Law, Gender Identity, and the Brain

Exploring brain-sex theories in judicial decisions on trans and intersex minors

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Chapter 1

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Abstract

This chapter introduces the key themes explored in the book and foreshadows its structure, focus and conclusions. The introduction starts with an explanation of brain-sex binary theories and how they link to the idea of a biological 'true sex' determinant. The focus on the special medical jurisdiction of the Australian Family Court and its judicial decision-making for trans and intersex minors is explained. The introduction outlines the book's overall structure and discusses terminology in a number of contentious discourses including trans and intersex issues. The chapter concludes with a caveat about the risks of critiquing scientific and bio-medical research as a non-scientist.

Introduction

Neurology is the latest candidate in an historical search for a reliable and fixed biological marker of 'true sex' that has permeated every aspect of Western culture, including law. The search for the body's 'true sex' marker reflects a view of biology as fixed, inexorable, universal, and authentic. Different somatic characteristics, from gonads to hormones to chromosomes to genitals, have previously been candidates for the role of 'true sex' marker. Each of these has, in its time, done the work of configuring binary sexed biology as normal, natural and pre-cultural. Each, in turn, has

faltered or failed. In our commitment to identifying a convincing biological anchor for binary sex categories of male and female, attention has most recently turned to the brain.

Law, alongside medicine, has been an integral part of this quest for a biologically-fixed gender binary, since it is a primary means of drawing regulatory and definitional boundaries of sexed identity. It is called upon to determine and differentiate between 'male' and 'female' in a series of contested areas of sexed identity, most recently through authorising medical interventions to alter the embodied sex characteristics of minors with gender dysphoria (as trans identity is referred to in the case law and medical literature), or intersex variations.

This book investigates the extent to which neurological sex differentiation, the belief that there is a distinct 'male' and 'female' brain - often referred to in the literature as 'brain organisation theory'[1] - has influenced legal perceptions of sex and gender. This book considers the argument that brain-sex binary theories are emerging as a primary contemporary influence on the understanding of gender identity in law, a manifestation of the current search for a definitive marker of true sex. In relation to transgender minors, legal authority has evolved to reflect a neurocultural perspective on gender identity and sexed embodiment. This perspective is inherently conservative and wedded to a concept of binary sex, even though it supports progressive approaches to transgender minors. By contrast, a neurological perspective is not prominent in judicial decisions relating to intersex children, where the discussion on gender identity is more aligned to an outdated treatment protocol called 'optimal gender' theory,[2] which has been publicly denounced but continues to permeate and possibly dominate the medicalised perspective on intersex. This outdated treatment protocol emerged out of an earlier theory that focused on the genitals and the psyche as the central loci to construct a person's 'true sex.'

Brain organisation theory posits that biological sex differentiation occurs not just in the anatomy and physiology of the body, but also in the brain, producing distinctive male and female brains - though the sex of the body may not match the sex of the brain. Fetal hormone exposure changes the way the brain develops in utero and beyond. Pre-natal exposure to androgens will change the default female brain into a male brain. These changes - along masculine or feminine lines - influence the gender identity, sexual orientation, personality, interests, abilities, aptitudes and character of the person. The idea that our material brains, and hence our minds, embody a binary sex/gender is at the heart of brain organisation theory. Finding a neuro-biological explanation for binary gender is a modern manifestation of the ideology that the material body expresses and determines every person's sex and gender in two distinct classes of male and female. Brain organisation theory is part of a broader approach which ties sex and gender to a neuro-biological origin. I refer to this broader approach as the 'brain-sex binary.'[3]

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[1] Rebecca Jordan-Young, *Brainstorm: The Flaws in the Science of Sex Difference* (Harvard University Press, 2010).

[2] John Money, Joan G Hampson and John L Hampson, 'Imprinting and the Establishment of Gender Role' (1957) 77(3) *Archives of Neurology and Psychiatry* 333; See also Senate Standing Committee on Community Affairs, Parliament of Australia, *Involuntary or Coerced Sterilisation of Intersex People in Australia* (Report No 2, 25 October 2013), 37 [3.7] ('Senate Committee Report').

[3] The phrase 'brain organisation theory' refers to the neuro-scientific theory that pre-natal hormones impact on the material soma, structure and organisation of the brain to produce brains that are distinctively male or female. The phrase 'brain-sex binary' is used when more broadly discussing this and other neurological research and practices that promote a brain-based concept of sex and gender, as well as the dissemination and adoption of these theories in other disciplines and domains such as law.

