

**Amendment 62 Co-Sponsors
Personhood Colorado and Colorado Right To Life
Answer the General Questions Submitted
by Colorado's Legislative Council**

Preliminary Comment on Beginning of Biological Development: The Legislative Council has persisted in claiming against all scientific and medical research and common usage of English grammar that the phrase "the beginning of biological development," is "a term which is not defined... and is not an accepted medical or scientific term." So prior to presenting our answers to the council's thirteen questions, we're summarizing references that address this matter first, for both sexual (fertilization) and asexual (twinning, cloning, etc.) human reproduction.

THE BEGINNING OF BIOLOGICAL DEVELOPMENT

1. SEXUAL HUMAN REPRODUCTION:

The following scientific references are provided by medical ethicist Dr. Prof. Dianne N. Irving of Georgetown University who herself writes herein, "Scientifically, the term 'embryo' as it refers to the *sexually* reproduced single-cell human embryo should apply from the biological beginning of that human organism, i.e., at the beginning of the process of fertilization or first contact of the sperm with the oocyte (as documented by Carnegie Stage 1):"

Carnegie Stage 1 Definition: **Embryonic life commences** with fertilization, and hence the **beginning of that process may be taken as the point de depart of stage 1**. Despite the small size (ca. 0.1 mm) and weight (ca. 0.004 mg) of the organism at fertilization, the embryo is "*schon ein individual-spezifischer Mensch*" (Blechsmidt, 1972). ... Fertilization is the procession of events that **begins when a spermatozoon makes contact with an oocyte or its investments** and ends with the intermingling of maternal and paternal chromosomes at metaphase of the first mitotic division of the zygote (Brackett et al., 1972). Fertilization *sensu stricto* involves the union of developmentally competent gametes realized in an appropriate environment to result in the formation of a viable embryo (Tesarik, 1986) Fertilization requires probably slightly longer than 24 hours in primates (Brackett et al., 1972). In the case of human oocytes fertilized *in vitro*, pronuclei were formed within 11 hours of insemination (Edwards, 1972). ... Fertilization, which takes place normally in the ampulla of the uterine tube, includes (a) **contact of spermatozoa with the zona pellucida of an oocyte, penetration of one or more spermatozoa through the zona pellucida and the ooplasm, swelling of the spermatozoal head and extrusion of the second polar body**, (b) the formation of the male and female pronuclei, and (c) the beginning of the first mitotic division, or cleavage, of the zygote. ... The three phases (a, b, and c) referred to above will be included here under stage 1, **the characteristic feature of which is unicellularity**. ... [Carnegie Stages of Early Human Embryonic Development, Stage 1, at: <http://nmhm.washingtondc.museum/collections/hdac/stage1.pdf>] (emphases added)

Human development is a continuous process that begins when an oocyte (ovum) from a female is *fertilized* by a sperm (or spermatozoon) from a male. (p. 2); *ibid.*: ... but **the embryo begins to develop** as soon as the oocyte is *fertilized*. (p. 2); *ibid.*: [Single-cell human embryo]: this cell results from the union of an oocyte and a sperm ... **is the beginning of a new human being (i.e., an embryo)**. (p. 2); *ibid.*: **Human development begins** at fertilization, the process during which a male gamete or sperm ... unites with a female gamete or oocyte ... to form a single cell [embryo] . This highly specialized, totipotent cell **marks the beginning of each of us as a unique individual**. (p. 18) ... The usual site of fertilization is the ampulla of the uterine tube [fallopian tube], its longest and widest part. If

the oocyte is not fertilized here, it slowly passes along the tube to the uterus, where it degenerates and is reabsorbed. Although fertilization may occur in other parts of the tube, it does not occur in the uterus. ... The embryo's chromosomes sex is determined at fertilization by the kind of sperm (X or Y) that fertilizes the ovum; hence it is the father rather than the mother whose gamete determines the sex of the embryo. [Keith Moore and T.V.N. Persaud, *The Developing Human: Clinically Oriented Embryology* (6th ed. only) (Philadelphia: W.B. Saunders Company, 1998), p. 37] (emphases added)

