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"El desarrollo de las ciudades inteligentes no es una tarea fácil, pero es una inversión fundamental para el futuro. Las ciudades inteligentes representan una oportunidad para mejorar la calidad de vida de millones de personas, promover la sostenibilidad ambiental y crear entornos urbanos más resilientes y equitativos. La agenda pendiente es impostergable, y la colaboración entre todos los actores involucrados es esencial para construir un futuro urbano más sostenible y habitable para todos. El camino a seguir requiere visión, compromiso y una acción decidida para transformar nuestras ciudades en espacios más inteligentes, sostenibles. Las ciudades inteligentes presentan oportunidades y desafíos sin precedentes. Para aprovechar al máximo su potencial y mitigar sus riesgos, es esencial un enfoque holístico que priorice la protección de los derechos fundamentales de las personas. La colaboración entre gobiernos, empresas, investigadores y la sociedad civil es crucial para construir un futuro en el que la IA sirva a la humanidad de manera justa, equitativa y sostenible. El desarrollo responsable de la IA no es una opción, sino una necesidad imperativa para garantizar un futuro mejor para todos.
Por ello, es de resaltar la encomiable tarea de poner a disposición de la comunidad jurídica global, la presente gran obra que entona de manera protagónica y trascendente con la realidad y necesidades actuales de las sociedades contemporáneas".

JORGE ISAAC TORRES MANRIQUE
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CIDADES INTELIGENTES E A AGENDA PENDENTE IMPOSTERGÁVEL
CIUDADES INTELIGENTES Y LA IMPOSTERGABLE AGENDA PENDIENTE
SMART CITIES AND THE UNAVOIDABLE PENDING AGENDA

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SUMÁRIO

PRÓLOGO

Las ciudades, epicentros de la actividad humana, se enfrentan a desafíos sin precedentes en el siglo XXI. El crecimiento demográfico acelerado, la creciente demanda de recursos, el cambio climático y la brecha digital exigen soluciones innovadoras y sostenibles. En este contexto, el concepto de "Ciudad Inteligente" emerge como una respuesta crucial, no solo para mejorar la calidad de vida de sus habitantes, sino también para asegurar un futuro habitable para las generaciones venideras. Este documento explorará la importancia de las ciudades inteligentes y la impostergable agenda pendiente que debemos abordar para su desarrollo efectivo.

El siglo XXI ha presenciado una migración masiva hacia las áreas urbanas, con consecuencias significativas para el medio ambiente, la economía y la sociedad. El aumento de la densidad poblacional genera una presión inmensa sobre los recursos naturales, incluyendo el agua, la energía y los alimentos, lo que a su vez contribuye al cambio climático a través de las emisiones de gases de efecto invernadero. Además, la creciente desigualdad social, la congestión del tráfico, la falta de acceso a servicios básicos y la inseguridad ciudadana son problemas que afectan la calidad de vida de millones de personas en todo el mundo.

Las ciudades tradicionales, con sus infraestructuras obsoletas y modelos de gestión ineficientes, luchan por hacer frente a estos desafíos. La respuesta no radica en simplemente ampliar la infraestructura existente, sino en una transformación radical que integre la tecnología, la sostenibilidad y la participación ciudadana. Las ciudades inteligentes ofrecen una visión de futuro donde la tecnología se utiliza para optimizar los recursos, mejorar la eficiencia de los servicios públicos, promover la participación ciudadana y crear entornos más seguros, saludables y resilientes. Esta transformación no es una opción, sino una necesidad imperiosa para garantizar el bienestar de la población urbana y la sostenibilidad del planeta.

La implementación de las ciudades inteligentes requiere un enfoque holístico que abarque diversos aspectos, desde la planificación urbana y el diseño de infraestructuras hasta la gestión de los servicios públicos y la participación ciudadana. Es fundamental integrar diferentes tecnologías, como el Internet de las Cosas (IoT), la inteligencia artificial (IA), el big data y la analítica de datos, para recopilar y analizar información en tiempo real, permitiendo una toma de decisiones más eficiente y eficaz. La colaboración entre los diferentes actores involucrados, incluyendo los gobiernos, las empresas privadas, la academia y la sociedad civil, es esencial para el éxito de este ambicioso proyecto.

El desarrollo de una ciudad inteligente se basa en tres pilares fundamentales: la tecnología, la sostenibilidad y la participación ciudadana. La tecnología

proporciona las herramientas necesarias para la recopilación, análisis y gestión de datos, permitiendo una optimización de los recursos y una mejora en la eficiencia de los servicios públicos. El IoT, por ejemplo, permite conectar diferentes dispositivos y sistemas, generando una red inteligente que optimiza el consumo de energía, el tráfico y la gestión de residuos. La IA, por su parte, puede utilizarse para predecir patrones de comportamiento, optimizar la planificación urbana y mejorar la seguridad ciudadana.

La sostenibilidad es un elemento crucial en la construcción de ciudades inteligentes. La reducción de la huella de carbono, la promoción del transporte público y la movilidad sostenible, la gestión eficiente de los recursos hídricos y la implementación de energías renovables son aspectos fundamentales para crear ciudades más respetuosas con el medio ambiente. La construcción de edificios ecológicos, la optimización de la gestión de residuos y la promoción de la agricultura urbana son ejemplos de iniciativas que contribuyen a la sostenibilidad de las ciudades inteligentes.

La participación ciudadana es un pilar fundamental para el éxito de las ciudades inteligentes. La creación de plataformas digitales que permitan a los ciudadanos participar en la toma de decisiones, expresar sus opiniones y reportar problemas es esencial para asegurar que las soluciones implementadas respondan a las necesidades reales de la población. La transparencia y la accesibilidad a la información son cruciales para fomentar la confianza y la participación ciudadana en el proceso de construcción de la ciudad inteligente. La colaboración entre el gobierno y los ciudadanos es clave para crear un entorno urbano más inclusivo y equitativo.

