LEGAL REGULATION OF MEDICALLY ASSISTED REPRODUCTION IN CROATIA: IS THE GRASS GREEN ENOUGH ON OUR SIDE?

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ABSTRACT

This article addresses the medical and family law aspects of the legal regulation of medically assisted reproduction in Croatia. Croatia has balanced legislation on medically assisted reproduction. The author explains the principles that governed the legislator; namely: the ultima ratio principle, the principle of the protection of participants (prospective parents, donors, and physicians), the principle of the protection of the best interests of the child, and the principle of state control. The Medically Assisted Reproduction Act (2012) and the family law rules in the Family Act are explained. In practice, some problems have emerged. What should be done with surplus cryopreserved embryos? How should donor programs be regulated? How can cross-border surrogacy arrangements be prevented? How should the efficiency of licenced fertility clinics be measured? The author concludes that, despite some objections, Croatia's legal regulations have successfully balanced the human rights of participants (the child, intended parents, donors, and medical staff).

KEYWORDS

medically assisted reproduction
assisted reproduction technologies
the right of the child to know his origin
reproductive rights
donation of gametes
surrogacy

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1. Introduction

For most people, one of the strongest human desires is the desire to fulfil oneself as a parent. Approximately 15% of couples face infertility[2] caused by the health factors of one or both partners.[3] These couples often seek medical help. Notably, such reproductive medical supports are increasingly successful.

Robert, the first child conceived by *in vitro* fertilization (IVF) in Croatia, celebrated his fortieth birthday in September 2023. Croatia was the seventh country worldwide to achieve significant success with medically assisted reproduction. Robert's birth gave new hope to thousands of Croatian couples struggling with infertility.

According to the European Atlas of Infertility Treatment Policy (published on 10 December 2021 by the Fertility Europe Forum of the European Parliament for Sexual and Reproductive Rights), Croatia has maintained a high level of legislation related to medically assisted reproduction.[4] More specifically, this atlas analyses the quality of legislation, availability, financing, and state investment. Based on these factors, Croatia given a 'very good' rating, attaining the highest percentage of required points (76%) among countries with the same rating.[5]

In the Republic of Croatia, sixteen health institutions conduct medically assisted reproductive procedures (eight public and eight private institutions). These institutions are listed in the register of authorised medically assisted reproductive institutions governed by the state.[6]

2 | The WHO defines 'infertility' as a disease of the male or female reproductive system defined by the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse, see WHO, 2024.

3 | It seems that male fertility is especially endangered. Data and analyses confirm prior findings of an appreciable decline in sperm count between 1973 and 2018 among men from North America, Europe, and Australia and support a decline among unselected men from South/Central America, Africa, and Asia. This decline has continued and has notably steepened since 2000. This substantial and persistent decline is now recognized as a significant public health concern. In 2018, a group of leading clinicians and scientists called for governments to acknowledge decreased male fertility as a major public health problem and to recognize the importance of male reproductive health for the survival of the human (and other) species. *Amplius*: Levine et al., 2023, pp. 157–176, and Aitken, 2022, pp. 629–638. Swann, 2021 states that most couples may have to use assisted reproduction by 2045.

4 | The European Parliamentary Forum for Sexual and Reproductive Rights is a network of Members of Parliament throughout Europe committed to protecting the sexual and reproductive rights (SRHR) of all people, both at home and overseas. The Secretariat is based in Brussels. Croatia's position on the European Atlas of Infertility Treatment Policy is remarkable, especially considering that The European Parliamentary Forum for Sexual and Reproductive Rights aims to 'ensure that all European citizens receive equal access to treatment, as part of their right to the highest possible level of sexual and reproductive health.' See Bulmanska-Wingett, 2023.

5 | Only four countries earned an 'excellent' score (meeting 81% of the required criteria): Belgium, Israel, the Netherlands, and France. See: European Parliamentary Forum for Sexual & Reproductive Rights, 2021.

6 | The registry is also part of the European Union Register of Authorized Health Institutions and Tissue and Cell Banks. EU Coding Platform. European Commission, 2024.

Here, it is helpful to note that the International Committee for Monitoring Assisted Reproductive Technologies (ICMART)[7] defines assisted reproductive technologies (ART) as

> all interventions that include the in vitro handling of both human oocytes and sperm or of embryos for the purpose of reproduction. This includes, but is not limited to, IVF and embryo transfer ET, intracytoplasmic sperm injection ICSI, embryo biopsy, preimplantation genetic testing PGT, assisted hatching, gamete intrafallopian transfer GIFT, zygote intrafallopian transfer, gamete and embryo cryopreservation, semen, oocyte and embryo donation, and gestational carrier cycles. Thus, ART and ART-only registries do not include assisted insemination using sperm from either a woman's partner or a sperm donor.[8]

Broadly, medically assisted reproduction (MAR) comprises

> reproduction brought about through various interventions, procedures, surgeries and technologies to treat different forms of fertility impairment and infertility. This include ovulation induction, ovarian stimulation, ovulation triggering, all ART procedures, uterine transplantation and intrauterine, intracervical and intravaginal insemination with semen of husband/partner or donor.[9]

MAR raises many medical, human rights, and ethical issues.[10] These issues challenge the legislature to find appropriate and justified solutions that balance different interests, such as the interests of prospective parents, the interests of the child, and the interests of other participating persons (e.g. donors, surrogate mothers). It is also notable that reproductive medicine is a big business: providers of IVF reported profits of USD 12.5 billion in 2018 and are expected to generate profits of up to USD 25.6 billion in 2026.[11]

Cross-border issues related to MAR are particularly critical. Couples and/or individuals may engage in MAR abroad. In addition, a MAR procedure may be started in one country but the relevant couple or individual may request the gametes or embryos to be transferred to another country. While a state can only regulate MAR rules within its borders, individuals and couples can seek MAR treatments in other countries and request an acknowledgement of parentage in a country that prohibits MAR technologies (e.g. surrogacy, giving birth to a child conceived with the egg of a female partner and born

7 | ICMART is a non-profit corporation governed by an international board of reproductive medicine professionals. Notably, in 2017, ICMART developed 'The International Glossary on Infertility and Fertility Care', which is used in this Art. The glossary was published in Fertility and Sterility (FNS) and Human Reproduction (HS). See ICMART, 2017.

8 | Ibid.