Human pregnancy begins with the fusion of an egg and a sperm. (p. 3); ... finally, the fertilized egg, now properly called an embryo, must make its way into the uterus (p. 3); ... The sex of the future embryo is determined by the chromosomal complement of the spermatozoon ... Through the mingling of maternal and paternal chromosomes, the [embryo] is a genetically unique product of chromosomal reassortment ... [Bruce M. Carlson, *Human Embryology and Developmental Biology* (St. Louis, MO: Mosby, 1994), p. 31; *ibid*, Carlson 1999, pp., 2, 23, 27, 32] (emphasis added)

In this text, we begin our description of the developing human with the formation and differentiation of the male and female sex cells or gametes, which will unite at fertilization to **initiate the embryonic development of a new individual**. ... Fertilization takes place in the oviduct [not the uterus]... resulting in the formation of an [embryo] containing a single diploid nucleus. **Embryonic development is considered to begin at this point**. (p. 1); ... [William J. Larsen, *Human Embryology* (New York: Churchill Livingstone, 1997), p. 17] (emphases added)

Fertilization is an important landmark because, under ordinary circumstances, **a new, genetically distinct human organism is thereby formed**. (p. 5); *ibid.*: *Fertilization* is the procession of events that begins when a spermatozoon makes contact with a secondary oocyte or its investments ... (p. 19); *ibid.*: "The *ill-defined and inaccurate term pre-embryo*, which includes the embryonic disc, is said either to end with the appearance of the primitive streak or ... to include neurulation. The term is not used in this book. [Ronan O'Rahilly and Fabiola Muller, *Human Embryology & Teratology* (New York: Wiley-Liss, 1994), p. 55] (emphases added)

2. ASEXUAL HUMAN REPRODUCTION

Definition of asexual human reproduction: For example: "...**genetically identical twins are clones** who happened to have received exactly the same set of genetic instructions from two donor individuals, a mother and a father. A form of animal cloning can also occur as a result of artificial manipulation to bring about a type of **asexual reproduction**. The genetic manipulation in this case uses nuclear transfer technology: a nucleus is removed from a donor cell then transplanted into an oocyte whose own nucleus has previously been removed. **The resulting 'renucleated' oocyte can give rise to an individual** who will carry the nuclear genome of only one donor individual, unlike genetically identical twins. ... Nuclear transfer technology was first employed in embryo cloning, in which the donor cell is derived from an early embryo, and has been long established in the case of amphibia. ... Wilmut et al (1997) reported successful cloning of an adult sheep. For the first time, an adult nucleus had been **reprogrammed to become totipotent once more, just like the genetic material in the fertilized oocyte** from which the donor cell had ultimately developed. ... Successful cloning of adult animals has forced us to accept that genome modifications once considered irreversible can be reversed and that **the genomes of adult cells can be reprogrammed by factors in the oocyte to make them totipotent once again.**" [Tom Strachan and Andrew P. Read, *Human Molecular Genetics 2* (New York: John Wiley & Sons, Inc, 1999), pp. 508-509) (emphases added)

COUNCIL QUESTIONS

1. What do you consider to be the most important points that voters should know about the amendment?

The protection of innocent human beings is the paramount purpose of government.

Yet, under the current state of Colorado law, a human being is not considered a person until after they are born (C.R.S. 18-3-101) This discriminatory definition of the term "person" has created an entire class of innocent human beings who are helpless in the eyes of the law.

The Personhood Amendment seeks to rectify this grave injustice by applying the common sense definition of the term "person," as used in Black's Law Dictionary 1178 (8th ed. 2004), that a "person" is quite simply "[a] human being," to those sections of the Colorado Bill of Rights that concern the fundamental rights of all persons.

Furthermore, the Personhood Amendment will clarify that there is no point in the biological development of a human being, when that human being is not a person worthy of human rights and dignity under the law of Colorado.

2. What information do you think should be included in the background section of the ballot analysis?

We would like the background section of the ballot analysis to point out that under Colorado law, Due Process of Law (Section 25) includes Equal Protection.

Equal protection means that Colorado must apply the law equally and cannot give preference to one person or class of persons over another.

Since 1980, the Colorado Supreme Court has interpreted Section 25 to guarantee equal protection of the laws under rules very similar to those applied under the federal Equal Protection Clause. Whereas, Colorado cannot define the meaning of the term "person" under the federal Equal Protection Clause, it can define it for purposes of applying the equal protection of Colorado state laws. (Heninger v. Charnes, 613 P.2d 884, 886 n.3 (Colo. 1980).