A pesar de los avances significativos en el desarrollo de las ciudades inteligentes, aún queda una agenda pendiente considerable. La falta de inversión en infraestructura tecnológica, la falta de formación y capacitación en el ámbito de las tecnologías de la información y la comunicación (TIC), la falta de estándares y protocolos comunes y la falta de una estrategia integral a nivel nacional son algunos de los principales obstáculos que impiden un desarrollo más rápido y efectivo de las ciudades inteligentes.

Para abordar estos desafíos, es fundamental una mayor inversión en investigación y desarrollo, la promoción de la colaboración público-privada, la creación de marcos regulatorios adecuados y la formación de profesionales capacitados en el ámbito de las ciudades inteligentes. La creación de una estrategia nacional que defina los objetivos, las prioridades y los plazos para el desarrollo de las ciudades inteligentes es esencial para asegurar la coherencia y la eficacia de las acciones emprendidas. La colaboración internacional y el intercambio de buenas prácticas entre diferentes ciudades son también cruciales para acelerar el proceso de transformación.

El desarrollo de las ciudades inteligentes no es una tarea fácil, pero es una inversión fundamental para el futuro. Las ciudades inteligentes representan una oportunidad para mejorar la calidad de vida de millones de personas, promover la sostenibilidad ambiental y crear entornos urbanos más resilientes y equitativos. La agenda pendiente es impostergable, y la colaboración entre todos los actores involucrados es esencial para construir un futuro urbano más sostenible y habitable para todos. El camino a seguir requiere visión, compromiso y una acción decidida para transformar nuestras ciudades en espacios más inteligentes, sostenibles y resilientes.

Luego de haber realizado la obligada sustentación de la importancia que comporta la muy importante temática que la contiene, resulta imprescindible abordar el desarrollo de los desafíos que les corresponde afrontar.

En conclusión, las ciudades inteligentes presentan oportunidades y desafíos sin precedentes. Para aprovechar al máximo su potencial y mitigar sus riesgos, es esencial un enfoque holístico que priorice la protección de los derechos fundamentales de las personas. La colaboración entre gobiernos, empresas, investigadores y la sociedad civil es crucial para construir un futuro en el que la IA sirva a la humanidad de manera justa, equitativa y sostenible. El desarrollo responsable de la IA no es una opción, sino una necesidad imperativa para garantizar un futuro mejor para todos.

En ese sentido, la presente obra abraza en su desarrollo de manera insular como señera dichas temáticas, a efectos de proporcionar profundas reflexiones y aportes de importantes profesionales especialistas.

Así, es de verse que la sumamente interesante y trascendente propuesta que la contiene, la convierte en una fuente de obligatoria consulta y referencia de los lectores del orbe.

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INTRODUCCIÓN

El concepto de "Ciudad Inteligente" ha ganado considerable impulso en las últimas décadas, prometiendo soluciones innovadoras a los desafíos urbanos del siglo XXI. Sin embargo, la realidad es que la implementación de estas soluciones se enfrenta a una extensa agenda pendiente, llena de desafíos y oportunidades que requieren un abordaje estratégico y colaborativo. Este documento explorará los puntos clave de esta agenda, dividiéndola en tres áreas principales: infraestructura, gobernanza y ciudadanía.

La infraestructura es el cimiento sobre el cual se construye una ciudad inteligente. Sin una base sólida en conectividad, datos y servicios públicos eficientes, las tecnologías inteligentes no pueden desplegar su pleno potencial. La agenda pendiente en este ámbito es extensa y abarca varios aspectos:

En primer lugar, la conectividad: Muchas ciudades carecen de una infraestructura de telecomunicaciones robusta y equitativa. La brecha digital, tanto en acceso como en velocidad, impide la plena participación de todos los ciudadanos en la sociedad digital y limita el despliegue de servicios inteligentes. La agenda pendiente incluye la expansión de la cobertura de banda ancha de alta velocidad, la mejora de la conectividad inalámbrica y la garantía de acceso equitativo para todos los sectores de la población.

Seguidamente, los sensores y datos: El corazón de una ciudad inteligente reside en la capacidad de recopilar y analizar datos en tiempo real. Sin embargo, la implementación de redes de sensores inteligentes a gran escala requiere una inversión significativa en hardware, software y personal capacitado. La agenda pendiente incluye la estandarización de protocolos de datos, la creación de plataformas de gestión de datos seguras y la inversión en la formación de profesionales especializados en el análisis de datos urbanos.

Luego, los servicios públicos: La modernización de los servicios públicos, como el transporte, la energía, el agua y la gestión de residuos, es crucial para mejorar la eficiencia y la sostenibilidad de la ciudad. La agenda pendiente incluye la implementación de sistemas inteligentes de gestión del tráfico, la modernización de las redes eléctricas para integrar energías renovables, la optimización de los sistemas de gestión del agua y la implementación de sistemas inteligentes de gestión de residuos.

Por su parte, es de verse que la implementación exitosa de una ciudad inteligente requiere una gobernanza efectiva, que fomente la colaboración entre diferentes actores y establezca un marco regulatorio claro y transparente. La agenda pendiente en este ámbito incluye:

Primeramente, el liderazgo y estrategia: Falta una visión estratégica clara y un liderazgo político comprometido en muchas ciudades. La agenda pendiente incluye la creación de planes estratégicos a largo plazo, la asignación de recursos adecuados y la definición de indicadores de rendimiento claros y medibles.

A continuación, la colaboración público- privada: La colaboración entre el sector público y el privado es esencial para la financiación y la implementación de proyectos de ciudades inteligentes. La agenda pendiente incluye la creación de modelos de colaboración innovadores, la transparencia en los procesos de contratación y la garantía de la participación equitativa de todos los actores involucrados.