9 | Ibid.

10 | The Catholic Church strongly objected to 'artificial insemination' and IVF. The Church published a booklet, titled 'A child: a gift or an object?', that claimed that children conceived by such methods would suffer more health problems and that numerous embryos are destroyed during MAR procedures. In response, medical experts advised that most medical centres here have not destroyed embryos and are instead awaiting new legislation before they do so. See Wood, 2005. The Croatian Bishop's Conference made a statement in step with the teaching of the Catholic Church, expressed in the instructions Donum Vitae (1987) and Dignitas Personae (2008).

11 | Allied Market Research, 2019.

by her same-sex partner). Cross-border arrangements may challenge public order in the parents' domicile countries (e.g. in the case of surrogacy).

Croatia's legislation regarding the medical aspects of assisted reproduction (including the donation of gametes) is relatively balanced; however, there remain some unsettled issues of public concern, such as the destiny of frozen embryos, the lack of gamete and embryo donation banks, and the exclusion of single women and same-sex couples from being beneficiaries of MAR procedures.

This Art. offers a general overview of relevant legislation and specific questions that should be addressed in the future, such as how to address the uncertain legal status of frozen embryos and possible solutions for the lack of donors.

2. Legislation

As MAR has repercussions for sensitive personal status and must align with human rights, national legislation must carefully regulate the related aspects of medical and family law. There is also notable legislative activity at the European level on this issue, which is addressed in more detail below.

2.1. The European Union and the Council of Europe

The Charter of Fundamental Rights of the European Union[12] protects the right to integrity through a specific provision related to medicine and biology (Art. 3). The Charter obliges that, in the fields of medicine and biology, the free and informed consent of the person concerned must be respected. Further, according to the procedures laid down by law, it prohibits activities that treat the human body and its parts as sources of financial gain. Additionally, it prohibits the reproductive cloning of human beings. Related general provisions on dignity, the protection of privacy, and other issues should also interpreted as necessary in the context of human rights.

While EU Directives prescribe technical quality and safety requirements,[13] each EU country is free to regulate MAR procedures according to its needs. The Council of Europe

12 | Charter of Fundamental Rights of the European Union, 2012/C 326/02.

13 | Directive 2004/23/EC of the European Parliament and of the Council of 31 March 2004 on setting standards of quality and safety for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells. This Directive is primary legislation and sets standards of quality and safety for the donation, processing, preservation, storage, and distribution of human tissues and cells. This Directive was recently replaced by a new one, the Proposal for a Regulation of the European Parliament and of the Council on setting standards of quality and safety for the substances of human origin intended for human application and repealing Directives 2002/98/EC and 2004/23/EC (The Proposal of 14 July 2022). Other notable Directives include: Commission Directive 2006/86/EC of 24 October 2006 implementing Directive 2004/23/EC of the European Parliament and of the Council as regards traceability requirements, notification of serious adverse reactions and events and certain technical requirements for the coding, processing, preservation, storage and distribution of human tissues and cells; Commission Directive 2012/39/EU of 26 November

Social Charter's provision[14] on the right to health protection (Art. 11) also generally applies to the area of reproduction. Meanwhile, the Oviedo Convention (the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine)[15] prohibits the selection of a child's sex (except in cases where doing so is necessary to prevent serious hereditary sex-related diseases; Art. 14), the creation of human embryos for research purposes (Art. 18, para. 2), and profiting from or disposing of a part of the human body (Art. 21). Although the Oviedo Convention was followed by several protocols, no protocol on reproductive technology has yet been issued.

Further, the European Convention on Human Rights (*ECHR*) has been invoked several times in cases related to reproductive issues.[16] For example, on several occasions, the European Court of Human Rights (ECtHR) made rulings based on interpretations of Art. 8 of the ECHR. The jurisprudence of ECtHR included the cases that judged the right to access artificial insemination facilities,[17] the possibility of using an embryo against the will of the ex-spouse,[18] an unacceptable complete ban on specific artificial procreation techniques (e.g. ovum donation),[19] the use of an artificial insemination by a couple that is not sterile or infertile but wants to conceive a child using MAR procedures to prevent genetic diseases (e.g. cystic fibrosis) for which they are carriers that could be passed to their child.[20,21]

2012 amending Directive 2006/17/EC as regards certain technical requirements for the testing of human tissues and cells (Text with EEA relevance); Commission Directive (EU) 2015/565 of 8 April 2015 amending Directive 2006/86/EC as regards certain technical requirements for the coding of human tissues and cells (Text with EEA relevance); and Commission Directive (EU) 2015/566 of 8 April 2015 implementing Directive 2004/23/EC as regards the procedures for verifying the equivalent standards of quality and safety of imported tissues and cells. These Directives establish minimum quality and safety standards for procedures related to the donation, processing, preservation, storage, and distribution of human reproduction cells. These directives will be replaced by a single directive, detailed by the Commission in 2022 in a draft proposal for the revision of this legislation.
During the last revision of this Art. these directives were replaced by a single legal document: Regulation (EU) 2024/1938 of the European Parliament and of the Council of 13 June 2024 on standards of quality and safety for substances of human origin intended for human application and repealing Directives 2002/98/EC and 2004/23/EC.

14 | European Social Charter (Revised) ETS No. 163.

15 | Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine (ETS No. 164). Entry into force for Croatia on the 1 March 2023.

16 | ECHR, 2023a.

17 | *Dickson v. the United Kingdom*, Application No. 44362/04, Judgement 4 December 2012.

18 | *Evans v. the United Kingdom,* Application No. 6339/05, Judgement 10 April 2007.

19 | *S. H. and Others v. Austria*, Application No. 57813/00, Judgement 3 November 2011.

20 | *Costa and Pavan v. Italy*, Application No. 54270/10, Judgement 28 August 2012.

21 | Lebret, 2020; Preložnjak, 2020.

