] Llewellyn (n 132) 80.
[223] Karl Llewellyn, *Jurisprudence: Realism in Theory and Practice* (The Oxford University Press, 1969) 102.

An example is the premise that if fact-categories A, B, C, D and E exist, legal consequence F will follow. The fact-finding needs to classify the facts found from the selected evidence into the relevant fact-categories. In the example given earlier of the offence of disposal of waste, facts found as to the person's actions need to be classified as being to "dispose"; the substance disposed of needs to be classified as "waste"; the person's state of mind in disposing of the substance needs to be classified as either "wilfully" or "negligently"; and the factual consequence of the disposing of the substance needs to be classified as "harms or is likely to harm the environment". These classifications into fact-categories involve drawing inferences by deduction.

This stepped and multi-inferential process of fact-finding involves considerable uncertainty. Frank contended that the "chief obstacle to prophesying a trial court decision is, then, the inability, thanks to these inscrutable factors, to foresee what a particular trial judge or jury will believe to be the facts."[224] Frank saw the major cause of legal uncertainty to be this factual uncertainty – the unknown ability before a decision is given to predict what the judge will find the facts to be and what the judge will consider to be the appropriate decision on the basis of the judge's findings of fact.[225] The existence of factual uncertainty influences both the parties' behaviour, such as what evidence the parties choose to present to the court, and the judge's behaviour, such as how the judge uses the parties' evidence to find the relevant facts. The judge's decision is dependent on the judge's findings of fact that form the minor premise in the syllogism. The law that is found for the major premise may be fairly constant for particular types of legal claims, but the facts found for the minor premise may vary significantly. Frank quoted Edmund Burke as saying: "The major (premise) makes a pompous figure in the battle, but victory depends upon the little minor of circumstances."[226]

4.2.3 The discretion of remedy or sanction flowing from the conclusion

The third step in the syllogism is drawing a conclusion by deduction from the major and minor premises. There is no discretion in this step. If the argument is valid, the conclusion will follow from the premises. For judicial review, civil actions and criminal prosecutions, to take some types of environmental disputes, this step determines whether the breach of law claimed by the plaintiff or prosecutor is established. If no breach of law is established, nothing further needs to be done other than to dismiss the proceedings. If a breach of law is established, however, there is a further step of determining whether an order and, if so, what order should be made granting relief or imposing a sanction. If this further step is engaged, there will be a discretion.

The court has a discretion as to both the grant and the terms of the remedy or sanction for the proven breach of law. The discretion may have its source in statute, the common law or in equity. The duty of

[224] Frank (n 169) xi
[225] Ibid 116.
[226] Ibid 127, 134.

the court in matters of discretion is to exercise its moral judgment as to what is just, right, equitable or reasonable in the circumstances of the case.[227] As noted earlier, these standards are predicated on "fact-value complexes", not merely on facts.[228] The use of these standards allows changes in society's values and attitudes to be taken into account. Hence, in ascertaining whether these standards are satisfied, the judge will have regard not only to the individual circumstances of the case but also to society's values, attitudes and prevailing practices.[229] This involves abductive reasoning, ascertaining the remedy or sanction that the judge thinks is most appropriate for the proven breach of law. The exercise of this discretion to grant or withhold relief permits individualisation in the application of the law.[230]

Planning and environmental legislation commonly permit a court which has found a breach of the law to make "such order as it thinks fit" to remedy or restrain the breach.[231] Such a phrase empowers the court "to mould the manner of its intervention in such a way as will best meet the practicalities as well as the justice of the situation before it."[232] The discretion extends to withholding relief if the court does not think any order is fit to remedy or restrain the breach.[233]

5. Conclusion

A justification for establishing specialist environmental courts is their responsiveness to environmental problems. Legal integrity is promoted by a specialist environmental court responding to the distinctive characteristics of the environmental problems it is charged with resolving. Responsiveness is facilitated by the court having the institutional design of a constitution, competences and expertises that will better enable it to respond to the environmental problems. The Land and Environment Court of NSW is an example of a specialist environmental court that has been designed with a constitution, competences and expertises that enable responsive environmental adjudication. The Court is long established and has a pre-eminent national and international reputation as an exemplar specialist environmental court.[234]

But as I have discussed, good institutional design of a court, while necessary, is insufficient. The court has to engage in responsive environmental adjudication in practice. The court needs to identify the distinctive characteristics of environmental problems and the challenges they create for adjudication and adapt the process of adjudication, including the legal reasoning used, to respond to the distinctive characteristics of environmental problems. Specialist environmental courts are better placed to

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[227] Fitzgerald (n 128) 68-69, 70-71. See further Bingham (n 203) 36.
[228] See Stone (n 131) 264.
[229] Stone (165) 144.
[230] Roscoe Pound, *Introduction to the Philosophy of Law* (Yale University Press, 1954) 53, 56, 63. See also AM Gleeson, 'Individualised Justice - The Holy Grail' (1995) 69 *Australian Law Journal* 421.
[231] See, for example, s 9.45 of the *Environmental Planning and Assessment Act 1979* (NSW).
[232] *F Hannan Pty Ltd v Electricity Commission* (NSW) (No 3) (1985) 66 LGERA 306, 311.
[233] Ibid. See also *Warringah Shire Council v Sedevcic* (1987) 10 NSWLR 335, 338-341 and *ACR Trading Pty Ltd v Fat-Sel Pty Ltd* (1987) 11 NSWLR 67, 82-83.
[234] Preston, 'The Land and Environment Court of New South Wales: A Very Short History of an Environmental Court in Action' (n 115) 639.

undertake this responsive environmental adjudication than other courts, not only because their constitutions, competences and expertises in the resolution of environmental disputes equip them to be responsive to environmental problems,[235] but also because they are adept in identifying and responding to the distinctiveness of environmental problems in practice. The Land and Environment Court is not only an illustration of a court with an effective institutional design, but also of how that design is operationalised in the adjudication of environmental disputes in ways that are responsive to the environmental problems.[236]

This responsiveness gives environmental adjudication by specialist environmental courts legal integrity, which in turn fosters normative legitimacy. For a specialist environmental court, the public needs to have trust and confidence that the court not only is competent and impartial, but also is responsive to the environmental disputes it is charged with resolving. The public needs to maintain a level of confidence that the particular type of disputes the court has been established to resolve, environmental disputes, will in fact be resolved utilising the competences and expertises with which the court was established and be responsive to those disputes. A court that is seen to be competent and impartial, and responsive, in the resolution of environmental disputes will have legitimacy and endure over time.

[235] Preston (n 121) 9-12, and Brian Preston, 'Characteristics of Successful Environmental Courts and Tribunals' (2014) *Journal of Environmental Law* 1, 14-15, 23-24.
[236] Preston (n 121).