

Childhood Gender Dysphoria: Conundrum For The Courts.

Childhood gender dysphoria may be defined as distress due to conflict between the physical manifestations of gender in the body and their perception in the mind of a child or adolescent. The body reveals one sex, the mind feels the other.

This conflict between matter and mind can be as destructive as any other confusional state and deserves our compassion. Very disturbingly, its incidence appears to be increasing with special clinics in major centres in Australia now reporting hundreds of new cases each year. This contrasts, dramatically, with a straw poll I have undertaken of 28 paediatricians with a cumulative experience of 931 years. This poll revealed only 10 cases: 8 associated with mental illness, 2 with sexual abuse. Protestations by a child that it belonged to the opposite sex used to be a warning sign of sexual abuse.

Given the increasing prevalence, the perturbation to family life as well as the mind of the child, and the possibility of prolonged therapy, the importance of gender dysphoria now rivals that of anorexia nervosa with its incongruity between bodily reality and mental perception (the body is thin but is imagined to be fat). Fundamental differences exist, however, between the medical and societal managements of anorexia and gender dysphoria. In the former, management seeks to reduce the delusion, not substantiate it. No medical authority would augment weight loss with diet pills and a gastric band. No media would portray anorexia as heroic. No legislature would forbid therapies that did not support the delusion. No court would praise the courage of the child in refusing food, and no court would consider being relieved of a protective role. But, with



regard to gender dysphoria, these are the kinds of things that are happening.

This article will consider three matters: First, the treatment regime for childhood gender dysphoria; second, Family Court of Australia decisions regarding childhood gender dysphoria; third, research that indicates medical treatment for gender dysphoria may damage the brain.

Treatment for childhood gender dysphoria.

It should reassure that international consensus declares up to 90% of children questioning their sexual identity will orientate to their natal sex by puberty. Particular difficulties, however, may occur when there are associated mental disorders such as autism spectrum and defiant disorders, and depression. Dr Kenneth Zucker of Canada would also warn of 'environmental' factors including family influences, especially maternal.

Given this likelihood of recovery, international opinion warns against 'parental commitment' of the child to full 'social transitioning'. This is contrary to examples on television in which young children are renamed, re-clothed, re-declared and re-enrolled in schools as the opposite sex. This transitioning should be avoided because it will make it difficult for the child to return to its natal sex at puberty. Worse, the psychological imprinting of being raised as the opposite sex may lead to lasting confusion. Worse still, the child may progress to medical intervention from which there may be no return. If the child is experiencing gender confusion, punitive measures should be avoided but kindly restrictions are in order as, for example, to where the cross-sex clothing might be worn. The best approach would be 'watchful waiting'. The worst would be to permit the child becoming a poster exhibit for the school and the media. Childhood is the time of development of identity and exploration is inherent. Puberty is the time of physical development for procreation: adolescence, for gaining maturity to raise the offspring. The Bible explains 'When I was a child, I spake as a child, I



understood as a child, I thought as a child: but when I became a man, I put away childish things'. In that sense, puberty orientates the child towards the binary function of reproduction and rearing of the species.

Some therapists conclude international reassurances do not pertain to the individual under their care and they enter the child on the pathway of medical therapy for gender dysphoria. This pathway is known as the 'Dutch protocol' because it evolved from the Center of Expertise on Gender Dysphoria in Amsterdam. The protocol became basic, in 2011, to one of the Standards of Care of the World Professional Association for Transgender Health. It comprises...

(a) Stage 1 therapy. Puberty is initiated by a biological clock deep in the brain and involves a cascade of chemical messengers that travel to the gonads to cause them to release hormones that evoke secondary sex characteristics, and to prepare for procreation using organs laid down before birth. Not surprisingly, there are many checks and balances in this 'multi-variant closed loop control system' of engineering. Chaos from an inserted spanner must be considered.

In 1971 one of the chemical messengers was identified and then manufactured in a laboratory. As it stimulated the release of hormones from the pituitary gland that went on to stimulate the gonads, after the Greek, it was called gonadotrophin releasing hormone (GnRH). It was found GnRH was secreted onto the pituitary gland in pulses, every hour so, as if the pituitary needed a period of rest before releasing its next burst of gonad stimulating hormones.