The ECtHR also has dealt with several cases of surrogacy[22] with cross-border elements. Case law has slowly led to the legal recognition of parenthood in some cases, although it still leaves a margin of appreciation for the state.[23]

Notably, the ECtHR has been putting an increasing amount of pressure on contracting states to confirm the establishment of the parent–child relationship for children born abroad through surrogacy and taken back to countries of which their prospective parents are nationals. The ECtHR referred to the right to private and family life, weakening the validity of the ban on surrogacy due to cross-border arrangements. Additionally, this approach supported the European Commission's completion of the Parenthood Regulation Proposal[24]; notably, this may affect whether the respondent state must acknowledge the parenthood status of couples who had children with the help of surrogate mothers and same-sex couples, which might be considered contrary to *ordre public*. Further, in 2019, the Parliamentary Assembly of the Council of Europe approved Recommendation 2156, calling for the Committee of Ministers to deliberate on waiving anonymity for all future human gamete donations to allow all children born through ART to know their origins.[25]

2.2. National legislation

The Medically Assisted Reproduction Act (hereinafter referred to as 'MAR Act')[26] regulates several concerns, such as the medical aspects of procedures, the beneficiaries of MAR, legal procedures concerning consent, counselling when donor gametes are

22 | ECHR, 2023b.

23 | Recently, a very interesting position was taken in the case *K.K. and Others v. Denmark* (Application No. 25212/21, Judgment 6 December 2022), with no violation found against a woman who wanted to adopt two children born by a surrogate mother. The Danish Supreme Court had held that a ban on adoption in which payment to the person consenting to it existed under section 15 of the Adoption Act. The intention had been to stop children from becoming a commodity. Danish authorities had refused to allow the adoption and only granted shared custody—there was no legally recognized parent–child relationship. This placed the children in an uncertain legal position; for example, their legal position was uncertain regarding inheritance. Reiterating that the child's interests were paramount in such cases, the Court found that the Danish authorities had failed to balance the interests of the children and the societal interests in limiting the negative effects of commercial surrogacy. Therefore, there was a violation of Art. 8 regarding respect for the private lives of children.

24 | Proposal for a Council Regulation on Jurisdiction, Applicable Law, Recognition of Decisions and Acceptance of Authentic Instruments in Matters of Parenthood and on the Creation of a European Certificate of Parenthood. {SEC(2022) 432 final} – SWD(2022) 390 final} - {SWD(2022) 391 final} - {SWD(2022) 392 final}.
Under Art. 4 para. 3 of the Proposal, 'establishment of parenthood' means the legal determination of the relationship between a child and each parent, including the establishment of parenthood following a claim contesting parenthood established previously. The Explanatory Memorandum as well as the Preamble to the proposed Regulation elaborate that '[f]or the purposes of the proposal, parenthood may be biological, genetic, by adoption or by operation of law.' Explanatory Memorandum of the Parenthood Regulation Proposal, p. 13; Preamble of Parenthood Regulation Proposal, recital 24.

25 | Recommendation 2156 (2019) Anonymous donation of sperm and oocytes: balancing the rights of parents, donors and children.

26 | The Medically Assisted Reproduction Act (Zakon o medicinski potpomognutoj oplodnji), Official Gazette, No. 86/12. In text: the MAR Act.

used, informed consent, the cryopreservation of gametes and embryos, and *post mortem* insemination. Meanwhile, family law regulates the establishment of the origin of a child with the Family Act.[27] Here, it is also worth noting that the Criminal Code[28] penalises the illicit trading of parts of the human body, including human tissue, gametes, embryos, or foetuses; this rule extends to advertising related forms of commerce for financial gain (Art. 10. paras. 2–6); cloning and altering the human genome (Art. 108); mixing human sex cells with animal cells (Art. 109); malpractice (Art. 181); and the unauthorised taking and transplanting of parts of the human body, including tissues, gametes, embryos, and foetuses (Art. 182).[29]

2.2.1. Basic principles

Several important principles have already been included in national legislation, including: the *ultima ratio* principle; the principle of protecting participants (prospective parents, donors, and physicians); the principle of the protection of the best interests of the child; and the principle of state control.[30] [31]

The *ultima ratio* principle reflects the idea that MPO may only be performed when it is truly necessary from the standpoint of medical science and when the protection of the human rights of all included parties can be confirmed (i.e. this work cannot be based on the wish of intended parents or scientific experimentation). According to Art. 4, para. 1 of the MAR Act, medical assistance may be provided 'only when the previous treatment of infertility has been unsuccessful or hopeless and when it is necessary to avoid, in the cases of natural conception, the transmission of a serious disease onto the child'.

Meanwhile, the principle of protecting participants is quite complicated to achieve because each participant has different interests and rights. Intended parents have reproductive rights, the right to privacy, and the right to informed consent; the child has his/her own set of children's rights; donors have an interest in remaining anonymous as well as in being renumerated for their services; and medical and non-medical staff have the right to

27 | The Family Act (Obiteljski zakon), Official Gazette Nos 103/15, 98/19, 47/20, and 49/23.

28 | Criminal Code (Kazneni zakon), Official Gazette Nos 125/11, 144/12, 56/15, 61/15, 101/17, 118/18, 126/19, 84/21, 114/22, and 114/23.

29 | In 2009, a huge scandal on the criminal liability of a distinguished professor who allegedly stole *ova* and transferred them to another woman to make her pregnancy concluded with a judgment that dismissed accusations against a gynaecologist. The state attorney did not succeed in proving that the *ova* were stolen because the patients (one of them a mother aged 52 years) did not allow their DNA to be used prove that a heterologous – rather than a homologous technique – had been used used. The leader of feminist NGO B.a.B.e opposed the judgment, stating that this case 'undoubtedly revealed a violation of women's reproductive rights, because in an illegal procedure, without their knowledge and consent, explanted eggs, required far greater attention from the entire judiciary.' Udruga B.a.b.e. zgrožena oslobađajućom presudom Asimu Kurjaku i ocjenama sutkinje, 2009.

30 | The state grants licenses to eligible medical clinics to perform MAR and regulates requirements for MAR proceedings. Additionally, the state must protect and balance different interests and rights.

31 | *Amplius*: Korać Graovac, 2009, pp. 231–232.

conscious objection[32]. In all actions and procedures, the priority should be the child's best interests, which are tied to rights such as the child's right to be cared for by both parents, the child's right to know his/her origin, and the child's right to healthcare.

States take different approaches to regulating MAR. Each state is free to limit procedures and techniques, introduce bans (to some extent), and regulate other important related issues as appropriate for its particular society. Along these lines, the ECtHR stressed[33] that each state should set its own legal rules.