Lastly, in the "Arguments For" section of the 2008 Blue Book for Amendment 48, it was listed that "Currently these rights are not given until birth". As the rights we are dealing with are inalienable rights, they could never be given or taken away, so we prefer the word that is used be "recognized" so that currently these inalienable rights are not recognized until after birth.

3a. If the amendment were to pass, how do you think its effects would be implemented?

When the Personhood Amendment passes, the amended constitution would require that the Colorado Supreme Court apply the constitutionally mandated definition of the term "person" to all sections of the Colorado Revised Statutes that affect equality of justice, inalienable rights, and due process of law (including equal protection) when challenged.

A specific example of how the amendment could be implemented would be through litigation similar to that of the Colorado vs. Logan Lage case (08CA0617), where the Colorado Court of Appeals held that C.R.S. 18-3-101 did not apply to preborn children, and therefore the state was not allowed to prosecute the defendant on a count of homicide for killing an 8.5 month old preborn child. When the amendment passes, 18-3-101 would have to

be reconciled with the new definition of the term person so that the protection of the law applies equally to preborn human beings as it does to born human beings.

Another method of implementation would be for a father whose child is in danger of being killed in utero, to challenge the constitutionality of 18-3.5-102 as a violation of Sections 3, 5, and 25 of the Colorado Constitution. The text of the statute defining the unlawful termination of a pregnancy contains the following exclusion, which the court would now have to hold violates the state constitution as amended:

"Nothing in this article shall permit the prosecution of a person for providing medical treatment, ~~including but not limited to an abortion~~, in utero treatment, or treatment resulting in live birth, to a pregnant woman for which the consent of the pregnant woman, or a person authorized by law to act on her behalf, has been obtained or for which consent is implied by law."

3b. What examples might be used to illustrate the effects of the amendment?

Colorado law prohibits the intentional killing of an innocent person. So the illegality and unconstitutionality of abortion will be evident. All businesses that specialize in the killing of human beings before birth would be outlawed. Ethical standards that currently allow the intentional killing of one human being at the request of another would have to be reformed. "Research" and "medical treatments" that result in the intentional killing of human beings would be proscribed by law.

Do you foresee any unintended consequences if the amendment were to pass?

No. The law already recognizes the preborn child as possessing property, inheritance, and certain entitlement rights (such as Social Security benefits) before birth, so that the peripheral effect of the Personhood Amendment would not unsettle the law outside of the area of intentional killing. Furthermore, for nearly two hundred years of American history, the child in the womb was considered a person with vested rights, and yet when abortion was mandated upon the states by the United States Supreme Court there was no legislative quagmire. If there was no chaos when the preborn child was stripped of its personhood, there should be none when the preborn child's rights are again recognized.

5. How do you think the term "the beginning of the biological development of [a] human being" should be described in the analysis? How would you differentiate that term from other terms such as fertilization or conception?

The term "the beginning of the biological development of [a] human being" should be described **an inclusive term used for the purpose of protecting the human rights of all living innocent human beings – not just some of them.** Thus, even the youngest and most vulnerable human beings would be protected from the moment they begin to exist as human *organisms*. Such protection is based on the *nature* of the human organism *as a human being*, rather than on various popular psychological or physical functions, including the ability to survive on one's own, criteria that could really only be attributed to "normal" adult human beings. The term would not include mere human cells -- only human organisms (including the single-cell human organism). It would also not include non-human animals.

Since the **purpose of the term is to include all living innocent human beings**, the terms "fertilization" and "conception" would not suffice, and would essentially lead to legal loopholes. As has been known scientifically for over a hundred years, human beings can be reproduced both sexually and asexually. The term **"fertilization"** applies only to human sexual reproduction, and would thus not cover all asexually reproduced human beings (including *naturally occurring* human identical twins reproduced within a woman's body). The term **"conception"** would likewise refer to human sexual reproduction only. Further, in many states, the term "conception" is already legally defined as "beginning at implantation" (5-7 days post-fertilization), rather than

as "beginning at fertilization". The 5-7 day old human embryo reproduced sexually and already existing for almost a week would not be covered by such legislation. Thus, the terms "fertilization" and "conception" would not cover any human beings asexually reproduced, and in some states would not cover even sexually reproduced human beings until after implantation.

6. How do you think that the moment at which "the beginning of the biological development of [a] human being" would be determined? What effects would the method of determination have on the implementation of the law?