Legal Focus – why these cases?

Assessing the impact of brain-sex binary theories on legal discourse means finding how it has been taken up in judicial decisions concerning gay, lesbian, trans and intersex people. This will provide insight into how the law constructs neurological knowledge and the gendered brain in relation to 'atypical' gender identity, gendered and sexual behaviour, or sexual orientation. To explain my focus on the Australian Family Court cases concerning trans and intersex minors, I consider what areas of law are explicitly concerned with understanding the development of sexed bodies and brains.

Although news, legislation and policy regarding same-sex relationships and identities have had a high profile in recent years, particularly in relation to same sex marriage, this has involved little or no judicial consideration of neurological or other 'explanations' of sexual orientation. Similarly, although there has been legislative attention to banning conversion therapy for gay, lesbian and trans people, this has not been the subject of judicial consideration. This gives little opportunity to assess the judicial uptake of brain-sex binary theories in relation to decisions about gay and lesbian people, even though those cohorts are prominent in the research studies and rhetoric.

A fruitful area dealing with foundational understandings of sex and gender is sex testing in sport, particular at the elite level. This is a flashpoint for disputes and controversies about what it means to be a woman or a man. There is a developing literature concerning inclusion of trans and intersex athletes in women's sports which grapples with many of the issues outlined in this book. However, the relevant rules, policies and decisions rarely surface in formal legal proceedings or law.

The biological origin of gender was explored at length in obiter dicta in *Re Kevin*,[4] a case from 2001 concerning the right of a trans man to marry as a man. In *Re Kevin*, Justice Chisholm outlined the fundamental points of brain organisation theory and explicitly endorsed it because 'apart from the theory of brain sex differentiation, there is no available explanation of transsexuals like Kevin.'[5] This discussion was obiter because Chisholm J expressly did not wish to rely on an unproven theory as the basis for his decision, but he devotes an entire section of the judgment- some 16 pages out of an 86 page decision – to explain brain-sex binary theory and debate its merits. He concludes that he is satisfied that the Applicant's gender dysphoria is caused by anomalous fetal androgen exposure.[6]

Following *Re Kevin* there have been subsequent cases concerning the legal definitions of sex, but these have not explored the origins or causes of trans identity or considered a neurological link. In 2011 in *AB & AH v State of Western Australia*[7] the High Court determined the criteria for a trans person to be legally recognised as a member of their sex of identity but the judgment makes no reference to etiology of gender diversity. In *NSW Registrar of Births, Deaths and Marriages v Norrie,*[8] Australian law recognised for the first time that a person's sex/gender may be non-binary and permitted a non-binary sex/gender to be recorded as their legal sex. In both cases the reasons for judgment did not refer to brain-sex binary theories or indeed any theory about the development of gender identity or gender dysphoria. Now that same-sex marriage has been legalised it is unlikely that courts will be called on to consider in depth the legal definitions of men or women in the context of marriage law. Issues around the legal sex of trans people have not been resolved entirely, since each Australian jurisdiction imposes different requirements in regards to medical transitioning,

[4] *Re Kevin (Validity of Marriage of Transsexual)* (2001) 1074 FamCA (*'Re Kevin'*) [252].
[5] Ibid, 66 [252].
[6] *Re Kevin* (n 4), 82 [312]
[7] *AB & AH v State of Western Australia* (2011) 244 CLR 390.
[8] *NSW Registrar of Births, Deaths and Marriages v Norrie* (2014) 250 CLR 490.

before a person can change their legal sex.[9] Such issues are currently in flux as different states introduce legislation loosening the requirements for a person to change legal sex. Currently, however, there is no controversy prompting legal analysis of the definitions of male and female.

There is recent caselaw where courts have made decisions that directly relate to the development of gender identity. These cases concern applications by parents and caregivers for approval for medical interventions on minors in order to alter their sex characteristics in response to gender dysphoria (as it is called in the caselaw and medical evidence), on the one hand, and intersex variations on the other hand. These cases are heard in the Australian Family Court exercising the special medical jurisdiction, and where the judiciary most directly confronts competing theories about the nature of gender and its relationship to sex. These are the cases where brain-sex binary theories have emerged in legal discourse, and therefore are the focus of this book's analysis.