2.2.2. Medical legislation

Medically assisted procreation in Croatia has been regulated since 1978 by the Act on Health Measures on the Exercise of the Right to Free Decisions about Giving Birth to

32 | It is not very common to think about the rights of physicians and non-medical staff; however, according to Art. 44 of the MAR Act,
'Health workers and non-health workers who should carry out or participate in medically assisted reproduction procedures have the right to appeal to conscience due to their ethical, religious or moral views, or beliefs, and refuse to carry out the medically assisted reproduction procedure or participate in that procedure.'

33 | In the case *Pejřilová v. the Czech Republic,* Application No. 14889/19, Judgment 8.12.2022 [Section V], the ECtHR dismissed the widow's request to be fertilized with her deceased husband's frozen sperm based on the fact that domestic law only allows fertilization for couples and *inter vivos*. More specifically, this case concerned the domestic courts' dismissal of the widow's request to use her late husband's cryopreserved sperm in a MAR procedure that they had initiated before his death. Relying on Art. 8 (the right to respect for private and family life) of the European Convention on Human Rights, the applicant submitted that the State should respect her choice of a father for her child as well as her late husband's wish to father a child with her and should therefore allow her to continue the procedure using his frozen sperm. However, no violation of Art. 8 was found. In *S.H. and Others v. Austria [GC]*, Application No. 57813/00, Judgment 3.11.2011 [GC], the Grand Chamber found no violation because Austrian law prohibited the use of ova and sperm from donors for *in vitro* fertilization. Two couples complained. Only *in vitro* fertilization with the use of ova from a donor would allow them to have a child for whom one of them was the genetic parent. However, both possibilities were ruled out by the Austrian Artificial Procreation Act, which prohibits the use of sperm from a donor for in vitro fertilization and ova donation in general. At the same time, the Act allows other MAR techniques, especially in vitro fertilization with ova and sperm from spouses or cohabitating partners themselves (homologous methods) and, in exceptional circumstances, donation of sperm when it is introduced into the reproductive organs of a woman. The ECtHR pointed out that 'according to the Austrian Constitutional Court's findings, the legislature had tried to reconcile the wish to make medically assisted procreation available on the one hand and the existing unease among large sections of society as to the role and possibilities of modern reproductive medicine on the other. However, the Court could not overlook the fact that the splitting of motherhood between a genetic mother and the one carrying the child differed significantly from adoptive parent-child relations. The legislature had thus been guided by the aim of maintaining a basic principle of civil law, that the identity of the mother is always certain, and of avoiding the possibility that two women could claim to be the biological mother of the same child. The Court further observed that all relevant legal instruments at the European level were either silent on the question of ova donation or – in the case of the European Union Directive on safety standards for the donation of human cells – expressly left the decision on whether to use germ cells to the State concerned.' ECHR, 2011.
Notably, this judgment is over a decade old; more recent liberalization in Europe may have led to some changes.

Children.[34] This Act introduced a modest regulation for time-available MAR technologies. In 2009, the first Act was dedicated only to MAR,[35] with some restrictive requirements concerning the duty of cohabiting couples to prove their status through judicial judgment and bans on the cryopreservation of embryos.

The MAR legislation was modified in 2012. The current version presents a possible solution for balancing the rights of prospective parents, the rights of the child, and the rights of donors.[36] Concerning prospective parents, the issues at hand are related to who may engage in MAR under the health insurance scheme as well as when and under what circumstances they may do so.

Holders of the right to MAR are men and women of legal age who have the legal capacity to give personal statements,[37] who are married or live in an extra-marital union, and who, in terms of their age and overall health conditions, are capable of exercising parental care (Art. 10, paras. 1 and 3). Extramarital spouses must provide a statement certified by a notary that they live in an extramarital union.[38]

A single woman of legal age who has legal capacity and does not live in a marital, nonmarital, or same-sex union; whose previous treatment of infertility has ended unsuccessfully or hopelessly; and who, because of her age and overall health condition, is capable of caring for the child, may also seek MAR treatment (Art. 10, para. 2). However, social infertility (impossibility to find a reproductive partner) and sexual orientation are not sufficient reasons for a woman to seek MAR; the main condition is that she has a medical need for MAR. Discussions on single women's right to MAR are based on the principle of proportionality between a woman's right to health and the fact that a woman would be giving birth to a child who will not have a father. The state – which limits who may be entitled to MAR and actively financially supports the medical aspects of the conception – maintains that a single woman may only use MAR for medical reasons.

Thus, beneficiaries who intend to found nontraditional families are excluded from MAR. These beneficiaries comprise single mothers without medical reasons for using MAR or same-sex female couples (the surrogacy ban places men in a relatively difficult position). Legal arguments for such solutions are needed to balance the rights and risks of the parties involved against societal values. However, such solutions may lead to reproductive tourism, where intended parents seek countries where they can get MAR technologies that are not allowed in their own country.

The Croatian Health Insurance Fund provides finances to cover four attempts of intrauterine insemination (IUI) and six attempts of *in vitro* fertilisation, with the obligation that two attempts must be conducted during a natural cycle. This provision attempts

34 | The Act on Health Measures for the Exercise of the Right to Free Decisions about Giving Birth to Children (Zakon o ostvarivanju prava na slobodno odlučivanje o rađanju djece), Official Gazette, No. 18/78.

35 | The Medically Assisted Reproduction Act (Zakon o medicinski potpomognutoj oplodnji), Official Gazette No. 88/09.

36 | Cf. Korać Graovac, 1999, p. 229.

37 | Under Art. 23 of the Convention on the Rights of Persons with Disabilities a person with disabilities has the right to freely and responsibly decide on the number and spacing of their children. According to this requirement, a person who is not deprived of legal capacity in the field of giving statements regarding her personal condition is also entitled to the right to medically assisted reproduction (Art. 10, para. 3 of the Medically Assisted Reproduction Act).

38 | Art. 11, para. 3 of the MAR Act.

to follow the principle of proportionality between the financial sources engaged and the probability of a successful pregnancy. Furthermore, given that hormonal stimulation can have negative effects for women, the health of women undergoing such treatment must also be supported. The state is quite generous, especially considering that it covers a significant part of the expenses of MAR technologies for couples forced to seek medical help abroad for a variety of reasons.[39]

Generally, a woman must not be older than 42 years; however, this rule can be broken for justified health reasons. This age limit was set to guarantee that the mother will be able to take care of the child effectively and in his/her best interests. The physician overseeing the treatment is entitled to check whether the patient is concerned with her age and overall health condition and is capable of caring for the child.[40] The authority of a gynaecologist to assess the capacity of a woman to care for a future child leads to the conclusion that this assessment is quite fluid, especially as a woman may visit another medical clinic if she is unsatisfied with the original clinic's findings.