Cleverly, scientists altered the structure of the GnRH molecule so it would stimulate the pituitary gland but would not 'let go' of its docking receptor. This 'agonist' or sustained stimulating effect, resulted in an immediate surge of pituitary hormones followed by inactivity for as long as the agonist lasted. Varieties of 'GnRH agonists' were developed to last many weeks after injection and



were employed to block release of sex hormones from the gonads in medical conditions in men and women.

It was also found agonists would block the development of puberty if it was occurring too early. Subsequently, it seemed a good idea to employ blockers in cases of gender dysphoria, to give 'more time' for the child to think about transitioning, and to postpone the appearance of secondary sex characteristics which might be upsetting. Such use was suggested to be delayed until 12 or, at least, until the earliest stages of puberty had emerged. The main side effects were declared to be reduction in the density of bones, but it was assured they would recover when sex hormones were applied. The psychological effect of delaying puberty while peers were developing secondary sex characteristics was also considered and would become the basis for calls for giving sex hormones at increasingly younger ages.

In all Family Court considerations of blockers since 2004, only once was mentioned an effect on 'cognitive ability and mood'. Otherwise, blockers were declared 'safe and entirely reversible' and, on that basis, their administration could be safely left to children, parents, quardians and therapists.

(b)Stage 2 therapy involved administration of hormones of the opposite sex (testosterone and oestrogens) to evoke their external characteristics, advisably not before 16 years of age. Such hormones would need to be continued for as long as the patient wanted to remain transgender, presumably for life. Side effects included metabolic, vascular, bone and emotional problems which would need sustained medical supervision. In some Family Court cases, the effects were declared to be 'partially reversible', though how long it would take to result in chemical castration was unknown. An effect on the structure of the brain was never mentioned. Ironically, some deliberations listed psychological complications of



depression, anger and instability which the use of hormones was intended to reduce.

(c)Stage 3 therapy would involve irreversible surgery, not usually performed under the age of 18.

Decisions of the Family Court of Australia regarding gender dysphoria.

Overview of children involved. Review of Family Court decisions published on-line by the Australasian Legal Information Institute under the generic term 'gender dysphoria' reveals almost 70 cases since 2004. Correcting for multiple appearances and removing cases of physical intersex now known as Disorders of Sexual Development, leaves 56 children with incongruity between natal sex and current feelings. Physical Disorders should be removed because they are as irrelevant to psychological gender dysphoria as congenital abnormalities of the bowel are to anorexia nervosa.

Most of the 56 children went before the court for authorisation to consent to receive cross sex hormones. In earliest cases, some sought blockers. Five were authorised for bilateral mastectomy. Review reveals a soaring incidence: From one case a year in 2004 and 2007, to 2 in 2010 and 2011, to 5 in 2013, then back to 3 in 2014, followed by 18 in 2015, and 22 in 2016. To publication, there have been 2 in 2017. Natal females predominate: 34 to 22. The summaries do not detail medical features, but many may be discerned. For example, in 25 of 39 cases in which family arrangements might be discerned, dysphoric children live with single parents or in foster care and only 14 with both parents. 38 children are reported to have revealed gender dysphoria before the age of 7. Many are claimed to have demonstrated it from the earliest years. One parent declared an infant had identified with its



opposite sex at the age of nine months, apparently not challenging the credulity of the court.

In 28 of the 56 children, mental co-morbidities are emphasised. These include Autism Spectrum Disorder (6), major depression, incapacitating anxiety, oppositional defiance, attention deficit/ hyperactivity and intellectual delay. Though many of these major disorders were revealed in earliest years before or in parallel with gender dysphoria, therapists claimed gender dysphoria as the cause and not merely one symptom of underlying disorder. Therefore, medical treatment for dysphoria was argued to be the primary solution.

In 15 summaries, including the last one of 2017, the safety and reversibility of blockers is emphasised. None refer to affects of cross sex hormones on the structure of the brain.