Seguidamente, el marco regulatorio: La falta de un marco regulatorio claro y actualizado puede obstaculizar la implementación de nuevas tecnologías y servicios. La agenda pendiente incluye la actualización de las regulaciones existentes para adaptarse a la realidad de las ciudades inteligentes, la creación de un entorno regulatorio que fomente la innovación y la protección de la privacidad de los datos.

En un tercer momento, amerita abordar el que las ciudades inteligentes deben ser construidas para y con sus ciudadanos. La participación ciudadana, la inclusión social y la alfabetización digital son elementos cruciales para el éxito de estos proyectos. La agenda pendiente en este ámbito incluye:

Primero, la participación ciudadana: Es fundamental asegurar la participación activa de los ciudadanos en el diseño, la implementación y la evaluación de los proyectos de ciudades inteligentes. La agenda pendiente incluye la creación de plataformas de participación ciudadana, la promoción de la transparencia y la accesibilidad a la información y la garantía de que las voces de todos los sectores de la población sean escuchadas.

A continuación, la inclusión social: Las ciudades inteligentes deben ser inclusivas y accesibles para todos los ciudadanos, independientemente de su edad, capacidad o nivel socioeconómico. La agenda pendiente incluye la garantía de que las tecnologías y los servicios sean accesibles para personas con discapacidades, la promoción de la inclusión social y la reducción de la brecha digital.

Además, es de considerar la alfabetización digital: La alfabetización digital es esencial para que los ciudadanos puedan participar plenamente en la sociedad digital y beneficiarse de los servicios inteligentes. La agenda pendiente incluye la inversión en programas de educación y formación en habilidades digitales, la promoción del acceso a la tecnología y la garantía de que todos los ciudadanos tengan las habilidades necesarias para navegar en el mundo digital.

En conclusión, la agenda pendiente de las ciudades inteligentes es compleja y multifacética. Su abordaje requiere un esfuerzo conjunto de gobiernos, empresas

privadas, instituciones académicas y ciudadanos. Solo a través de una visión estratégica, una gobernanza efectiva y una participación ciudadana activa podremos construir ciudades inteligentes que sean verdaderamente sostenibles, inclusivas y resilientes.

En la presente entrega y en ese orden de ideas, no podemos ser ajenos a la trepitante realidad que acontece en sede global, lo que obliga la muy urgente como insoslayable atención a los desafíos de las ciudades inteligentes y la impostergable agenda pendiente.

Por ello, ponemos a la consideración de la comunidad jurídica (y no jurídica) global, la presente importante obra: "Ciudades inteligentes y la impostergable agenda pendiente"; que reúne a destacados profesores referentes de: Brasil, Argentina, México, Cuba, Rusia, Italia; que abordan de manera rigurosa, profunda, reflexiva, interdisciplinar.

Agradecemos de sobremanera y quedamos muy honrados, por la muy valiosa participación del reconocido jurista y amigo, Dr. Jorge Isaac Torres Manrique, por haber elaborado el prólogo, de manera tan magnífica.

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Finalmente, esperamos que esta entrega tenga la importante acogida, que tuvieron nuestros anteriores proyectos.

LA DIRECCIÓN CIENTÍFICA

CAPÍTULO 11

LEGAL LANDSCAPE OF HUMAN CLONING: overview

Elena E. Gulyaeva[1]

The focal point of contemporary discourse within the realms of biological science and legal studies pertains to the contentious issue of human cloning. Human cloning denotes a technological process that involves the creation of a genetically identical replica of a human being, encompassing the reproduction of human cells and tissues. A noteworthy development in this field is the emergence of "reproductive" cloning[2], wherein a cloned human embryo is implanted into a woman with the explicit purpose of birthing a cloned human individual. Disagreement among experts is conspicuous, particularly in the context of "therapeutic" cloning, which entails the generation and subsequent utilization of a cloned human embryo for scientific or medical research. The "therapeutic" cloning category is chiefly concerned with creating and utilizing cloned human embryos for scientific or medical research, aiming to harness embryonic "stem cells". The potential transformative impact of such stem cells on medicine is envisioned to alleviate various debilitating diseases.

The contentious nature of human cloning stems, firstly, from ethical concerns ingrained in the public consciousness. The complete development of a cloned embryo necessitates the use of a pregnant woman's body, where her own embryo is replaced by an artificially created one during the early stages of pregnancy[3]. Secondly, the human cloning process directly conflicts with fundamental human

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[2] In biological terms, therapeutic cloning is the same as reproductive cloning, but with a limited (up to 14 days) embryo growth period.

[3] Midlovets MV, Samadinov M. Actual ethical and legal issues of cloning // Russia and the world community: economic, social, technical and technological development: a collection of scientific articles on the materials of the I International Multidisciplinary Forum (15.03.2017) - M.: NOO "Professional Science", 2017. - P. 282-284.

rights, including the right to human dignity and the preservation of the integrity and uniqueness of each human person[4].

The act of cloning imposes the image and likeness of the donor, essentially asserting dominance over another human being. This act is construed as a violation of the child's human dignity, reducing them to a status akin to a subject of the will of others rather than a unique individual with equal dignity to their "creators". Consequently, the practice of cloning is seen as an affront to religious sensibilities, usurping the role of the creator.

In the context of human rights, the Permanent Delegates of France and Germany draw attention to the "Universal Declaration on the Human Genome and Human Rights"[5], ratified by UNESCO in 1997. Article 11 of this declaration explicitly prohibits "practices contrary to human dignity, such as reproductive cloning of human beings". This prohibition is grounded in the principles of equality, freedom, and non-discrimination enshrined in the Universal Declaration of Human Rights[6], emphasizing the inherent dignity of every human being, which must not be subjugated as an object or instrument of others' wills.