In addition, prospective parents have certain rights as patients, such as the rights to get medical help according to modern medical standards, to give informed consent,[41] to receive psychological counselling when necessary, and to request the safe transfer of their gametes and embryos to another medical institution on their request and at their expense in the hope of getting better medical services. Contrary to such solutions, the liberal approach refers to reproductive rights and the non-discrimination clause[42] and argues that everyone should have the right to seek medical help through MAR technologies regardless of his or her personal status or sexual orientation.

Concerning the child, issues centre on whether the child should have the right to know his or her origin and the right to be cared for by both (capable) parents from the very beginning of his or her life. These issues are related to the ban on *post mortem* embryo transfer and insemination, the ban on MAR for single women who do not need medical help,[43] and the ban on the contestation of parenthood in court proceedings if the child is conceived by donor gametes or embryos. Further, an answer to the question of when

39 | In addition to expenses guaranteed by the MAR Act, some municipalities co-finance further medically assisted reproduction attempts in the amounts of 40 to 80% of the entire costs; these financial supports are provided to increase the birth rate.

40 | Art. 10, paras. 4 and 5 of the MAR Act.

41 | Before carrying out all procedures of medically assisted fertilization, a doctor, holder of a Master of Biology, or other authorized health worker is obliged to explain the details of the procedure, the chances of success, and the possible consequences and dangers of the procedures for the woman, man, and child (Art. 12, para. 2 of the MAR Act).

42 | For example, Art. 14 of the Constitution of Croatia: 'All persons in the Republic of Croatia shall enjoy rights and freedoms, regardless of race, colour, gender, language, religion, political or other opinion, national or social origin, property, birth, education, social status or other status.'

43 | Older academic legal sources contain critical arguments for why a single woman may seek MAR, such as the idea that the child would serve as a kind of compensation for the woman's infertility and loneliness. However, such solutions deprive the child of a father. In addition to such a psychosocial disadvantage, such solutions would also reduce the child's property rights as the child does not have the right to alimony and inheritance from his father. Additionally, legally allowing a woman without a male partner to have a child with MAR would violate the constitutional principle of equality between men and women as a man without a female partner cannot similarly become a parent. Cf. Alinčić, 2006; Zupančić, 2001; Hrabar, 2020.

life begins may lead to a ban on the cryopreservation of embryos or the destruction of cryopreserved embryos.

Posthumous fertilisation is not allowed because 'marriage or an extra-marital union must exist at the time of placing sexual cells or embryos into a woman's body'[44]. If the person who has provided and stored sex cells or tissues dies, the health institution must destroy the person's sex cells or tissues within 30 days of its knowledge of the person's death[45]. Indeed, the child's interest in enjoying the care of both parents is prioritized over a surviving female partner's desire to give birth. However, the problem of stored embryos is complex.

The protection of the human dignity of the child led to the ban on experiments on human embryos. According to Art. 36 of the MAR Act, it is forbidden to enable the extra-corporeal development of an embryo that is older than six days, fertilize a female egg with a seminal cell of any species other than the seminal cell of a human or an animal egg by the seminal cell of a human, change the embryo by transplanting other human or animal embryos, introduce human sex cells or human embryos into the animal, introduce animal sex cells or animal embryos into a woman, create human embryos for scientific or research purposes, or perform scientific or research work on an embryo.

Types of MAR can be further specified as follows: intrauterine insemination, *in vitro* insemination, intracytoplasmic, intracytoplasmic sperm injection, cryopreservation of gametes or embryos, *in vitro* fertilisation-embryo transfer, gamete intra-fallopian transfer, zygote intra-fallopian transfer, frozen embryo transfer, and preimplantation genetic diagnostics.[46]

In MAR, homologous fertilisation using a couple's own sex cells is preferred. The number of eggs stimulated during the procedure should not exceed 12. All 12 eggs can be fertilised to avoid exposing the woman to the risks associated with hormonal overstimulation. To avoid multiple pregnancies, a maximum of two embryos can be transferred to the woman's womb (three if a woman is over 38 years old, has adverse ovarian reserve tests, has repeatedly failed to experience a successful treatment, or is an oncology patient or if the problem is due to a severe form of male infertility). Spouses or common law spouses are obliged to declare in writing before initiating MAR proceedings whether they want the fertilisation of up to two or more eggs. This is important because the remaining embryos and/or eggs are cryopreserved[47], which can result in many problems (surplus embryos, deciding on future of non wanted embryos etc.). In homologous treatment, the couple is not obliged to undergo psychological or psychotherapeutic counselling. However, problems may emerge regarding the content of the couple's informed consent for the cryopreservation of embryos and their destiny (*vide infra*).

For heterologous techniques, the MAR Act requires prospective parents to complete compulsory psychological or psychotherapeutic counselling. Medical clinics are also obliged to provide legal counselling[48] due to the consequences of heterologous techniques in family law (ban on contesting parenthood, *vide infra).*

44 | Art. 11, para. 1 of the MAR Act.
45 | Art. 33, para. 3 of the MAR Act.
46 | Art. 9 of the MAR Act.
47 | Art. 7 of the MAR Act.
48 | Art. 13 of the MAR Act.

Donations of sperm, eggs, and embryos are allowed; however, donors must undergo medical and psychological screening. According to Art. 15 of the MAR Act, a person conceived and born with the help of MAR by a donated seminal cell, egg, or embryo has the right, upon reaching the age of 18 years, to access the register of data on fertilisation and all data on his or her genetic origin, including the identity of the seminal cell donor or the donor of the egg (i.e. the embryo donors). These data are stored in the State Register of Medically Assisted Reproduction by the Ministry of Health. Furthermore, parents are obliged to inform a person conceived and born with the help of donor(s) of how he or she was conceived no later than the age of 18.