In 41 cases which reported the competency of the child to fully understand the treatment to be received, 11 children were acknowledged to be incompetent, and authority to consent for treatment was extended to parents and guardians, as guided by therapists. Many of those with mental co-morbidities were, nevertheless, considered to possess 'Gillick competency' as discussed below. Such illnesses were apparently presumed not to affect understanding or motivation.

Of the 5 authorised to consent to mastectomy, the first was in 2009, involving a 16 year old on blockers for 5 years and cross sex hormones for one year. The next was in 2015, involving a 16 year old on cross sex hormones for a year. Of those in 2016, one was 15 and on blockers for nearly 2 years and cross sex hormones for 8 months; one was 17 and appears to have had no previous hormonal intervention; and one was 15 and on blockers for almost 1 ½ years. As to whether this latter child was 'Gillick competent', one proponent doctor declared 'he was not very knowledgeable about details concerning possible side effects and complications of the surgery, but this did not strike me as being out of keeping with his



stage of development...' The possibility that extended exposure of the brain to blockers, themselves, might have reduced the capacity for informed consent was not discussed.

The judge backed both horses announcing he considered the child competent to consent but, if he was wrong, 'he would accept the submissions of all parties' that it was in the child's best interests and would, therefore, let others consent on the child's behalf.

(b) **Gillick competency and re Marion.** Fundamental to understanding the Family Court's summaries is the concept of Gillick competency, and the Australian case known as re Marion in which parents sought permission to consent on behalf a retarded daughter for sterilisation to minimise effects of menstruation and the possibility of pregnancy.

In considering whether Marion had the capacity to decide for herself, the Australian court accepted the precedent from the House of Lord's regarding a Mrs Victoria Gillick who contested, unsuccessfully, that children under 16 were not competent to consent for contraception therapy. The English court decided that if a child possessed 'sufficient understanding and intelligence to enable him or her to understand fully what is imposed', the child could consent to medical treatment. This capacity became known as Gillick competency.

In 1992, in re Marion, the Australian court followed the House of Lords, declaring 'This (Gillick) approach though lacking the certainty of a fixed age rule accords with experience and psychology' and 'should be followed...as part of the common law'.

Accordingly, if the child was 'Gillick competent', court authorisation would not be needed for medical interventions for conditions that involved 'malfunction or disease' and were given 'for the traditional medical purpose of preserving life...'

If these traditional reasons for medical intervention were not obvious, and the child was Gillick incompetent, the authority of the



court would be needed in 'special cases' involving 'invasive, irreversible and major (surgery)' where there was a significant risk of making a wrong decision and the effects of that decision were 'grave'. If the intended intervention was 'non-therapeutic' and the child Gillick incompetent, neither parents, guardians or the court had the power to consent.

re Marion emphasised the need for the protective role of the court, as averred in re Jane, that 'the consequences of a finding that the court's consent are unnecessary are far reaching both for parents and for children. For example, such a principle might be used to justify parental consent to the surgical removal of a girl's clitoris for religious reasons...'

re Marion went further, warning against unqualified trust in the medical profession which 'Like all professions... has members who are not prepared to live up to its professional standards of ethics...Further, it is also possible that members of that profession may form sincere but misguided views about the appropriate steps to be taken'.

The High Court considerations in *re Marion* have been like a stake in the ground to which subsequent courts have been tied with a short leash. As populism demands acceptance of gender dysphoria as rainbow normality and not disorder, courts appear to be struggling back and forth to be free from the restrictions of the definitions of such words as malfunction, disease, therapeutic, best interests, competency and responsibility. To be fair, what words in the English language can be used to define an entity as normal when it requires massive medical, and even surgical intervention, to confirm and maintain? Or treatment necessary, when some 90% are going to get better by themselves?



In the end, the possibility of freedom for the court emerged: parliament could pass a law to extricate it from the whole business. Politicians could provide water and bowl for the washing of hands. And, as the crowd encouraged Pontius Pilate, a petition is circulating to 'Remove Family Court of Australia from Medical Decisions for Trans Teens'.