From an international ethical and legal standpoint, the pursuit of this objective is deemed an imperative inaugural stride, imbuing this scientific domain with the requisite significance. This challenge is particularly pertinent in our contemporary era, wherein international law assumes the responsibility of safeguarding human life and future generations from potential transgressions in the domain of science and technology[7]. While science stands as a pivotal catalyst for progress, it concurrently harbors the potential for abuse, culminating in unforeseeable and adverse ramifications.

The exploitation of human beings, as sought by select scientific and industrial factions and propelled by prevailing economic interests, persists as ethically untenable. Its severity as an affront to human dignity and the right to life is accentuated when it extends to human embryos.

Given the profound ramifications that the prospect of human cloning holds for humanity, it becomes imperative for the law to champion the defense of both present and future generations, upholding their rights and fundamental freedoms.

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4 Gromov V.G., Yaroshchuk A.V. The problem of human cloning: legal and moral and ethical aspects // Fundamentals of Economics, Management and Law. 2020. № 6 (25). - P.60.

5 Universal Declaration on the Human Genome and Human Rights 1997. URL: https://www.un.org/ru/documents/decl_conv/declarations/human_genome.shtml "ConsultantPlus.

6 Universal Declaration of Human Rights of 1948 // Rossiyskaya Gazeta. 1995. 5 April.

7 *Abashidze A.Kh., Gulyaeva E.E., Trikoz E.N.* Technique and practice of international rule-making: challenges and solutions (review of materials of the International Conference ESIL) // Vestnik RUDN, Series Legal Sciences. - 2022. - Vol. 26. - № 2.

This ethical imperative has prompted numerous countries to institute regulations pertaining to human cloning.

This article delineates specific facets of Latin American legislation concerning biotechnology, with a particular focus on human cloning.

Bioethics, in the contemporary milieu, is construed as an evolving interdisciplinary discourse integrating life science with human values. It seeks to formulate, articulate, and potentially address a spectrum of issues emanating from laboratory research and practical interventions in human life, the environment, and the Earth's biosphere[8]. The Regional Bioethics Unit of the Pan American Health Organization, based in Santiago de Chile, adheres to this comprehensive definition. In the legal discourse, *bioethics* involves the philosophical, moral, and ethical evaluation of the repercussions of medical and biological procedures and research, encompassing genetic engineering, organ transplantation, care for the terminally ill, among others[9]. In the Latin American context, bioethics is intricately linked with mechanisms for the protection of human rights, democracy, and citizenship, further amplifying the politicization of the concept of bioethics[10].

Bioethics is undergoing rapid expansion as an interdisciplinary field in Latin America, distinct from *biopolitics*, and represents a distinct domain of science and practice[11]. However, the academic influence of bioethics remains relatively limited in the Latin American region, with programs predominantly concentrated in major urban centers of only a select few countries[12].

As articulated by members of Mexico's National Bioethics Commission (La Comisión Nacional de Bioética - CONBIOÉTICA), "bioethics is characterized as a branch of applied ethics. It engages in reflection, analysis, and the application of normative and public policy approaches to regulate and resolve conflicts in social life. This focus extends to the life sciences, curative practices, and medical research, with implications for life on the planet both in the present and for future generations".

In the early 2000s, Latin America witnessed a renewed phase of legislative regulation addressing various bioethical issues, clinical practices, and genetic

[8] Selecciones de Bioética №15 del Instituto de Bioética de la Pontificia Universidad Javeriana de Colombia // Archivado desde el original el 5 de junio de 2016.

[9] Stepke Fernando Lolas. The Pan American Health Organization and Latin American Bioethics // Ibero-American Bioethics: History and Perspectives / Ed. by L. Pessini, Ch.P. de Barchifontaine, F.L. Stepke. Springer Science, Business Media B.V., 2010. Pp. 55-60.

[10] Cossio J.R. Derecho y Bioética // Perspectivas de Bioética / Ed. by J. González Valenzuela. Mexico: University Nacional Autónoma de Mexico, 2013. Pp. 302-303.

[11] Denisenko Vladislav V., Trikoz Elena N. Biopolitics and Law Issues of Emergency Situations in the Context of Coronavirus Pandemia // E3S Web of Conferences. 2020. Vol. 180. Pp. 1-9.

[12] Álvarez-Díaz, J.A. Bioética latinoamericana o bioética en Latinoamérica [Latin American bioethics or bioethics in Latin America?] // Revista Latinoamericana de Bioética (1). 2012. Pp. 10–27.

research[13]. At the constitutional level, Brazil and subsequent countries embedded the right to decent healthcare and access to healthcare within the context of bioethics, establishing it as a universal right for the working population[14].

In Mexico, the establishment of the "National Bioethics Commission" (CONBIOÉTICA) marked a significant development. As the primary decentralized body under the Ministry of Health, CONBIOÉTICA operates with technical and institutional autonomy. Its responsibilities encompass defining national policies and legislative proposals in the field of bioethics. Objectives include establishing public health policies related to bioethics, serving as a national advisory entity on specific bioethical matters, fostering debate across diverse social sectors on bioethical issues, supporting education and teaching in health and bioethics, and promoting the establishment of public bioethics commissions, as well as organizing and facilitating the functioning of bioethics committees in public and private health institutions.

In the context of this study, it is pertinent to delve into key concepts directly linked to the issue of cloning. Foremost among these is the elucidation of the general notion of "the beginning of life".

Despite the universally acknowledged right to life, various international legal acts, there exists a need to scrutinize differing perspectives on the legal status of the embryo. This examination is crucial for a comprehensive understanding of the ethical and legal dimensions surrounding the topic of cloning.