The empirical approach argues that knowledge of one's genetic origins is essential for one's physical and psychosocial well-being and that a lack of access to this information constitutes harm. For example, children without such knowledge may experience medical and health disparities. Furthermore, when parents chose not to disclose to their children that they were conceived with the help of a donor, these children may make false assumptions about the unknown half of their genetic history and are thus likely to make uninformed medical decisions.[49]

49 | Cf. Ravitsky, 2017; Ishii and Beriain, 2022. Points 2 and 3 of Recommendation 2156 (2019) on 'Anonymous donation of sperm and oocytes: balancing the rights of parents, donors and children' state:
'In recent decades, there has been movement towards the recognition of a right to know one's origins, connected to the right to an identity and to personal development: in international human rights law, through its inclusion in the United Nations Convention on the Rights of the Child as a 'stand-alone' right for children, and in European human rights law through the case law of the European Court of Human Rights, which has recognized this right as an integral part of the right to respect for private life. This right includes the right to access information that would make it possible to trace one's roots, to know the circumstances of one's birth, and to have access to certainty of parental filiation.…However, this right is not absolute and must thus be balanced with the interests of the other parties involved in sperm and oocyte donation: principally those of the donor(s) and the legal parent(s), but also those of clinics and service providers, as well as the interests of society and the obligations of the State.'
The Parliamentary Assembly invited the Committee of Ministers to propose a legally binding instrument based on the following principles:
'7.1. anonymity should be waived for all future gamete donations in Council of Europe member States, and the use of anonymously donated sperm and oocytes should be prohibited. This would mean that (except in exceptional cases, when the donation is from a close relative or friend) the donor's identity would not be revealed to the family at the time of the donation, but to the donor-conceived child upon their 16th or 18th birthday. The donor-conceived child would be informed at that time (ideally by the State) of the existence of supplementary information on the circumstances of their birth.…;
7.2. the waiving of anonymity should have no legal consequences for filiation: the donor should be protected from any request to determine parentage or from an inheritance or parenting claim.…The donor should have no right to contact a child born from donation, but the donor-conceived child should be given the option to contact the donor, as well as possible half-siblings, after their 16th or 18th birthday – subject to certain conditions being met;
7.3. Council of Europe member States that permit sperm and oocyte donation should set up and run a national donor and donor-conceived person register with a view to facilitating the sharing of information, as stipulated in paras. 7.1 and 7.2, but also with a view to enforcing an upper limit on the number of possible donations by the same donor, ensuring that close relations cannot marry and tracing donors if the medical need should arise. Clinics and service providers should be required to keep and share adequate records with the register,

Parents' violation of this duty to inform their child of the circumstances of his or her origin is not punished with sanctions under the MAR Act.[50] Instead, their sense of responsibility to inform their child may arise from general civil obligations regarding the importance of a child's right to know his or her origin.

More specifically, Art. 7 of the Convention on the Rights of the Child suggests that children have the right to know their origins.[51] Paradoxically, due to the right of the child to know the identity of the donor, there is no donor programme; thus, no children whose rights could be breached can be conceived in Croatia.

Notably, this approach clearly prohibits *post mortem* embryo transfer and insemination. In the event of the death of a person whose gametes or sexual tissues are stored, the medical clinic must destroy the stored sexual cells and sexual tissues within 30 days of the date of knowledge of the death of the person from whom the sexual cells or sexual tissues originated.[52] Although some widows requested that the National Medical Commission allows *post mortem* transfer based on the argument that their deceased husbands' wanted to conceive a child, such requests were not approved. As such, a decision would be *contra legem*.

It is extremely interesting to consider what would happen if an embryo were stored at the time of death of a child's ancestor or relative and the child was later born. Can the *nasciturus* rule apply to cryopreserved embryos if the child is born alive? This should not necessarily be connected to the prohibition of *post mortem* transfers. Consider a scenario in which a grandmother leaves a will that appoints all her grandchildren as heirs. What if a cryopreserved embryo was later born as one of her grandchildren? In this case, because inheritance is opened at the time of her death, all inheritance rights should be reconsidered. While this would lead to legal uncertainty, it would preserve inheritance rights. The answer may be in the medical definition of 'conception' – is this the moment of fertilisation or the moment of nidation? Prolonged implementation of *nasciturus* rule would cause legal uncertainty but would combat discrimination against children who are descendants.

Croatian legislator scrutinised cryopreserved embryos, outlining that in the event of the death of one or both persons from whom the stored embryos originated, the embryos

and a mechanism should be established to provide for cross-border exchanges of information between national registers;

7.4. the anonymity of gamete donors should not be lifted retrospectively where anonymity was promised at the time of the donation, except for medical reasons or where the donor has consented to the lifting of the anonymity and thus inclusion on the donor and donor-conceived person register....;

7.5. these principles should be applied without prejudice to the overriding consideration that gamete donation must remain a voluntary and altruistic gesture with the sole aim of helping others, and thus without any financial gain or comparable advantage for the donor.'

50 | Ibid.

51 | Such an approach was criticized by some academics, pointing out that Art. 7 of the Convention on the Rights of the child does not specifically promote the child's right to know his/her origin. Hence, the Committee on the Rights of the Child has interpreted the right of the child in this manner. Cf. Fortin, 2009; for a comparative review, see Lind, 2019, who argues that the Implementation Handbook for the Convention on the Rights of the Child (1998) was also unclear, as it made this right 'soft' in 1998, taking into account the rights of donors, p. 105.

52 | Art. 33 of the MAR Act.

may be donated to another beneficiary with the right to MAR.[53] Considering how such a case may be analogous to a case of adoption, it may be situated as an embryo adoption due to *pro* life tendency Abandoned embryos, instead to be destroyed, might be offered to another intended parent(s).. Hence, according to medical standards, an embryo cannot be donated if the donors (genetic parents) do not undergo appropriate medical examinations. This provision prohibits the use of frozen embryos in the vast majority of cases (parents-to-be are not required to undergo serious medical examinations as donors), so idea to give them to 'adoption' failed. Furthermore, while it is formally possible to donate an embryo, it is not possible for a widow to use it for her own pregnancy, even though the widow physically contributed with her egg to the creation of the embryo.

Cryopreserved embryos cause significant moral and political problems. Currently, there are allegedly 10,000 cryopreserved embryos in Croatia's fertility clinics. While the exact number of frozen embryos is unknown, a large number were unselectively frozen and thus have no chance of survival.