Launched in August 2016 by Georgie Stone, it has 15,659 supporters and hopes soon to reach 25,000. Georgie is 16 and began taking puberty blockers at 10 years and 9 months in transitioning to female. Georgie argues 'the courts follow medical advice in their decision making anyway, making the courts (sic) process unnecessary'.

That politicians are keen to involve themselves in childhood gender dysphoria is confirmed by 6 US states and 1 in Canada which have declared it illegal to practice 'conversion' or 'reparative' therapy on minors. These misleading terms essentially mean the only therapy that can be extended to minors with gender dysphoria is one that 'affirms' their condition, and does not seek to 'convert' or 'repair' them back to their natal state. In 2017, bills to ban 'conversion' therapy on minors have been filed in 14 more US state legislatures. In Australia, the new Victorian Health Complaints Act possesses potential for similar effect. The Victorian Health Minister, Jill Hennessy declared the Act will 'provide the means to deal with those who profit from the abhorrent practice of 'gay conversion' therapy...which inflicts significant emotional trauma and damages the mental health of young members of our community'. She explained "Any attempts to make people feel uncomfortable with their own sexuality is completely unacceptable". Though the Minister specified 'gay people' and did not define age, the Act could apply to any therapist not affirming gender considerations of a child.



Overview of the cases reveals profound change in a short time. There has been devolution from dispassionate conviction for a protective role (supported by a submission from the Human Rights Commission), to the passionate plea in *re Lucas* for laws to abolish the role of the court.

Also, medical interventions have been performed at ages progressively younger than advised by international opinion. Blockers have been introduced at 10 3/4 and not 12; cross sex hormones earlier than 16. Irreversible surgery would not wait to 18: bilateral mastectomies would be performed at 15.

Summaries also reveal a change in medical tone from traditional caution to a certitude that is rarely seen in other circumstances. Few doctors prophecy as fulsomely for the outcome of other problems, as is done for the medicalisation of gender dysphoria. Rarely is such zeal indirectly proportional to evidence. Few doctors remain optimistic that chemical castration and surgical onslaught on genitals will ameliorate mental disturbance, though such therapies do exist in the distant history of psychiatry.

Along the way, the Family Court of Australia appears to have tired. Published judgements shrink from an average of 28 pages in the first 6 cases from 2004, to 7.5 in the most recent (which included 3 cases of bilateral mastectomy). Does this reflect surrender to the influence of a small group of protagonists who argue the court's almost exclusive reliance on its testimonies render the court an unnecessary intrusion into its business?

(d)Looking more closely at some of the cases.

In re Alex (2004), the Family Court considered whether authority to consent for hormonal treatment should be given to guardians of a 13 year old natal female identifying as a male. The case was complicated by Alex's Gillick incompetence, depression, 'perceptual disturbances' in which Alex 'could hear his own voice or the voice of his father', and sense that 'somebody can read my mind and the



thoughts in my mind' The Court was persuaded it was in Alex's best interests to start treatment with drugs that would suppress menstruation and to continue with 'irreversible' hormonal treatment at age 16.

The judge wondered if gender dysphoria was a disorder or merely a point in a rainbow of normality, acknowledging some might find it 'offensive' to have their condition categorised as 'disease or malfunction'. He concluded, however, that 'current state of knowledge would not...enable a finding that the treatment would clearly be for 'malfunction of disease' and thus 'therapeutic' in the considerations of *re Marion*. Nevertheless, authority was given and, whether Alex was normal or not, Alex progressed from blockers to cross sex hormones to bilateral mastectomies.

Re Brodie, (2008), concerned a 13 year old natal girl adamant she was a boy. Brodie existed in such a 'tremendous state of turmoil and anger' at 'betrayal' by an abandoning father she was so difficult to handle her mother 'was nearly ready to ask the State to take responsibility'. Arguing that puberty blockers would reduce the 'hostility and anxiety', therapists assured the court their effects were 'completely reversible', and their denial 'would...endanger (Brodie's) life'. Authorising consent, the court launched the mantra blockers possessed 'no long term side effects that would harm the child and be contrary to her best interests'. The judge congratulated Brodie for being fortunate in having therapists who 'continue to keep up with research' and who approached the matter with 'sensitivity and reflection'. It appears the attention of the court was not drawn to reports of effects on the brain which had begun to emerge several years earlier.