Scientifically, it is quite simple to determine when a human being begins to exist, and techniques for accomplishing this have been used for many decades in many fields of medical and scientific endeavor. **The scientific basis for these tests and assays is that a thing acts or functions according to "what" it is, or the "kind" of thing it is.** Thus, e.g., there are many scientific tests and assays that can detect when specifically *human* proteins and enzymes are produced that only a human *organism* is capable of producing. Mere human "cells" that are not human organisms could not produce these same specifically human proteins and enzymes; they could produce only limited number of mere "cell" proteins and enzymes. For example, the single-cell human organism is capable of producing specifically human proteins and enzymes immediately when he/she begins to exist, whereas a normal human somatic cell is only capable of producing a very limited number and kind of proteins and enzymes. Again, a human sperm or human oocyte can only produce proteins and enzymes peculiar to their roles as sperm or oocyte.

These tests and assays are already used routinely in many private and state laboratories and clinics, so such determinations would create no burden to the implementation of the law.

7. What information would you provide to help voters better understand the term "the beginning of the biological development of [a] human being"?

The tiniest boys and girls (since gender is established immediately), from the beginning of their existence, will not be protected. Voters are already wary of how legal loopholes have been used in the law for years for purposes of leaving out of consideration or for discriminating against certain classes of human beings on the basis of sex, physical and/or mental dependency or abilities, race, etc. – and age. As noted above, the term "the beginning of the biological development of [a] human being" is used in order to guarantee to the voters that such legal loopholes will no longer be used to deny inherent human rights to any class of human beings. Voters might consider the logical consequences of defining a "person" only in terms of his/her *current ability to survive on his or her own*. This mis-definition of "person" would automatically leave out of "personhood" even the following *adult* human beings: the mentally ill, the mentally retarded, the psychologically damaged, the comatose, severe drug addicts, the frail elderly, those with severe nerve damage, paraplegics, etc. Unless the term "person" is defined in terms of the nature of a human being from the first moment of his/her existence, then such psychological or physical mis-definitions of a "person" as noted would clearly leave more innocent human beings, including many adults, out of "personhood" than many voters realize.

8. Are there specific terms that you believe should or should not be used in the ballot analysis, such as fertilized egg, fetus, embryo, zygote, pre-born, unborn, etc.? Please explain your reasoning concerning the use of such terms.

I have noted below both scientifically accurate and scientifically inaccurate terms, and have provided specific objective scientific references from internationally accepted and recognized human embryology and human molecular genetics texts for those terms that voters might not be familiar with or that are often mis-defined.

** As noted above, **the terms "fertilization" and "conception" should not be used** in the ballot analysis, as they would fail to cover all asexually reproduced human beings, as well as many sexually reproduced human beings. The analysis should include both sexually and asexually reproduced human beings.

** The term "**human personhood**" means the legal recognition of every human being's full status as a human person, including all the rights that accrue thereto, that applies to all human beings, irrespective of age, health, function, physical or mental dependency or method of reproduction, from the beginning of their biological development as human beings.

As noted above, the term "**person**" is defined on the basis of "what" something is – its nature – rather than on any specific psychological or physical functions or abilities that would apply only to "normal" adult human beings. The term "person" should also not be defined as a "**potential**" or "**possible**" human being. Rather, it applies to an already existing human being. Nor should the term "person" apply to any **non-human animals** (such as apes, dogs, pigs, chickens, etc.).

** The term "**human being**" is defined as any organism, including the single-cell human embryo, irrespective of the method of reproduction, who possesses a genome specific for and consistent with an individual member of the human species.

** The term "**human organism**" is defined as **an individual living human being**, including the single-cell human embryo, who can react to stimuli, reproduce, grow, and maintain homeostasis.

** The term "**human cell**" is defined as the structural, functional and biological unit of all human organisms; a part of a larger whole, with restricted function and role.