Structure

The book is organised in two parts. The first part, which includes chapters 2, 3 and 4, provides a background understanding and context to inform the later legal analysis considered in the final two chapters before the conclusion. The first part establishes the historical context for current attitudes about sex and gender, including neurological theories of gender and the significance of these ideas for the medicalised experiences of people with intersex variations. Chapters 5 and 6 analyse the legal understanding of the sexed and gendered bodies of minors, as demonstrated by jurisprudence emerging out of decisions of the Family Court of Australia.

Chapter 2 considers the relationship between sex and gender, as it has been explored in science, feminism and the law in Western culture since the enlightenment. This perspective points to certain assumptions underlying the theories of sex and gender over time, assumptions that also underlie and impact on brain organisation research. The historical perspective suggests a cautious and critical approach to brain-sex binary theories.

Chapter 3 focuses on brain organisation research and theory, pointing to some problematic aspects of the research design as well as the interpretation and dissemination of results. The discussion explores different scientific theories about gender development and explains why brain-sex binary research often focusses on trans people and people with intersex variations.

Chapter 4 focuses on intersex encounters with biomedicine, examining the medical literature concerned with gender identity development of people with intersex variations. It outlines medical practice aimed at 'curing' the anomolous intersex body using medical technologies such as genital surgeries, sterilisation and hormone therapy, and considers their probable impact on gender development.

The book does not include a similar separate chapter on trans people because trans experience and relationship to the medical establishment are better understood and extensively theorised and discussed across many disciplines and fora. A broad understanding of the nature of trans identity and lived experience is prominent in social media, popular discourse, academic writing and clinical

[9] *Births, Deaths and Marriages Registration Act 1995* (NSW) s32B; *Births, Deaths and Marriages Registration Act 1999* (Tas) s 28A; *Births, Deaths and Marriages Registration Act 1996* (Vic) s30A; *Births, Deaths and Marriages Registration Act 2003* (Qld) s22; *Births, Deaths and Marriages Registration Act 1996* (SA) s29I; *Births, Deaths and Marriages Registration Act 1996* (NT) s28B*; Births, Deaths and Marriages Registration Act 1997* (ACT) s24; *Gender Reassignment Act 2000* (WA) s14.

literature.[10] The book draws on this literature throughout but in particular in the discussion of the law's response to trans identity. However, because intersex lived experiences and identities are less well explored[11] a separate chapter lays out some fundamental understandings and misunderstandings. Confusion surrounds the meaning of intersex and the specific experiences of intersex embodiment and medicalisation.[12] For this reason it is important and necessary to explore these issues in greater detail.

The last two chapters of the book provide a legal analysis of two groups of cases heard in the Australian Family Court under a special welfare jurisdiction. These cases concern medical interventions to alter the embodied sex characteristics of minors who are transgender or who have intersex variations.

In 1992 in *Secretary, Department of Health and Community Services (NT) v JWB and SMB (Marion's Case)*[13] the High Court decided that parents or guardians are not empowered to consent to some medical procedures performed on minors. This is the genesis of the special medical jurisdiction, wherein medical interventions beyond the scope of parental authority require court authorisation from the Australian Family Court. Until *Re Kelvin*[14] was decided in 2017, for 13 years the Australian Family Court was called on to authorise medical interventions to treat gender dysphoria. Over that time the Court decided over a hundred cases concerning trans minors. In the same period, the Court decided eight cases authorising medical interventions on minors with intersex variations.

The medical literature dealing with the origins and causes of gender dysphoria, and the literature examining brain organisation theory[15] in relation to trans people is examined in Chapter 5. This is followed by an analysis of the cases dealing with trans minors, focussing on the judicial approach to gender development and gender dysphoria. The key cases are assessed to see whether the judgments endorse a neurological understanding of gender identity development in line with brain-sex binary theories.

Chapter 6 analyses the cases approving medical interventions on children and minors with intersex variations. This chapter considers the judicial uptake of brain-sex binary theories and identifies the apparent preference for a competing theory of gender identity development which was first proposed in the 1950s. The impact of this competing theory, called optimal gender theory, is analysed.

Chapter 7 concludes.