In re Bernadette (2010), regarding a 17 year old natal male seeking the body of a female, the 'Dutch protocol' was appearing in Australian courts. Philosophically, it was based on the ideology that sexual identity is determined by the mind and not the matter of



'genitalia or other aspects of...physical appearance or presentation'. Practically, it formalised therapy into the stages described above. Three other features stand out in *re Bernadette*. First, the judge was unable to be convinced transexualism was a 'normally occurring factor of human development' which could be safely left to parental consent and, therefore, it was 'in the best interests of every child' for the court to retain the authorising power. Second, for the first and last time in FCA deliberations, concerns of 'potential damage to the brain' by puberty blockers were raised.

The judge, however, declared he was 'satisfied' the effect of Stage 1 therapy was reversible, despite the 'British view...that brain development continues throughout adolescence' and blockage may incur 'potential damage'. The judge concluded 'this aspect' is dealt with by the Dutch professors who 'comment on the need for a study on the brains of adolescent transsexuals to endeavour to detect functional effect and difficulties'. He said 'this potential aspect of the matter' would not cause him to deny treatment. Thus the judge appeared satisfied there would be no brain damage in the present on the basis of research to be pursued in the future.

Third, the judge declared 'so far as stage 2 is concerned, I am satisfied that it would be possible to reverse that treatment...' It appears the judge's attention was not drawn to research already reporting drastic effects of cross sex hormones on brains, as discussed below.

re Jamie (2011), was a saga that continued into the Full Court in 2012, 2013 and 2015. It concerned a natal twin boy of 10 ½ years identifying as a girl. In 2011, Jamie was declared Gillick competent to consent to puberty blockers despite the fact it was 'difficult to ensure' he understood 'the full and extensive ramifications of such decisions, especially in the long term', and that the blocker would be administered at an age less than researched and, therefore recommended, in Holland. Declaring blockers 'safe and entirely reversible', the court decided there was no need for its protective



role, and decisions regarding blockers could be left to the child, parents and therapists.

The court decided, however, the 'nature... of Stage 2' was such that authorisation would still be needed for parental consent to the child's treatment, unless the child demonstrated 'Gillick competence'. In that case the court could authorise the child to give consent. If not, the court would decide what was in the 'child's best interests'. Thus, the role of the court was to establish Gillick competence. If established, it would have no further role.

In 2015, the court heard that, after almost 4 years of blockers, Jamie was approaching 15 with the appearance of a 'pre-pubescent girl... (who) does not resemble her female peers, particularly in terms of development of breasts'. Deducing psychological stress, the court pronounced Gillick competence, authorising oestrogens.

There was a major turn in the reasoning of the court in Jamie's saga. The need to protect the 'best interests' of the child was subsumed to the concept the child could consent to irreversible, possibly grave, intervention as long as the child could convince the court it knew what it was doing. In reality, the Court was bowing to sincere (but possibly mistaken) therapists for, apart from their opinions, how could it evaluate competence?

It is ironical Jamie's parents appealed to the Full Court with the argument that gender dysphoria was, in fact, a mental disorder which warranted psychiatric medication for 'a malfunction or disease'. This argument contradicted the populist claim that transgender orientation was, in fact, merely a point in rainbow normality.

In 2013, in re Sam and Terry, Sam concerned a natal boy identifying as a girl, and Terry, a girl identifying as a boy. Both were Gillick incompetent. Sam suffered severe mental co-morbidities of anxiety, depression, eating disorder and social phobia and was, essentially, housebound. Terry suffered from Asperger's Syndrome. Approval



was sought and received by parents for administration of Stage 2 therapy.