The most explicit delineation of the commencement of life is articulated in the American Convention on Human Rights, specifically in Article 4(1): "everyone has the right to respect for his life. This right shall be protected by law, in general, from the moment of conception. No one shall be arbitrarily deprived of his life". Consequently, for countries signatory to this convention, human life is considered to initiate at the moment of conception. Consequently, any artificial termination of pregnancy may be construed as a deprivation of the right to life for an embryo or fetus. However, the international instruments mentioned do not offer precise guidance on defining the onset of life, creating a legal void.

The Declaration of the Rights of the Child (1959) stipulates that the child "needs legal protection both before and after birth"[15]. Although this declaration does not explicitly define the commencement of life, it implies that the act of killing a child before birth is not sanctioned by this declaration. Nonetheless, the

[13] *Bulle Goyri V.M.* Bioética, Derecho y Derechos Humanos // Perspectivas de Bioética. Mexico, 2013.

[14] *Volnei Garrafa, Thiago Rocha da Cunha, Camilo Manchola*. Access to Healthcare: A Central Question within Brazilian Bioethics // Cambridge Quarterly of Healthcare Ethics. 2018. Vol. 27(03). Pp. 431-439.

[15] 1959 Declaration of the Rights of the Child. URL: https://www.un.org/ru/documents/decl_conv/declarations/childdec.shtml

declaration fails to specify when a child becomes entitled to legal protection, leaving ambiguity regarding the point at which an embryo or fetus attains the status of a human being. This ambiguity is particularly salient in the context of surrogacy and in vitro fertilization (IVF) procedures. A proposed amendment during the drafting of the declaration, suggesting that the right should be protected by law "from the moment of conception", was rejected due to legal uncertainties.

Article 1 of the Convention on the Rights of the Child (1989)[16] recognizes a child as "a human being below the age of 18 years", unless national law prescribes an earlier age of majority. Consequently, a void exists in defining the inception of human life. While the protection of a child's life is endorsed even before birth, the precise juncture at which an embryo transforms into a human being, and thereby a child, remains elusive.

International and regional human rights treaties safeguard the right to life without specifying its commencement. Authoritative sources, encompassing the historical discourse on terms and the practices of entities responsible for interpreting and monitoring these treaties, elucidate that the protection of rights is not extended before birth. It is acknowledged that safeguarding the absolute right to life before birth may conflict with the guarantees of human rights protection inherent in a woman. The travaux préparatoires, serving as a source of interpretation for ambiguous terms in international human rights treaties, indicate that provisions securing the right to life do not imply protection before birth. Additionally, treaty monitoring bodies, through general comments, concluding observations, and case-specific decisions, consistently underscore the imperative of protecting women's rights. They argue that, to ensure women's fundamental rights to life and health, states must eliminate impediments to the full realization of these rights, such as the denial of safe and legal abortion.

In accordance with Article 1 of the Universal Declaration of Human Rights, "all human beings are born free and equal in dignity and rights". It is noteworthy that the term "born" was intentionally chosen during the negotiation process to explicitly exclude the application of the rights enshrined in the Declaration to the prenatal stage. The drafters of the Declaration rejected a proposal to eliminate the term "born", and the final text expressly states that the rights conferred by the Declaration "belong (to a person) from the moment of birth"[17].

[16] Convention on the Rights of the Child 1989 URL: https://www.un.org/ru/documents/decl_conv/conventions/childcon.shtml

[17] Universal Declaration of Human Rights 1948. URL: https://www.un.org/ru/documents/decl_conv/declarations/declhr.shtml

The International Covenant on Civil and Political Rights (ICCPR)[18] does not contemplate extending the right to life, as guaranteed by Article 6(1), to prenatal life. Specifically, the drafters of the ICCPR dismissed a proposal to amend this article, suggesting that "the right to life belongs to the human person from the moment of conception, and this right shall be protected by law".

Despite the Preamble of the Convention on the Rights of the Child (CRC)[19] acknowledging "the need for special protection and care for children due to their physical and mental immaturity", Article 1 of the CRC does not expressly define the beginning of the right to life.

In the American Declaration of the Rights and Duties of Man, Article 1[20] asserts that "everyone has the right to life, liberty, and security of person". The drafters of this declaration rejected a proposed formulation specifying that "everyone has the right to life, extending from the moment of conception", citing potential conflicts with prevailing abortion laws in most states.

Simultaneously, Article 4 of the American Convention on Human Rights declares: "Everyone has the right to respect for his life. This right shall be protected by law, generally from the moment of conception". However, the Inter-American Court of Human Rights and the Inter-American Commission on Human Rights, the interpretative and monitoring bodies within the Inter-American system, have clarified that this rights protection is not absolute.

The right to life is considered not only in the context of the fetus in the womb but also in the perspective of the in vitro embryo. While an embryo is not regarded as a commodity or an object, its status as a human being, though subject to debate, cannot be dismissed. The use of embryos and human fetuses in medical and other experiments outside a woman's uterus raises concerns in the realm of international law, particularly with respect to prohibitions against trafficking in human beings, organs, and tissues. The Council of Europe, in 1986, issued Recommendations[21] on the use of human embryos and fetuses, emphasizing the continuous development of human life from the moment of fertilization. Paragraph 5 underscores that "from the moment of fertilization of the ovum, human life undergoes continuous development, rendering it impossible to distinctly demarcate the initial (embryonic) phases of its progression. Consequently, it becomes imperative to

[18] International Covenant on Civil and Political Rights 1966. URL: https://www.un.org/ru/documents/decl_conv/conventions/pactpol.shtml

[19] Convention on the Rights of the Child 1990. URL: https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child

[20] American Declaration of the Rights and Duties of Man 1948. URL: https://www.oas.org/en/iachr/mandate/Basics/american-declaration-rights-duties-of-man.pdf

[21] Use of human embryos and foetuses for diagnostic, therapeutic, scientific, industrial and commercial purposes. Recommendation 1046 (1986). Parliamentary Assembly [electronic resource] URL: http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=15080&lang=en

ascertain the biological status of the embryo". In light of these considerations, Member States have advocated for the prohibition of sustaining in vitro embryo life beyond 14 days post-fertilization (as articulated in point 14.1.4.). Additionally, they have recommended restricting the utilization of human embryos, fetuses, materials, and tissues in industrial applications solely to therapeutic purposes (as articulated in point 14.1.2.). Consequently, it can be inferred that the stipulation prohibiting the sale and experimentation on in vitro embryos implies their classification as human beings, thereby entitling them to the right to life.