In summary, this book outlines evidence of incoherence in the legal understanding of gender identity development, which translates into inconsistent approaches to intersex and transgender issues. This is attributable to legal deference to a medicalised understanding of the biological sources of sex and gender. The decisions regarding trans minors reflect an undeclared adherence to the brain-sex binary without addressing or taking into account its significant limitations or implications. The clinical perspective tends to focus on treatment outcomes rather than etiology. The Australian

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[10] See discussion and references in Chapters 3 and 6.
[11] See, for example, L M Danon, 'The Body/Secret Dynamic: Life Experiences of Intersexed People in Israel' (2015) 5(2) *SAGE Open* 215824401558037.
[12] See, for example, discussion in Morgan Carpenter, 'The "Normalization" of Intersex Bodies and "Othering" of Intersex Identities in Australia' in Jens Scherpe, Anatol Dutta and Tobias Helms (eds), *The Legal Status of Intersex Persons* (Intersentia, 2018) 445.
[13] (1992) 175 CLR 218. (*'Marion's Case'*)
[14] *Re Kelvin* (2017) FamCAFC 258. (*'Re Kelvin'*)
[15] Jordan-Young (n 1).

Family Court has relied on the development of medical consensus about treatment protocols in its developing jurisprudence. Of greater concern is the dominance of an outdated and superseded gender theory and treatment protocol in the cases relating to medical interventions on intersex children and minors. Law's uncritical endorsement of a medicalised perspective has led to the adoption of two different conceptual frameworks regarding the origins and development of gender identity. Both frameworks, however, essentialise and naturalise binary sex.

Terminology

Terminology in relation to sex, gender, intersex and transgender is fraught. In this field, terminology is freighted with meaning and implications which need to be identified, acknowledged, and, if necessary, avoided. Words can become encrusted with inference that may not be intended, particularly if the inferences are linked to unconscious bias.

The sex/gender dichotomy, which is critiqued in chapter 2 and throughout the chapters, developed as a means to distinguish different features of sex in a productive and significant way. The development of terms to identify these different features has been a powerful linguistic mechanism to deconstruct the hitherto monolithic concept of sex. However, this distinction has sometimes ossified into distinct conceptual domains. The language of sex and gender, whereby 'gender' refers to cultural, social and psychological aspects and 'sex' refers to biology, breaks down in light of knowledge about their interconnectedness. For example, the plasticity of brain structures and functions means that the brain will change via experience, so that biological effects may be the result of culture and vice versa. A number of feminist theorists identify the problems and weaknesses of using language which reinforces the sex/gender distinction. In literature challenging the scientific colonisation of knowledge about biological sex, the term 'sex/gender' is often favoured as a means to acknowledge the dynamic interaction of biological and non-biological variables. Jordan-Young and Rumiati, for example, explain that

> While conceptual differences between the two are important, 'sex' and 'gender' are, in practical terms, inseparable. Numerous empirical studies demonstrate the problematic task of distinguishing between sex and gender in practice.[16]

While recognising the fundamental inseperability of sex and gender effects, nevertheless the terms 'sex' and 'gender' are used to designate different aspects or features of sex in a way that is consistent with their use in modern feminist literature. This is not intended as an uncritical endorsement of this separation, but as a pragmatic recognition that this separation has come to dominate modern academic discourse and thinking and is useful in unravelling different dimensions of a complex process.

The phrase 'brain organisation theory' refers specifically to the neuro-scientific theory that pre-natal hormones impact on the material soma, structure and organisation of the brain to produce brains that are distinctively male or female. The term 'brain-sex binary' is coined to refer more broadly to brain organisation theory and other neurological research and practices that promote a brain-based concept of sex and gender, as well as the dissemination and adoption of these theories in other disciplines and domains such as law.

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[16] Rebecca Jordan-Young and Raffaella I Rumiati, 'Hardwired for Sexism? Approaches to Sex/Gender in Neuroscience' (2012) 5(3) *Neuroethics* 305, 306; See also Anelis Kaiser, 'Re-conceptualizing "sex" and "gender" in the human brain' (2012) 220(2) *Journal of Psychology* 130.

In the domain of intersex medicalisation, clinicians have favoured the use of diagnostic terms and classifications which also reflect dominant theories about natural sex. For example, in the Victorian era, scientists and doctors based the taxanomic categories and terminology on the type of gonadal tissue present. If an intersex person had testicular tissue they were typed as a 'male pseudohermaphrodite' but if ovarian tissue was present, the person was typed as a 'female pseudohermaphrodite.' In cases where the person had one or more ovotestes they were typed as a 'true hermaphrodite.'[17] As the focus of medical typing has shifted to genetics, the terminology has also shifted. A 2006 Consensus Statement ('the Consensus Statement') developed by the Lawson Wilkins Pediatric Endocrine Society (LWPES) and the European Society for Paediatric Endocrinology (ESPE) addressed terminology and argued that 'A modern lexicon is needed to integrate progress in molecular genetic aspects of sex development.'[18]