** The term "**human genome**" is defined as the *total amount of nuclear and extra-nuclear DNA genetic material* that constitutes an organism as an individual member of the human species — including the single-cell human embryo. [See quotes from human molecular genetics texts]:

Tom Strachan and Andrew P. Read, *Human Molecular Genetics 2* (New York: John Wiley & Sons, Inc, 1999): "The **human genome** is the term used to describe the **total genetic information (DNA content) in human cells. It really comprises two genomes:** a complex **nuclear** genome ... , and a simple **mitochondrial** genome ... Mitochondria possess their own ribosomes and the few polypeptide-encoding genes in the mitochondrial genome produce mRNAs which are translated on the mitochondrial ribosomes. (p. 139); In animal cells, **DNA is found in both the nucleus and the mitochondria.** (p. 10); The mitochondria also have ribosomes and a limited capacity for protein synthesis." (p. 18)

Benjamin Lewin, *Genes VII* (New York: Oxford University Press, 2000): "A **genome** consists of **the entire set of chromosomes for any particular organism**, and therefore comprises a series of DNA molecules, each of which contains a series of many genes. The ultimate definition of a genome is to determine the sequence of the DNA of each chromosome. (p. 4); ... **Genes not residing within the nucleus are generally described as extranuclear;** they are transcribed and translated in the same organelle compartment (mitochondrion or chloroplast) in which they reside. By contrast, nuclear genes are expressed by means of cytoplasmic protein synthesis." (p. 81)

** The term "**fertilized egg**" is a scientific misnomer, is very misleading, and should not be used. A "fertilized egg" is no longer an "egg"; it is a new existing single-cell human organism, a human being, a human embryo at Stage 1 of the *Carnegie Stages of Early Human Embryonic Development*. Speaking of term that

have "no scientific usefulness":

The term "egg" is best reserved for a nutritive object frequently seen on the breakfast table. (emphases added, see the *Carnegie Stages of Early Human Embryonic Development* <http://nmhm.washingtondc.museum/collections/hdac/stage1.pdf>)

** Scientifically, there is **no such thing as a "pre-embryo"**, and the term should not be used. The term was formally rejected by the international nomenclature committee on human embryology years ago. [See Ronan O'Rahilly and Fabiola Muller, *Human Embryology & Teratology* (New York: Wiley-Liss, 2001, pg. 88)]:

The term '**pre-embryo**' is not used here for the following reasons: (1) it is ill-defined because it is said to end with the appearance of the primitive streak or to include neurulation; (2) it is inaccurate because purely embryonic cells can already be distinguished after a few days, as can also the embryonic (not pre-embryonic!) disc; (3) it is unjustified because the accepted meaning of the word embryo includes all of the first 8 weeks; (4) it is equivocal because it may convey the erroneous idea that a new human organism is formed at only some considerable time after fertilization; and (5) it was introduced in 1986 'largely for public policy reasons' (Biggers).

** The term "**human embryo**" defines all human beings from the beginning of the embryonic phase of their biological development through eight weeks of development, irrespective of age, health, function, physical or mental **ability, disability or dependence**, or method of reproduction, whether *in vivo* or *in vitro*.

Scientifically, the term "**embryo**" as it refers to the *sexually* reproduced single-cell human embryo should apply from the biological beginning of that human organism, i.e., at the *beginning* of the process of fertilization or first contact of the sperm with the oocyte (as documented by Carnegie Stage 1). It should not apply *only* to the later single-cell embryo developed at the end of the process of fertilization, i.e., the "**zygote**". The term "zygote" applies only to the developing human being at Stage 1c of the Carnegie Stages. Before the formation of the "zygote" the developing human embryo is referred to at Stage 1a as the "penetrated oocyte", and at Stage 1b as the "ootid". [See Stage 1 of the *Carnegie Stages of Early Human Embryonic Development*, at: <http://nmhm.washingtondc.museum/collections/hdac/stage1.pdf>]:

Embryonic life commences with fertilization, and hence **the beginning of that process may be taken as the point de depart of stage 1**. Despite the small size (ca. 0.1 mm) and weight (ca. 0.004 mg) of the **organism** at fertilization, the **embryo** is "*schon ein individual-spezifischer Mensch*" (Blechsmidt, 1972). ... Fertilization is the procession of events that begins when a spermatozoon makes contact with an oocyte or its investments and ends with the intermingling of maternal and paternal chromosomes at metaphase of the first mitotic division of the zygote (Brackett et al., 1972). Fertilization *sensu stricto* involves the union of developmentally competent gametes realized in an appropriate environment to result in the formation of an **embryo** (Tesarik, 1986) ... Fertilization, **which takes place normally in the ampulla of the uterine tube**, includes (a) contact of spermatozoa with the zona pellucida of an oocyte, penetration of one or more spermatozoa through the zona pellucida and the ooplasm, swelling of the spermatozoal head and extrusion of the second polar body, (b) the formation of the male and female pronuclei, and (c) the beginning of the first mitotic division, or cleavage, of the zygote. ... **The three phases (a, b, and c) referred to above will be included here under stage 1, the characteristic feature of which is unicellularity.** (emphases added)