While explicit references to the protection of the right to life in the embryo or fetus are not consistently evident, advocates for the rights of unborn children often rely on indirect arguments. For instance, Article 6(5) of the 1966 International Covenant on Civil and Political Rights[22] stipulates that "the death penalty shall not be imposed for offenses committed by persons under 18 years of age, nor shall executions be carried out on pregnant women". This provision can be construed to imply that the contracting parties deemed executing a pregnant woman as tantamount to killing an innocent person. This indirectly suggests evidence supporting the notion that an unborn human being in the womb possesses a right to life[23], notwithstanding theories positing that abortion, under certain circumstances, does not equate to the killing of a child because a child cannot physically exist outside the mother's body until a certain stage of development. If the foetus is a "part" of the mother's body, it cannot have the right to life).

Another pivotal concept related to life and health is the concept of "somatic rights". Somatic rights, as defined in doctrine, encompass a group of rights rooted in the fundamental worldview belief in an individual's "right" to autonomously control their body. This includes the ability to undertake "modernization", "restoration", and even "fundamental reconstruction" of the body, along with altering the functional capabilities through technical-aggregate or medication means[24]. Somatic rights encompass various inherent rights that enable individuals to make specific modifications to their bodies through medical and scientific interventions. These encompass aspects such as euthanasia, positive and negative reproductive rights (e.g., artificial insemination and sterilization), changes in biological sex, and organ and tissue transplantation[25].

[22] International Covenant on Civil and Political Rights 16.12.1966 // Collection of existing treaties, agreements and conventions concluded with foreign states, Moscow, 1978, vol. XXXII, p. 44.

[23] Semenova, N. S. The ban on abortion in the light of the protection of traditional values: international legal aspect / N. S. Semenova // Gaps in Russian legislation. - 2016. - №8. URL: https://cyberleninka.ru/article/n/zapret-na-aborty-v-svete-zaschity-traditsionnyh-tsennostey-mezhdunarodno-pravovoy-aspekt

[24] Kruss, V.I. Personal ("somatic") human rights in the constitutional and philosophical-legal dimension: to the statement of the problem / V.I. Kruss // State and Law. - M.: Nauka. - 2000. - № 10. - P. 43-50.

[25] Kokambo Y. D. Somatic human rights as a new generation of individual rights // Vestnik of Amur State University. Series: Humanities. 2015. № 68

Regulation of the boundaries and principles defining somatic rights varies among societies. It is influenced not solely by technical aspects, such as the objective possibilities of medicine, but significantly by longstanding social norms, encompassing religion, ethics, traditional beliefs, and philosophical perspectives on human life and its value. Areas prone to conflicts related to somatic rights include the trade and donation of human organs and tissues, surrogate motherhood, and artificial termination of pregnancy. These services, integral to reproductive rights, fundamentally alter the integrity of the human body, and individuals seeking such services often encounter limitations imposed by legal, moral, and ethical frameworks within their respective societies[26]. To circumvent these limitations, individuals sometimes opt to provide or receive services outside their home country or habitual residence. This transnational approach not only gives rise to clashes between the private and public laws of one country but also engenders conflicts between legal norms across two or more countries. Instances may arise where the civil and criminal laws of multiple countries come into conflict, adding complexity to the legal landscape.

The establishment of somatic rights is governed by several international legal instruments, with notable prominence accorded to the following:

- The Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine, adopted by the Council of Europe in 1997[27].

- Resolution 2001/39 of 26 July 2004, addressing "Genetic privacy and non-discrimination".

- Resolution 2003/69 of 25 April 2003, focusing on "Human Rights and Bioethics"[28].

- The UN Declaration on Human Cloning, sanctioned by the UN General Assembly in 2005[29].

Somatic rights distinguish themselves from other rights by their simultaneous connection to an individual's physical integrity, psychological and spiritual well-being, and personality. A. I. Kovler asserts that the right to life and human dignity,

[26] Tricoz E.N., Gulyaeva E.E. The positions of the ECtHR on some issues of bioethics and genetic data // Advances in Law Studies. 2018. T. 6. № 4. P. 36-40.

[27] Convention for the Protection of Human Rights and Human Dignity in Connection with the Application of Biology and Medicine (ETS No. 164) (concluded in Oviedo on 04.04.1997) (as amended on 27.11.2008) // ConsultantPlus.

[28] Resolution 2003/69 of 25 April 2003. "Human Rights and Bioethics". URL: https://www.un.org/ru/documents/decl_conv/declarations/bioethics_and_hr.shtml

[29] UN Declaration on Human Cloning, which was adopted by the UN General Assembly in 2005. URL: https://www.un.org/ru/documents/decl_conv/declarations/decl_clon.shtml

freedom of conscience, the right to liberty and personal inviolability[30], among other rights, are categorized as somatic rights, given their foundational role in all personal human rights[31].

Contrarily, some legal scholars propose that somatic rights emanate from socio-economic and cultural rights, exemplified by the linkage of trade in organs to the right to health and medical care[32].

A collision between public and private interests can emerge in the exercise or violation of somatic rights, particularly when instances of harm to health are at play. Cases involving significant or moderately grave harm to health fall within the purview of public law, leading to potential criminal prosecution. It is crucial to highlight that this scenario is applicable only when the individual causing harm to health is distinct from the person whose health has been compromised, thereby excluding instances of suicide and similar cases[33].