The court reaffirmed its need to be the 'decision maker' in the best interests of the child, re-visiting reasons from re Jane, including the need to protect from removal of a 'girl's clitoris for religious or quasicultural reasons or the sterilisation of a perfectly healthy girl for misguided, albeit sincere, reasons'. Contributing to confusion as to whether gender dysphoria was a disorder or not, a psychiatrist opined it was a condition that 'does not require psychiatric treatment. The treatment it requires is gender transition which is a medical and surgical process'. The irony seems unappreciated that such treatment could lead to both clitorectomy and sterilisation. Disagreeing with the psychiatrist by declaring gender dysphoria was, indeed, within the ambit of a 'psychiatric disorder', the judge seemed unaware of the status being confirming upon gender dysphoria: the only psychiatric illness still treated by surgery on the genitals. By 2015, attitude had really swung towards the concept of transgender being normal, though no particular reason emerges from cases in 2014. 'Pleasingly', the judge declared in re Cameron, gender dysphoria is not 'not now generally considered a mental illness'. And, though the natal girl hoping for a male's body 'did not have full understanding, the court 'wishes him well, acknowledging the maturity and courage he has shown', while authorising cross sex hormones.

By 2016, certitude in testimonies before the court had become almost evangelical. In re Celeste, New Life was prophesied for a natal male transitioning to female: Cross sex hormones 'would maintain... self esteem, retain her congruence of self as a young woman and facilitate her normative psychological, social and sexual development'. These prophecies, however, were difficult to reconcile with other testimony that the child had been diagnosed with Asperger's syndrome, attention deficit/ hyperactivity disorder and language disorder at 4 years of age, whose ongoing effects had



reduced capacity to attend and concentrate at school. In summary, it was confessed 'she' does not 'understand everything that is said to her'.

In re Gabrielle, which involved another natal male identifying as female, the Court found oestrogens were necessary to 'continue living happily'. Certainly, in the Court's view their denial 'would result in a loss of recognition and validity of her sense of self...depression and anxiety (will) increase...and (she) will be at greater risk of self harm and death from suicide'. Paradoxically, it was also asserted that if Gabrielle ever wanted to revert to being a male after all that positive experience as a female, 'she has the thoughtfulness and creativity to be able to manage...de-transition comfortably'. In 51 years of medicine, I have never heard medical 'happiness' predicted.

The certitude of 2016 was extended surgical removal of breasts from three females pursuing maleness. Justification for circumventing international guidelines for best practice included interpreting them as merely advice, and minimising the onslaught by arguing it was limited to 'The Top' and not the full Monty as described in 'The Fashion in Child Surgical Abuse'

When guestioned about possible after effects of the operation, was one teenage recipient affecting nonchalance with the reply 'he' would just have to 'stay on the couch and watch Netflix for some weeks...(and might have to) miss the formal? Or, did such superficialities suggest inability to understand what was really about to happen?

One of the others seeking mastectomy was declared to be 'not very knowledgeable about...side effects and complications of the surgery' but this 'did not strike me (the witness) as being out of keeping with his stage of development...' On advice, the Judge declared Lincoln competent to consent but, equivocating, he added 'if I am wrong...I accept the submission of all parties...that the proposed treatment is in the best interests of Lincoln'. One way or another, Lincoln was

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going to lose her breasts. The fact she had been on blockers for almost 2 years and cross sex hormones for 6 months was not considered to have affected the structure of her brain and, thus, cognition.

In re Lincoln, the judge set the stage for future loss of breasts and even genitalia by declaring he could not understand how a child could consent for Stage 2 therapy and not Stage 3 because both involved irreversible effects. Because of doubt as to whether Lincoln was Gillick competent, the judge also set the precedent for others to make decisions on behalf of the breasts of minors. Deliberation over the fate of Lincoln, has probably set another precedent. One therapist argued the age of administration of sex hormones should be lowered from 16 to soon after the start of puberty (which normally occurs around 9 in girls and 10 in boys). He declared 'lagging behind their peers in pubertal development' creates its own 'psychological stress'. Therefore, Stage 2 should be started at a much lower age if the 'diagnosis is clear cut'. In this case, the therapist did admit a cognitive effect of blockers. Facilitating entry to Stage 2, in re Darryl, the court rejected the assertion by an expert witness that the natal female who was prone to depression and self-harming does not have 'the competency to consent to irreversible treatment'. Uniquely, that witness continued 'given the grave consequences, I am not persuaded that most minors would be in the position to fully understand the implications of irreversible hormone treatment over the entire lifespan'. The judge dismissed the opinion of the medical witness, declaring 'there can be no doubt' about Darryl's competence. In any case, the judge concluded he did 'not accept that the words "understand fully" require a child to have achieved the maximum understanding which later years may give them when their brain and personality are fully developed'. The judge appeared convinced full development would not bring recognition a grave mistake had been made in mentally disturbed adolescence.