This new lexicon emphasises chromosomal sex, but also endorses brain-based sex/gender because brain organisation theory links hormone output to karyotype.[19] It places increasing emphasis on karyotype when referring to intersex variations. For example, people once classified as 'male pseudo hermaphrodite' are now described as having 46,XY DSD. As this demonstrates, the terminology has also shifted away from attaching a label to the person to attaching a label to the biomedical disorder. This seems to reflect an important move away from the attitude prominent '[s]ince the nineteenth century [that] hermaphroditism was not only understood as a disorder but referred to a problematic type of person.'[20]

The Consensus Statement rejects a range of terms including hermaphrodite, pseudo-hermaphrodite and intersex, claiming that such terms 'are perceived as potentially pejorative by patients and can be confusing to practitioners and parents alike.'[21] When referring to intersex variations more broadly, the preferred medical term is 'Disorders of Sex Development' or 'DSD.' [22]

This adopted terminology has been controversial from its introduction. As Davis has argued,

> Medical professional's essentialist assumption that there is a rigid correlation between sex, gender, and sexuality resonates with the nomenclature shift from intersex to the pathologizing disorder of sex development…[23]

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[17] The current commonly used medical term for this variation is 'ovotesticular disorder.' Osama Al-Omar, *Disorders of Sex Development* (4 December 2019) Medscape. <https://emedicine.medscape.com/article/1015520-overview.>

[18] Peter A Lee et al, 'Consensus Statement on Management of Intersex Disorders' (2006) 118(2) *Pediatrics* e488, e488 ('the Consensus Statement').

[19] Catherine Clune-Taylor, 'Securing Cisgendered Futures: Intersex Management under the "Disorders of Sex Development" Treatment Model' (2019) 34 (4) *Hypatia* 690

[20] Ellen Feder and Katrina Karkazis, 'What's in a Name? The Controversy Over "Disorders of Sex Development"' (2008) 38(5) *The Hastings Center Report* 33, 33.

[21] Lee et al, (n) e488. The authority for this statement is an article in *British Medical Journal* from 2005 which makes no claims about terminology. It is rather a discussion of the then-common practice of non-disclosure of intersex status to patients on the basis of therapeutic privilege. The cited article provides no support for the claim that the term 'intersex' is perceived as pejorative. Jennifer Conn, Lynn Gillam and Gerard S Conway, 'Ethics In Practice: Revealing The Diagnosis Of Androgen Insensitivity Syndrome In Adulthood' (2005) 331(7517) *British Medical Journal* 628. This is also noted in Senate Committee Report, (n 2), 23 [2.6]-[2.7].

[22] Ibid.

[23] Georgiann Davis, '"DSD is a Perfectly Fine Term": Reasserting Medical Authority through a Shift in Intersex Terminology' in P McGann and D M Hutson (eds), *Sociology of Diagnosis* (Emerald Group Publising, 2011) vol 12, 155-182, 170.

Following interviews of 62 stakeholders including intersex people, parents and medical professionals, Davis concludes that

> Medical professionals needed to maintain their authority in the face of intersex activism, and they did so linguistically through a reinvention of the intersex diagnosis. The new DSD terminology constructs "sex" as a scientific phenomenon, and a binary one at that. Under such a frame, intersex experts neatly link intersexuality to science, and thus are able to justify surgery. This places intersexuality neatly into medical turf and safely away from critics of its medicalization. At the same time, the connection to science increases medical credibility, which in light of intersex activism, is necessary.[24]

The term 'intersex' has its own problematic history. Until the late 20th century, 'intersex was understood to denote kinds of people who violated prevailing cultural understandings of male and female bodies, and for whom physicians sought to provide a coherent gender.'[25] As Feder and Karkazis comment, '[i]ntersex came to mean many things to different people, fueling widespread disagreement of what diagnoses – and thus who – counted as intersex.'[26] The term was reappropriated by intersex activists in the 1990s, who used it as a means to bring together and identify commonalities among groups with different diagnoses. There was and is ongoing contestation over the term, including concerns that it emphasises identity, or that it carries overtones of a third sex category, or that it stigmatizes. Nevertheless, it has been widely adopted by intersex communities, particularly activists and advocates and peer support groups at the forefront of the movement to demedicalize intersex and challenge human rights violations.