M. A. Lavrik has articulated one of the prevailing classifications of somatic human rights, encompassing:

- The right to death
- Human rights concerning organs and tissues
- Human sexual rights
- Human reproductive rights
- The right to gender reassignment
- The right to the cloning of the entire human organism or individual organs
- The right to use drugs and psychotropic substances[34].

Transitioning from the overarching concept of somatic rights to specific legislative enactments governing distinct clusters of these rights, an exploration of their implementation in the Latin American region becomes imperative.

Several Latin American countries, including Argentina, Colombia, Costa Rica, Ecuador, Mexico, Panama, and Peru, have adopted restrictive policies on human cloning through national legislation.

States adhering to the perspective that the human embryo merits individual status find it morally objectionable to utilize embryos as research subjects,

30 Gulyaeva E.E. Legal grounds for restricting the right to liberty and security of person under the Convention for the Protection of Human Rights and Fundamental Freedoms of 1950. Moscow: Yurlitinform, 2013. 208 p.

31 Kovler A. I. Anthropology of Law. M., 2002.

32 Lavrik M. A. To the theory of somatic human rights // Siberian Legal Bulletin. 2005. № 3. P. 24-25.

33 Pikurov N. I. Private life and criminal law: the search for a balance of interests of the state and the individual: a monograph. Moscow: Yurait. 2021. P. 127

34 Lavrik M. A. To the theory of somatic human rights // Siberian Legal Bulletin. 2005. № 3. P. 24-25.

considering it a means to an end rather than an end in itself. Legislative measures enacted in Latin America exemplify policies grounded in this approach[35].

The American Declaration of the Rights and Duties of Man asserts that "Everyone has the right to respect for his life. This right shall be protected by law from the moment of conception. No one shall be arbitrarily deprived of life"[36]. Numerous countries in the region interpret this provision as conferring personhood status to the human embryo, serving as a guiding principle for policies that restrict or outright prohibit research or manipulation of the human embryo.

For instance, Article 49 of the Ecuadorian Constitution explicitly prohibits research on human embryos, implicitly proscribing cloning for both reproductive and therapeutic purposes[37]. Similarly, in Argentina, a presidential decree explicitly prohibits "experiments involving the cloning of human cells for the purpose of producing human beings"[38]. This interpretative approach is prominently illustrated in the regulation of medically assisted procreation in Costa Rica. In the year 2000, the Supreme Court of the country declared unconstitutional a government decree aimed at regulating assisted reproductive technologies[39]. The court's ruling contended that in vitro fertilization procedures contravene the right to life of the unborn child, as they expose the human embryo to a disproportionately elevated risk of mortality.

Costa Rica is presently deliberating a draft Penal Code in its Legislative Assembly, where Article 131 criminalizes genetic manipulation. The article imposes penalties for altering the life structure or genotype through the manipulation of human genes for purposes other than therapeutic objectives.

Numerous Latin American countries incorporate provisions within their national legal systems that explicitly forbid human cloning, often embedded within health laws. For instance, Peru's General Health Law No. 26842 of July 15, 1997, includes Article 7, expressly prohibiting "the fertilization of human eggs for purposes other than reproduction and the cloning of human beings"[40].

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[35] Isasi, R. M., Knoppers, B. M., Singer, P. A., & Daar, A. S. Legal and Ethical Approaches to Stem Cell and Cloning Research: A Comparative Analysis of Policies in Latin America, Asia, and Africa. // The Journal of Law, Medicine & Ethics, 32(4). – 2004. - p. 626–640.

[36] American Convention on Human Rights, "Pact of San Jose, Costa Rica," // Organization of American States (November 22,1969). URL: https://treaties.un.org/doc/publication/unts/volume%201144/volume-1144-i-17955-english.pdf

[37] Constitución del Ecuador, Artículo 49, párrafo I (junio 5, 1998) // Constitución Política de la República de Ecuador. URL: https://www.acnur.org/fileadmin/Documentos/BDL/2002/0061.pdf

[38] Decreto Nº 200/97 que Prohíbe La investigación sobre la clonación humana // InfoLEG. URL: http://servicios.infoleg.gob.ar/infolegInternet/anexos/40000-44999/42213/norma.htm

[39] Decreto Ejecutivo Nº 24029-S sobre "La Técnica de Fecundación in Vitro y Transferencia de Embriones", 3 de marzo de 1995.

[40] Ley №26842 Ley General de Salud // Platforma digital del Estado Peruano. URL: https://www.gob.pe/institucion/minsa/normas-legales/256661-26842

In Mexico, the General Health Law, the sole legislation governing genetic technology, indirectly proscribes human cloning while permitting embryo research. The Regulation on the Sanitary Control of Tissues, Organs, and Human Bodies and the Regulation on Scientific Research in Health (1985) are two components of the General Health Law. The Regulation on Scientific Research stipulates that research on assisted reproduction is permissible only when aimed at resolving infertility issues that cannot be addressed through alternative means.

The Republic of Chile legal framework incorporates the Ministry of Health Law No. 20.120 of September 22, 2006, addressing "Scientific research on human beings, their genome, and the prohibition of human cloning"[41]. This law prioritizes safeguarding human life from conception, emphasizing physical and mental integrity, genetic diversity, and identity concerning biomedical scientific research and its clinical applications as Article 1 of the document reads. Article 5 of the law explicitly prohibits "human cloning, irrespective of the purpose pursued or the technology employed". Article 6 outlines regulations for the "cultivation of tissues and organs, limiting these activities to therapeutic, diagnostic, or scientific research objectives, with a categorical prohibition on the destruction of human embryos to obtain stem cells". Moreover, Article 8 prohibits the "appropriation or establishment of ownership of knowledge related to the human genome or any of its components, rendering such knowledge non-patentable".