As scientifically documented by all human molecular genetics texts, the term "**embryo**" as it refers to the *sexually* reproduced human embryo should apply from the biological beginning of that human organism, i.e., when the state of differentiation of the DNA in a mere cell/s has reverted to that of an embryonic organism (rather than just a "cell"). [See, e.g., Tom Strachan and Andrew P. Read, *Human Molecular Genetics 2* (New York: John Wiley & Sons, Inc, 1999), pp. 508-509]:

Animal clones occur naturally as a result of [i.e., derived from] sexual reproduction. For example, genetically identical twins are clones who happened to have received exactly the same set of genetic instructions from two donor individuals, a mother and a father. A form of animal cloning can also occur as a result of artificial manipulation to bring about a type of asexual reproduction. The genetic manipulation in this case uses **nuclear transfer technology: a nucleus is removed from a donor cell then transplanted into an oocyte whose own nucleus has previously been removed. The resulting 'renucleated' oocyte can give rise to an individual who will carry the nuclear genome of only one donor individual, unlike genetically identical twins. **The individual providing the donor nucleus and the individual that develops from the 'renucleated' oocyte are usually described as "clones", but it should be noted that they share only the same nuclear DNA; they do not share the same mitochondrial DNA, unlike genetically identical twins.** ... Wilmut et al (1997) reported successful cloning of an adult sheep. For the first time, **an adult nucleus had been reprogrammed to become totipotent once more, just like the genetic material in the fertilized oocyte from which the donor cell had ultimately developed.** ... Successful cloning of adult animals has forced us to accept that genome modifications once considered irreversible can be reversed and that **the genomes of adult cells can be reprogrammed by factors in the oocyte to make them totipotent once again.** (emphases added)**

The term "**embryo**" should also apply to all developing human beings from their biological beginning through 8 weeks of development, whether *in vivo* or *in vitro*, whether sexually or asexually reproduced. The term "fetus" should apply to all developing human beings from the beginning of 9 weeks of development through birth. [See Ronan O'Rahilly and Fabiola Muller, *Human Embryology & Teratology* (New York: Wiley-Liss, 1994), p. 55]:

Prenatal life is conveniently divided into two phases: the embryonic and the fetal. The embryonic period proper during which the vast majority of the named structures of the body appear, occupies the first 8 postovulatory weeks. ... [T]he fetal period extends from 9 weeks to birth.

** The term "**human fetus**" defines all human beings from the beginning of the fetal period of their biological development (the beginning of nine weeks) through birth; irrespective of age, health, function, physical or mental **ability, disability or dependence**, or method of reproduction, whether *in vivo* or *in vitro*.

** A woman is normally "**pregnant**" with a new human embryo when fertilization has taken place within her fallopian tube. It is only when a woman undergoes artificial reproductive techniques that she is "pregnant" when an already existing embryo is implanted into her uterus. [See the following human embryology texts describing human *sexual* reproduction]:

Human development is a continuous process that begins when an oocyte (ovum) from a female is *fertilized* by a sperm (or spermatozoon) from a male. (p. 2); *ibid.*: ... but **the embryo begins to develop** as soon as the oocyte is *fertilized*. (p. 2); *ibid.*: [Single-cell human embryo]: this cell results from the union of an oocyte and a sperm ... **is the beginning of a new human being (i.e., an embryo)**. (p. 2); *ibid.*: **Human development begins** at fertilization, the process during which a male gamete or sperm ... unites with a female gamete or oocyte ... to form a single cell [embryo] . This highly specialized, totipotent cell **marks the beginning of each of us as a unique individual.** (p. 18) ... The usual site of fertilization is the ampulla of the uterine tube [fallopian tube], its longest and widest part. If the oocyte is not fertilized here, it slowly passes along the tube to the uterus, where it degenerates and is reabsorbed. Although fertilization may occur in other parts of the tube, it does not occur in the uterus. ... The embryo's chromosomes sex is determined at fertilization by the kind of sperm (X or Y) that fertilizes the ovum; hence it is the father rather than the mother whose gamete determines the sex of the embryo. [Keith Moore and T.V.N. Persaud, *The Developing Human: Clinically Oriented Embryology* (6th ed. only) (Philadelphia: W.B. Saunders Company, 1998), p. 37].