In 2013 the Australian Senate Standing Committee on Community Affairs conducted an inquiry into the involuntary medical sterilisation of intersex people. The Inquiry of the Senate Committee received submissions from advocacy and support groups OII Australia (now Intersex Human Rights Australia), A Gender Agenda, and Androgen Insensitivity Syndrome Support Group (AISSG) endorsing 'intersex' as appropriate terminology and rejecting 'DSD' or 'disorders of sex difference.'[27] Following a lengthy and detailed consideration of the issues around terminology, the Senate Committee made the following recommendation:

> The committee recommends that health professionals and health organisations review their use of the term 'disorders of sexual development', seeking to confine it to appropriate clinical contexts, and should use the terms 'intersex' or 'differences of sexual development' where it is intended to encompass genetic or phenotypic variations that do not necessarily require medical intervention in order to prevent harm to physical health.[28]

The discussion in this book favours the use of the word 'intersex' or the phrases 'intersex variations' and 'variations of sex characteristics.' The term 'hermaphrodite' is used in discussion about historic attitudes and responses to intersex variations, consistent with contemporary language. In discussions of the medical literature diagnostic terminology is used where relevant. Medicalised

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[24] Ibid 178.
[25] Feder and Karkazis, (n 20), 34.
[26] Ibid.
[27] Senate Committee Report (n) 25 fn24 and 26 [2.17]. Increasingly, DSD is recast as 'difference of sex development' or 'diverse sex development' as a means to depathologise and hence reinvigorate the acronym.
[28] Ibid 27 [2.20].

diagnostic terms such as '46,XX CAH' are used to convey information about specific variations and to avoid confusion when analysing the medical literature.

The term 'endosex' is used to refer to people who are not intersex.

The terminology associated with gender diverse people is equally contentious and sensitive. Terminology changes rapidly and generally it is recommended to use the language preferred by the people or person you are addressing or discussing.[29] As that may not be possible in some contexts, the alternative is terminology that aims to be respectful and appropriate. A Gender Agenda comment that

> Language in this space can change in the blink of an eye based on what people feel more comfortable with. Trans is useful shorthand that acknowledges a history of different terminology.[30]

The Australian Human Rights Commission also adopts the word 'trans' as an appropriate descriptor.[31] However, other resources such as Glaad's reference guide [32] recommend the word 'trans' should be used with care because its meaning is not well defined or understood. The word 'trans' is generally used as an umbrella term encompassing both transgender and transsexual identities.

This book uses 'trans' or 'transgender' as broad terms to refer to people whose gender identity is different to their sex assigned at birth. Where possible the pronouns preferred by or appropriate to the person referred to are used. Even though 'trans' can also incorporate 'transsexual', that somewhat dated and medicalised term is used to describe a transgender person who has or wishes to 'permanently change their bodies through medical interventions, including but not limited to hormones and/or surgeries.'[33] Medicalised terms such as 'gender dysphoria' and 'gender identity dysphoria' are used in the discussion of legal and medical literature, to maintain consistency and avoid confusion.

The term 'cisgender' is used to refer to people whose gender identity is consistent with their biological or assigned sex.

Comparing Trans and Intersex Issues

Both intersex and trans people are highly medicalised. The relationship between the intersex community and the medical profession is, however, entirely different from the relationship between the trans community and the medical profession. Davis argues that the key difference is agency:

> Although surgeries on trans bodies are, in practice, similar to surgeries on intersex bodies, there is a notable difference in agency. Intersex people usually have little, if any, autonomy over the medical management of their

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[29] 'Tips for Allies of Transgender People', *GLAAD Media Institute*, (Web Page), November 2020 https://www.glaad.org/transgender/allies.

[30] 'Where to Start: Transgender' *A Gender Agenda Resources*, (Web Page) https://genderrights.org.au/resources/where-to-start-transgender-brochure/.

[31] 'Section 3 A note on terminology addressing sexual orientation and sex and/or gender identity discrimination: Consultation Report (2011)' *AHRC Our Work*, (Web page) < https://humanrights.gov.au/our-work/section-3-note-terminology-addressing-sexual-orientation-and-sex-andor-gender-identity>.

[32] Glaad is an acronym for 'Gay & Lesbian Alliance Against Defamation'.

[33] 'Glossary of Terms– Transgender', *Glaad Media Reference Guide* (Web Page) https://www.glaad.org/reference/transgender.

> bodies, as doctors frequently perform "normalizing" operations on children.[34]

For trans people who undergo those same medical procedures, the providers of medical and surgical interventions are often heralded as allies who work to alleviate suffering and whose work is celebrated by the trans community. While these medical procedures have many detractors and critics, for the most part the critics are not the patients or the trans community or its many allies and supporters.