This legislative document imposes sanctions for contraventions of the human cloning prohibition. According to Article 17, "individuals engaging in or initiating the process of human cloning, as well as those involved in eugenic procedures, face imprisonment and total disqualification from professional activities for the duration of the imprisonment. Repeat offenders may incur life imprisonment in addition to the initial penalties". Sanctions are also established for the design of biomedical scientific research projects without the required authorizations, as specified in Article 20: "Individuals undertaking a biomedical scientific research project on human beings or their genome without the requisite authorizations mandated by this legislation will incur penalties, including a three-year suspension from professional activity. In the event of a recurrence, the offender faces an absolute prohibition on professional activity within the national territory".

The Colombian Criminal Code, as delineated in Law No. 599 of July 24, 2000, stipulates sanctions for transgressions related to the prohibition of human cloning. Article 133 of the Code, titled "Reproducibility of the human person", prescribes "imprisonment for a duration ranging from thirty-two to one hundred

[41] Ley №20120 «Sobre la investigacion cientifica en el ser humano, su genoma, y prohibe la clonacion humana» // Biblioteca del Congreso Nacional de Chile (BCN). URL: https://www.bcn.cl/leychile/navegar?idNorma=253478

and eight months for those engaging in the creation of identical human beings through cloning or any analogous procedure"[42].

In the Republic of Panama, Act No. 3 of January 15, 2004, titled "Prohibiting all forms of human cloning and establishing other provisions on the subject", enacted by the Legislative Assembly, imposes penalties for human cloning, incorporating fines. Article 1 of the legislation explicitly proscribes all modes of endorsement, financial backing, and donations, along with the utilization of public or private resources for investment in the experimentation, research, and development associated with any manifestation of human cloning. This encompasses the generation of an embryo replicating the biological attributes of a human being based on its anatomical structure. Nevertheless, a notable exception is stipulated in Article 2, allowing the reproduction of tissues aimed at recuperating organs for therapeutic purposes related to the prevention and treatment of diseases. This allowance is contingent upon securing the consent of the individual from whom the organic material is derived or their duly appointed representatives. The permission for tissue reproduction is contingent on it being unrelated to human reproduction and devoid of any vested interests on the part of the consenting individual. Violators of this legislation are subject to fines, with Article 3 stipulating a potential penalty of up to one million balboas.

The Republic of Cuba employs a distinct regulatory approach concerning human cloning through Decree-Law No. 290 of the Council of State, dated April 16, 2012 titled "On Inventions, Drawings and Industrial Models", incorporates restrictions on securing a patent for specific categories of scientific research products within Part II of Chapter I, addressing "Patentable Inventions"[43]. Among these restrictions are the cloning of human beings, organs, tissues, and their constituent parts or elements, along with the procedures involving the alteration of human embryonic genetic identity. Additionally, the utilization of human embryos for industrial and commercial purposes is expressly prohibited[44]. For instance, Article 21.3 of the document specifies that certain inventions, including j) essentially biological procedures and k) the human organism in diverse phases of its genesis and progression, the revelation of specific components or segments, and replicas thereof, encompassing sequences or partial sequences of a gene and its genetic identity, are precluded from patent consideration, irrespective of the utilization of technical procedures in their acquisition. Article 22 explicitly bars the acquisition of patents for g) the cloning of human beings and their organs, tissues, parts, or elements, h) procedures modifying human embryonic genetic

[42] Artículo 133. Repetibilidad del ser humano // Leyes.co. URL: https://leyes.co/codigo_penal/133.htm

[43] Decreto-ley №290 De las invenciones y dibujos y modelos industrials // Gaceta Oficial No. 24 Extraordinaria de 2012. URL: https://www.gacetaoficial.gob.cu/sites/default/files/go_x_024_2012.pdf

[44] Rodrigo Ramirez Herrera. Cuba y su nueva legislación de Propiedad Industrial: Clonar seres humanos está prohibido // IPTango. URL: https://iptango.blogspot.com/2012/02/cuba-y-su-nueva-legislacion-de.html

identity, and i) the exploitation of human embryos for industrial or commercial applications.

The realm of genetics and genomics has witnessed significant advancements with the cloning of living organisms, including humans. However, the ethical and legal dimensions of artificially creating human beings elicit profound concerns. The legal provisions safeguarding the right to life do not extend protection to the pre-birth stage. Additionally, treaty monitoring bodies, via general comments, concluding observations, and case-specific decisions, consistently underscore the significance of safeguarding women's rights. They argue that states should eliminate barriers to ensure women's fundamental rights to life and health are fully realized.

At the global level, the official prohibition of cloning is established in the 1998 Additional Protocol on the Prohibition of Human Cloning and the 1997 Oviedo Convention.

Despite reproductive and somatic rights being acknowledged as fundamental human rights, their protection is comparatively less assured compared to other human rights belonging to the initial three generations. This study scrutinizes what we perceive as the most critically safeguarded expressions of somatic and reproductive rights, specifically focusing on the utilization of embryos and human cloning. Presently, the regulation of somatic and reproductive rights in these medical interventions relies largely on indirect mechanisms due to the absence of detailed elaboration in international human rights treaties.

This study contends that ethical considerations have prompted numerous Latin American nations to adopt regulations addressing human cloning, recognizing the potential infringement upon human dignity and the right to life. The authors highlight the inherent risk of egregious human rights violations, including breaches of the right to equality, liberty, and non-discrimination, in the context of human cloning. Moreover, the entitlement to replicate either an entire human organism or specific organs ought to be categorized within the spectrum of somatic rights. The authors encapsulate the prevailing theme that legislative frameworks across Latin American nations universally proscribe human cloning.