The MAR Act prescribes that embryos be cryopreserved for five years and that the state pays for their cryopreservation. If a couple wants to cryopreserve their embryos for longer than five years, they have to do so at their own cost. Notably, the MAR Act, which was written in a *pro life spirit*, does not mention destroying embryos. If one spouse does not consent to the transfer, the other parent cannot use it for pregnancy (the embryo is in some ways 'co-owned'); however, it remains unclear what can be done with the embryo in such a case. Furthermore, these embryos cannot be donated because the original creators of the embryo did not undergo the strict health checks necessary for embryo donors. Meanwhile, some couples want to destroy their surplus embryos when they have their desired number of children. However, health clinics do not dare destroy these embryos; the MAR Act is not clear on this matter and the clinics are afraid of public condemnation.

Further, surrogate motherhood is not permitted.[54] In the Republic of Croatia, 'contracts, agreements and other legal transactions of bearing children for another (surrogate gestational motherhood) and handing over a child after a fertility treatment, with or without a pecuniary remuneration, are null and void'.[55]

A donor of gametes for a heterologous MAR procedure must be of legal age and legally capable of consenting to donation.

53 | Art. 33, para. 4 of the MAR Act.

54 | Art. 31 of the MAR Act.

55 | Art. 31, para. 3 of the MAR Act. In 2011, the EU Parliament adopted the Resolution that
'condemns the practice of surrogacy, which undermines the human dignity of the woman since her body and its reproductive functions are treated as commodity; considers that the practice of gestational surrogacy which involves reproductive exploitation and use of the human body for financial or other gain, in particular in the case of vulnerable women in developing countries, shall be prohibited and treated as a matter of urgency in human rights instruments.'
Para. 114 of the Annual Report on Human Rights and Democracy in the World 2014 and the EU Policy on the Matter European Parliament Resolution of 17 December 2015 on the Annual Report on Human Rights and Democracy in the World 2014 and the European Union's Policy on the Matter (2015/2229(INI)). In the year of 2021, the European Parliament stated that it 'acknowledged that sexual exploitation for surrogacy and reproductive purposes...is unacceptable and a violation of human dignity and human rights'. Para. 32 The EU Strategy for Gender Equality, European Parliament Resolution of 21 January 2021 on the EU Strategy for Gender Equality (2019/2169(INI)).

According to the most recent census in 2021, Croatia is a small country with only 3.9 million inhabitants; therefore, the possibility of having half-siblings may be quite real, so there might be a danger that individuals get know half-sibling without being aware of this. To prevent the uncontrollable donation of gametes, donors can donate only donate ova or seminal cells to one of the health institutions authorised to perform heterologous procedures. Furthermore, the health institution authorised to perform heterologous fertilisation is obliged to establish a system for verifying the donation of gametes or embryos in the State Register of Institutions authorised to perform heterologous procedures.[56]

Embryos available for donation are allowed to be created in a homologous fertilisation procedure. Embryo donors are married or extramarital spouses who donate their embryos to another infertile married or common-law couple to help them achieve pregnancy and childbirth.[57] The donors may no longer want their embryos for several reasons; for example, as noted above, they may have already had their desired number of children. It is important to observe that embryos may only be donated with the explicit consent of the involved spouses.[58] This also means that embryos from donated gametes cannot be produced from donating embryos alone. Embryo donors must simultaneously give certified consent for their embryo to be used for procreation by other marital or extra-marital spouses or by a woman.[59] Donors do not have the right to know the identity of the woman or the identity of the child for whom their genetic material was used. Further, they do not have any legal obligations or rights to the child conceived using their donated gametes or embryos. However, donors do have the right to obtain information regarding medical procedures and legal consequences when their genetic material is used. A donor may withdraw consent until the donated gametes or embryos are transferred to the sexual organs of a woman.[60]

Donations should not be done for economic gain. Accordingly, monetary gain (compensation or any other benefit) from a donation is forbidden. However, gamete and embryo donors shall be entitled to reimbursement for necessary expenses. It is also forbidden to conclude a contract, agreement, or other form of written or oral agreement on the donation of sex cells or embryos between the donors and one or both spouses or common-law partners undergoing the MAR procedure.[61]

Medical institutions must be licenced to use MAR by the Ministry of Health. They are obliged to keep records on MAR procedures; the personal and health data of the persons to be assisted and the gamete and embryo donors; the types of procedures; the consultations conducted; certified written consent for a particular procedure; withdrawal of certified consent; data on the course and duration of procedures; circumstances related to pregnancy and childbirth; healthy and non-healthy participants in a procedure; stored gametes, tissues, and embryos; and data necessary for tracing gametes, tissues, and embryos at all stages. Health institutions that keep data in their records are obliged to

56 | Art. 20, paras. 1 and 3 of the MAR Act.
57 | Art. 5, para, 1, points 7 and 8 of the MAR Act.
58 | Art. 8, para. 2 of the MAR Act.
59 | Art. 18 of the MAR Act.
60 | Art. 19 of the MAR Act.
61 | Art. 21 of the MAR Act.

maintain them permanently.[62] Medical institutions are obliged to submit data to state registers for safekeeping. All data are classified as professional secrets.

In practice, it is difficult to figure out the best method for collecting accurate data on treatment success rates – medical clinics treat patients with varying levels of severity using different methodologies. In the future, more consistent criteria for MAR success will be drafted and implemented.

2.2.3. Family law regulations

The main provisions regulating the family status of children conceived by the MAR were included in the Family Act.[63] Separate chapters set rules for establishing motherhood and fatherhood. Following the ban on surrogate motherhood, the Family Act rules *praesumptio iuris et de iure* that the mother of a child conceived by a donated gamete or embryo is the woman who gave birth to the child.[64]

Such a stipulation sends a clear message regarding maternity in the case of a breach of the prohibition of surrogacy. To date, no surrogacy agreements have been reported in Croatia. Notably, the Ministry of Health refused to allow maternity leave for a woman whose pregnancy was not recorded because she became a mother abroad; however, her motherhood remained unquestioned. Some Croatian citizens use surrogacy services abroad, and most remain confidential.[65] The main reason for this is that a child comes to Croatia with a temporary birth certificate, usually issued by a Croatian consulate in Ukraine; thus, the secret of his or her origin remains unveiled. Birth certificates contain data according to the certificate issued by the hospital, on which the intended parents are listed as biological parents.[66]