By contrast, intersex advocates and activists tend to be highly critical of medical interventions practiced on intersex people. Some intersex people report positive reactions to their medical interventions,[35] clinicians refer to a silent majority of patients who are satisfied with the medical interventions they received[36] and there is evidence that some parents of intersex children who undergo medical intervention are supportive of current medical practices.[37] However, most intersex support groups and advocacy groups are highly critical of medical 'management' of intersex. The relationship between the relevant medical community and the most publicly visible sections of the intersex community (if not most of the community itself) is hostile and antagonistic. This has a very significant impact on how these communities are constructed in the public imagination, in public documents and in legal and medical discourse.

One such impact has been to regularise interventions to 'normalise' intersex bodies. As Davis argues,

> technological advancements of the twentieth century, along with media attention on trans issues, made it easier for doctors to define intersex bodies, like trans bodies, as "abnormal" and in need of medical and surgical attention[38]

The mainstream medical establishment has worked hard to de-pathologise trans lives and bodies.[39] By contrast, a significant sector of the medical establishment explicitly pathologises intersex bodies, as reflected in the DSD terminology.

Another significant difference is the extent to which intersex and trans bodies contest the sex binary. While liminal intersex bodies challenge the natural status of a binary sex model, transsexuals who seek to transition to the sex that matches their gender identity do not. Although trans people increasingly espouse and promote concepts of gender fluidity and argue for an understanding of sex as variable rather than binary, the focus in this book and in the caselaw it analyses is on transsexual minors who seek to medically transition from male to female or vice versa using gender affirming medical technology. This cohort have a greater presence in medical and legal decision making, since accessing the medical technology has historically required persuading medical and legal gatekeepers

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[34] Georgiann Davis, *Contesting Intersex: The Dubious Diagnosis* (New York University Press, 2015) 30.
[35] Tiffany Jones et al, *Intersex: Stories and Statistics from Australia* (Open Book Publishers, 2016) 112.
[36] See, for example, H F L Meyer-Bahlburg et al, 'Attitudes of Adult 46,XY Intersex Persons to Clinical Management Policies' (2004) 171(4) *The Journal of Urology* 1615; Nike M M L Stikkelbroeck et al, 'The long term outcome of feminizing genital surgery for congenital adrenal hyperplasia: anatomical, functional and cosmetic outcomes, psychosexual development, and satisfaction in adult female patients' (2003) 16(5) *Journal of Pediatric and Adolescent Gynecology* 289.
[37] A Binet et al, 'Should we question early feminizing genitoplasty for patients with congenital adrenal hyperplasia and XX karyotype?' (2016) 51(3) *Journal of Pediatric Surgery* 465; Lane Palmer, 'The Push to Ban Intersex Medical Intervention' (2019) 39(3) *Urologic Nursing* 147.
[38] Davis, *Contesting Intersex: The Dubious Diagnosis* (n) 30.
[39] As evidenced by the changes to the framing of gender dysphoria in the most current edition of the Diagnostic and Statistics Manual. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 5 ed, 2013) (*'DSM-V'*).

of the legitimacy of access.[40] Within this cohort, the need to medically shape the body to properly express one's gender identity sits comfortably within the framework of binary sex.

Another important difference is how gender identity is understood and its significance in the decision-making process. For trans minors seeking to transition using medical technology, the prevalent understanding is that their gender identity is fully established from a very young age and is thereafter stable, resilient and fixed. Although it expresses a gender incongruous with the sex characteristics of the body, the development of an innate and rigid gender identity is understood as a natural and normal process. The sex expression of the body is malleable, but gender identity is static.

By contrast, the gender identity of intersex people is configured to be as malleable as the sexed body.

> … if there were technical similarities between surgeries for transsexual adults and those performed on intersex infants, there was also a vital difference in their respective therapeutic aims. Whereas the former were changes of sex to match the category in which patients felt they already belonged, the latter were tools for the assignment of gender in the first place. … genital plasticity was supposed in both cases, but only in the case of intersex was gender plasticity equally important.[41]

Within the medicalised perspective, only medical interventions can 'cure' the liminality of the intersex body and identity. Shaping the body to an appearance of orthodox stereotypical sex – unambiguously male or unambiguously female – provides an opportunity for gender identity to settle into the assigned sex. Unlike the gender identity of trans minors, the gender identity of intersex people must be manipulated and wrought to help it finally resolve. This becomes evident in a critical reading of the Australian Family Court cases authorising medical interventions.