2016 ended with a call in *re Lucas* for abolition of the role of the court in gender dysphoria. Regarding a 17 year old natal girl seeking authority for testosterone, the judge declared an 'urgent need for statutory intervention...to undo the consequences of *re Jamie*'. The judge pleaded for the abolition of the need for the court to authorise Stage 2 therapy, implying it should be left in the hands of therapists. Confirming his view that biology should be moulded to the mind, he asked 'what other section of our youth is required to endure such an ordeal to attain the corporeal manifestation of their (sic) identity?'

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The cerebral effects of blockers and cross sex hormones.

Blockers.

It was wondered if GnRH acted only on the pituitary gland but, as early as 1981, a role in other parts of the brain was being considered. By 1987, it had been found many of the nerve cells that produced the hormone connected to other neurons in widespread parts of the brain, especially the limbic system which is fundamental to executive, behavioural and emotional control. These findings were confirmed while others suggested extra-cerebral effects, all raising questions of the effect of long term administration on cognition, behaviour and emotional state. The effect of blocking GnRH in puberty was of special concern because it was a 'critical window for neuronal development and programming'. By 2004, it was known that surgical castration of male animals lead to 'profound loss of synaptic density in the hippocampus and changes in learning and memory' due to absence of testosterone. Synapses are the junctions between cells through which information is shared by tiny electrical impulses or chemical transmitters. Their reduction implies reduced activity of that region of the brain. As well as by castration, the effect of reduction of testosterone by blocking the pituitary needed to be elucidated.





In 2007, 'as animal and behavioural studies' suggested blockers 'may have significant effects on memory', studies on the relevant part of the brain were continued in women on blockers for gynaecological reasons. Abnormal function was found. In 2008, review of the effect of testosterone deprivation due to blockers raised the 'strong argument' that blockers, alone, were linked to 'subtle but significant cognitive declines'. Other studies confirmed these effects of blockers, declaring 'higher rates...of cognitive impairment' compared to controls, but these effects were denied by some. Laboratory study was needed.

In 2009, research had begun on the effect of blockers on the brains of sheep in collaboration between scientists in universities in Glasgow and Oslo These foundational studies confirmed GnRH receptors existed throughout the brain, that exposure of the prepubertal lamb to blockers led to observable increase in the size of the amygdala, that the activities of multiple genes in the amygdala and hippocampus were altered by the blockers and, not surprisingly, that the brain functioning of the sheep was disturbed. Female sheep had less emotional control and were more anxious. Males were more prone to 'risk taking' and alterations in emotional reactivity. Both sexes suffered sustained reduction in spatial memory.

At a molecular level, blockers may reduce the capacity of cells to communicate with each other by interfering with the production of neurosteroids. These locally produced steroids are responsible for synaptic connections and are prominent in the limbic system. . Contrary to the laboratory studies, a recent study by the Dutch group on its own human patients asserted no difference could be found in executive function between mid-teens on blockers and controls. Little reassurance about the Conclusion, however, can be found because close reading of the Results reveals males on blockers transgendering to females did have 'significantly lower accuracy scores than the control groups'. Dismissively, the authors declared



'it is possible that this is just a chance finding due to the small size of the subgroup (of 8 adolescents)'. Alternatively, it could have confirmed what had been revealed in sheep but, indeed, the numbers were small.