Furthermore, the recent jurisprudence of the ECtHR imposes a duty on a contracting state to provide the possibility of recognising the legal relationship between a child born through a surrogacy arrangement abroad and the man who was the biological father.[67] According to the Family Act, as explained above, the mother of the child is always the woman who gives birth to the child if all the required consent has been given before conception. Presumption of the fatherhood of the mother's husband applies if the mother was married when the child was born or if the child was born 300 days after the termination

62 | The personal and health data of persons undergoing MAR procedures, including data on the types of procedures they undergo, must be entered in the register. Furthermore, data are also recorded on medical products and medical devices; the donors and parents of the donors; the dates of donation, storage, and use of sex cells and embryo;, the dates of storage and use of sexual tissues; the results of examinations and examinations of the donor and his sex cells, data on the birth of a child conceived by MAR with donated sex cells (i.e. a donated embryo), and data on failed pregnancies. Ordinance on the operation of the State Register on Medically Assisted Reproduction and the Assignment of a Unique Identification Number, (Pravilnik o načinu rada Državnog registra o medicinski pomognutoj oplodnji i dodjeli jedinstvenog identifikacijskog broja) Official Gazette No. 70/13.

63 | The Family Act (Obiteljski zakon), Official Gazette 103/15, 98/19, 47/20, 49/23.

64 | Art. 82, para. 1 of the Family Act.

65 | One of these stories was exposed in the media: Moju kćer rodila je surogat mama iz Ukrajine. Nisam jedina u Hrvatskoj, ali sam prva koja govori za medije (Zemunović, 2017).

66 | *Amplius*: ECtHR, *Paradiso and Campanelli v. Italy*, Grand Chamber Judgment of 24 January 2017; Korać Graovac, 2022, pp. 48–49; Hrabar, 2020; Preložnjak, 2020, and Margaletić, Preložnjak and Šimović, 2019.

67 | *C v. Italy*, Application No. 47196/21, Judgment of 31 August 2023.

of the marriage. An additional request is that the husband provide consent in accordance with the MAR Act.[68]

In heterologous MAR proceedings, it is clear that the genetic parenthood of (at least) one parent is a legal fiction. In homologous proceedings, children are the offspring of their parents. Therefore, it is not possible to contest the maternity or paternity of a child conceived by MAR techniques if the donor's consent and the consent of all participants are provided.[69]

To protect the free will and the private and family lives of all participants, a woman registered as a child's mother or a woman who considers herself to be a child's mother is entitled to challenge maternity if she did not give the required consent to the MAR within six months of learning of the child and before the child's seventh birthday.[70] A woman who considers herself to be the child's mother must, in the same lawsuit, request the establishment of her maternity.[71] Meanwhile, the man registered as the child's father or the man who considers himself to be the child's father may challenge paternity if the relevant consent has not been given. At the same time, a man who considers himself the child's father must request that his paternity be established.[72] The time limits are the same as those used for contesting motherhood.

In the eventual contestation proceedings, the preliminary question is whether the child was conceived in step with the MAR proceedings. If the child was conceived by MAR without the required consent, he or she cannot contest his or her maternal or paternal origins – even when the necessary consent of the beneficiaries of the procedure has not been obtained. The child is in a similar position as an adopted child, but is not allowed to contest his or her origin.

3. Complaints on legislation

The biggest NGO advocating female patients' rights in MAR proceedings is Parents in Action (RODA). In a shadow report[73] sent to the UN High Commissioner for Human Rights in 2018, RODA complained that women who do not have a partner (married or common-law) are only entitled to assisted reproduction if they can prove that they are infertile (as noted above, the law provides that MAR is only available to heterosexual couples and single women; e.g. not available to lesbian couples); that the consent form is not signed in hospitals but must be authorized by a public notary; that there are (as of 2018) no reliable statistics available on the success of MAR treatments in Croatia; that the statistics that are known for public MAR clinics in Croatia are far below European averages; that women are being exposed to invasive treatments that are out of step with quality care and that may involve over-treatment; and that women undergoing egg retrieval procedures as part of

68 | Art. 83, para. 1 of the Family Act.
69 | Art. 82, para. 2 and Art. 83, para. 3 of the Family Act.
70 | Art. 82, para. 3 of the Family Act.
71 | Art. 82, para. 3 and Art. 395 of the Family Act.
72 | Arts. 83 and 401–403 of the Family Act.
73 | United Nations High Commissioner for Human Rights, 2018.

their MAR treatment are often not offered or denied anaesthesia for these treatments, resulting in undue suffering and psychological trauma.

Furthermore, in 2021, RODA initiated lawsuits on behalf of women whose embryos had been cryopreserved but that, due to unclear legislation, MAR clinics refused to destroy. RODA announced that it planned certain legal procedures to secure the right to the free disposal of cryopreserved embryos.

There are also complaints that heterologous techniques (donating gametes or embryos) are not performed due to a lack of donors and are thus facilitated by seeking medical help abroad (paid for by the Croatian Institute for Public Health)—usually in the Czech Republic and the Northern Republic of Macedonia. However, in financing such medical help, the state breaks its own commitment to the child's right to know his or her origin.

4. Concluding remarks

Every state is free to regulate its own sensitive, complex legal, ethical, sociological, anthropological, psychological, and interdisciplinary issues. Regarding MAR, Croatia's relevant legislation is balanced and relatively strong in the context of the broader European region. Notably, issues related to medically assisted reproduction were regulated by the MAR Act for over a decade. In practice, the greatest issues on this topic in Croatia include the possibility of comparing the professional success of clinics performing MAR, the lack of donors, and the resolution of the destiny of excessively cryopreserved embryos. *Pro future* a lot may be accomplished by establishing a strong concept of 'informed consent'. Additionally, some obstacles have notably been relieved by enabling medical treatments abroad. Additionally, it is also worth noting the presence of public discussions regarding the accessibility of MAR technology for single women and same-sex partners as well as the acknowledgement of surrogacy agreements concluded abroad. Meanwhile, this paper observes that the best interests of the child are well protected: the child has the right to know his or her origin and safeguards are present to ensure he or she will be cared for by both parents. Moving forward, advancements in human reproductive medicine and better understandings of what values should be protected will provoke the need for new national legislation. Such legislation will be constantly challenged by international influences and parents' freedom to seek MAR procedures abroad. However, at the moment, it seems that the grass is for most intended parents sufficiently green on Croatian side.

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