Critiquing Biomedical Research

This book argues that brain-sex binary theories are the latest manifestation of the search for a definitive biological sex determinant. Characterising brain-sex binary theories in this way is not intended to suggest that the research is illegitimate or lacks merit. It does suggest a tendency to approach the issue with a pre-determined belief in the neuro-biological basis of sex and gender differences. Such an approach has dogged bioscientific studies of sex differences for centuries and has distorted and handicapped scientific knowledge and understanding in relevant domains, including law. It suggests that we need to approach the research and conclusions with great caution, and be eagle-eyed in identifying distortions and mistakes caused by this bias. Although science can never be 'pure' and unalloyed with social and cultural beliefs, it is incumbent on researchers, as well as those relying on the research such as judges and lawyers, to be aware of the dangers and pitfalls of approaching a research issue with firmly held but unchecked assumptions and expectations.

This book offers a range of critiques of different scientific and bio-medical attitudes, research and practices. The intention is not to claim expertise in these disciplines, but to critique the *non-medical*

[40] The decision in *Re Kelvin* in 2017 made it unnecessary for minors to seek Court approval to access medical technologies except in select cases where there is a dispute among the minor, his or her parent or parents or guardian, and the medical professionals providing access. *Re Kelvin* (2017) FamCAFC 258.

[41] Iain Morland, 'Gender, Genitals and the meaning of Being Human' in Lisa Downing, Iain Morland and Nikki Sullivan, *Fuckology: Critical Essays on John Money's Diagnostic Concepts* (University of Chicago Press, Kindle edition, 2015) 83, 89.

claims and implications that arise out of the research. Further, there are points at which the discussion might imply that different areas of science and medical practice are monolithic and different theories and practices are hegemonic. Writing as though theory and practice within different disciplines can be summarised neatly within a few paragraphs is reductive. It is important to explain and emphasize that different theories and practices outlined in the thesis represent significant, sometimes dominant strands of thinking or practice within a particular discipline, however they do not represent the views and actions of all relevant actors. The dominant or central research theories and strands are often contentious and contested within the disciplines, and very often the analysis calls heavily on competing theories and ideas to address key issues in the dominant strands.

Many of the critiques offered are not primarily aimed at the scientific endeavours and methodologies themselves, but at the entanglements of science and medicine with questions and issues that have inherently broader implications. Very often the entanglement of science and medicine with legal, social, political and cultural issues is configured as a purely or largely bio-medical question. This is evidenced in, for example, clinical literature concerning intersex variations and issues relating to best sex of assignment. The literature is rife with unexamined assumptions about what is important and central to sex selection, such as the assumption that fertility is more important for children assigned female, whereas penis size is central for children assigned male. These assumptions are presented as objective biomedical considerations. This entanglement is endemic in bioscientific research on the nature of sex and gender. The legal analysis engages in a critical investigation that identifies and teases out some of the non-medical issues for careful evaluation and understanding. In using and sanctioning a scientific perspective, law and legal discourse must be informed by the critical work necessary to disentangle assumptions and biases about sex and gender. This is the intent and focus of the analysis of various bio-medical and bio-scientific theories.

These caveats are included at various relevant points throughout the thesis, but are foregrounded here at the outset and should be understood as a fundamental constraint that operates throughout the book.

Conclusion

A keystone of the book is chapters 5 and 6, which undertake a close doctrinal reading and a thematic analysis of cases dealing with applications for approval to alter the sex characteristics of trans minors to align with their gender identity and of intersex minors to bolster and shore up their assigned sex. However, both sets of cases, while relatively straightforward and uncontroversial on their face, contain layers of history and implication which need to be teased apart and amplified to reveal potential meaning and consequences. Intersex and transgender lives, identities and experiences have a dense, weighty history and valence in Australian law, culture and medicine. Intersex and transgender embodiment is a lightning rod for controversies about the nature of sex and gender, and these controversies are settled by law, even if law does not recognise or name the issues at stake. The first part of the book untangles and exposes the underlying significance of the decisions, language and doctrines in the cases. This background explication leading up to the legal analyses is important in scene-setting to make sense of how the cases speak to different theories and conceptions of sex and gender. This context is necessary to inform the analysis of law and legal decisions.

This explication begins in chapter 2 - exploring popular, legal, and bio-scientific conceptions of sex, gender and the relationship between the two. Much of this exploration uses the framework of medical interventions and determinations about intersex embodiment to demonstrate the theories driving the medical approach.

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