These studies should caste doubt on the repeated assertion that blockers are safe, with effects that are 'entirely reversible'. Contrary to older men with cancer whose brains are devolving with age, blockers are being given to children at a time of great brain development that will continue into the mid-twenties. Moreover, compared to the men whose treatment with blockers amounted only to months, many children receive them for years.

Cross sex hormones.

Courts have depended upon testimony of experts and have often repeated their assertions that the effects of cross-sex hormones are 'partially reversible'. In none of the summaries does it appear, however, that experts have directed consideration to the possibility of structural change on the brain, despite their occasional warnings about mood swings, depression and anger.

Animal studies on the drastic effects of androgen deprivation mentioned above should have, at least, raised concerns that similar effects might be occurring in the brains of natal boys on puberty blockers. The added effect of administered oestrogen on that blocked brain should at least have been mentioned in FCA deliberations because by 2006 it was described in medical literature. Three studies have compared the effects of cross sex hormones on the brain before and after treatment. One found pre-treatment structure and volume of the brain of a transgendering male to be comparable to brains of owners' content with their lot. After receiving oestrogen (with an anti-testosterone drug) for only four months, however, there was a reduction in brain size that was 'ten times the average annual decrease in healthy adults'. After a similar length of administration, the brain volume increased in females receiving testosterone.



Recent studies confirm shrinkage of male brains after administration of oestrogen is associated with reduction in the size of grey matter, evident after only 6 months of exposure. Females receiving testosterone had an increase in the size of their grey matter. Other studies on female brains receiving testosterone revealed an effect on the microstructure of brain cells.

Shrinkage of male brains can be attributed to the catabolic (or breaking down) effect of oestrogen which seems to induce death of neuronal and supporting cells. The increase in female brains is presumed due to the anabolic effect of testosterone increasing the size of molecular components of the neurons and supporting cells. As brains are chromosomally programmed before birth to anticipate and respond to the specific stimulation of appropriate sex hormones in puberty, disruption should not surprise when they are exposed to the wrong hormone.

As with blockers, the above studies were conducted on adult brains exposed to cross sex hormones for only several months. What can be expected from exposure in childhood that continues for decades? Despite implied assurance from courts through their experts, no one knows. A 2016 review concludes 'long term clinical studies are yet to be published... risks may become more apparent as the duration of hormone exposure increases'. In the meantime, court sanctioned therapy of children with gender dysphoria remains completely and utterly experimental.

Conclusion.

Children and parents caught up in the current transgender phenomenon deserve our compassion. The children are in great danger of at least psychological imprinting resulting from a Gnostic ideology whose enlightened leadership is declaring mind is truly over matter: feelings trump chromosomes. The danger increases exponentially when these children are ushered onto the pathway of





medical experimentation. How can these children be assumed to be thinking clearly when their brains have been altered by experimental drugs? Why is sustained anxiety and fear not a drug effect? Lamentably, Australian courts seem to be tiring of the protective role declared necessary in Marion's case. At least one judge is calling for the abolition of the role for the court in gender dysphoria and would leave treatment entirely in the hands of therapists.

There are, however, at least two problems in such unauthorised therapy. The first is that of human nature to which Marion's case alludes. The medical profession is not alone in having sincere but misguided practitioners and the consequences of mistakes regarding childhood gender dysphoria are, indeed, irreversible and grave. Family Courts praised therapists for their knowledge but while those experts were propounding no lasting side effects of blockers and were not considering any structural effects of cross sex hormones on the brain, international research was proving otherwise.

The second problem is the new Victorian Health Complaints Act, which has the potential to restrict therapists to affirmation of gender dysphoria with its medicalisation.

Affirming therapists may, however, face their own dangers. Patients may emerge with altered brains asking why no-one warned them about such effects of hormones? The High Court in *Rogers vs Whittaker* declared 'a medical practitioner has a duty to warn a patient of a material risk inherent in the procedure'. In that case, an ophthalmologist did not think to warn a patient of the one in 14,000 risk to the good eye when operating on the bad. Regarding the brain and hormonal treatment for gender dysphoria, reports of damage are established, and ignorance can be no defence.