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Fertilization is an important landmark because, under ordinary circumstances, **a new, genetically distinct human organism is thereby formed**. (p. 5); *ibid.*: *Fertilization* is the procession of events that begins when a spermatozoon makes contact with a secondary oocyte or its investments ... (p. 19); *ibid.*: "The *ill-defined and inaccurate term pre-embryo*, which includes the embryonic disc, is said either to end with the appearance of the primitive streak or ... to include neurulation. *The term is not used in this book* [Ronan O'Rahilly and Fabiola Muller, *Human Embryology & Teratology* (New York: Wiley-Liss, 1994), p. 55].

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** Some continue to try to explain the early development of human embryos and human fetuses in terms of the "**biogenetics law**". There is no such thing as the "biogenetics law", and the term has been formally scientifically rejected for decades. [See Ronan O'Rahilly and Fabiola Muller, *Human Embryology & Teratology* (3rd ed.)(New York: Wiley-Liss, 2001), pg. 16]:

Recapitulation, the So-Called Biogenetic Law. The theory that successive stages of individual development (ontogeny) correspond with ({recapitulate"}) successive adult ancestors in the line of *evolutionary descent* (phylogeny) became popular in the nineteenth century as the so-called biogenetic

law. **This theory of recapitulation, however, has had a "regrettable influence on the progress of embryology"** (G. de Beer). ... According to the "laws" of von Baer, general characters (e.g., brain, notochord) appear in development earlier than special characters (e.g., limbs, hair). Furthermore, during its development an animal departs more and more from the form of other animals. Indeed, the early stages in the development of an animal are not like the adult stages of other forms but resemble only the early stages of those animals. The pharyngeal clefts of vertebrate embryos, for example, are neither gills nor slits. Although a fish elaborates this region into gill slits, in reptiles, birds, and mammals it is converted into such structures as the tonsils and the thymus. (emphases added)

9. What are the strongest arguments in favor of the amendment (in order of priority)?

The Personhood Amendment will recognize in law the fact that all human beings are created equal and are possessed of certain inalienable rights. The fact that these rights are inalienable means that the government has committed a grave miscarriage of justice in stripping away the rights of an entire class of human beings. The Personhood Amendment will rectify this error by restoring the protection of the law to all human beings at every stage of their biological development.

The Personhood Amendment will end abortion, and outlaw only those chemicals, procedures, and research that intentionally destroy human beings. It will also force the medical community, pharmaceutical companies, abortion proponents, and population control advocates to honestly categorize chemicals as either contraceptive, in which case the amendment would not affect them, or abortifacients in which case the amendment would prohibit them.

In 2009, Colorado Court of Appeals Judge Connelly wrote that the definition of the word "person" is "an area that cries out for new legislation." Currently the law does not protect the preborn child against crimes against their person, but it does allow them certain property, inheritance, and other rights. Far from introducing uncertainty into the interpretation of the law, the Personhood Amendment would simplify the interpretation of our laws invalidating any law that discriminates against a human being in the exercise of their fundamental rights simply because of their age or stage of development.

10. What are the strongest arguments against the amendment (in order of priority)?

It will end the lucrative business of abortion.

It will limit the ability of individuals, including irresponsible fathers, rapists, and perpetrators of incest, from using abortion as a method of delayed contraception.

It will limit the ability of a born person from getting away with the killing of a preborn person.

11. Are you aware of other entities that will likely support the amendment? Oppose the amendment?

Support: Individuals of good conscience throughout the state as well as organizations that believe in fighting for an end to abortion right now. Every single preborn child in the state of Colorado.

Oppose: Organizations that make billions of dollars from abortion such as Planned Parenthood, NARAL, NOW, and the ACLU, as well as organizations that claim to want to wait for a future date to try to end abortion, and who also make millions of dollars from claiming to try to end abortion.

12. What other individuals should be included in the review of the ballot analysis?

None.

13. Are there any additional comments that you would like to add that were not addressed by our questions?

No.

SPECIFIC QUESTIONS FOR PROPONENTS

1. Why were Sections 3, 6, and 25 of Article II of the Colorado constitution specified in the amendment?

They encapsulate the foundational rights and liberties of individuals with regards to their bodily integrity.

2. Why were other sections of the constitution in which the term "person" appears excluded?

The amendment is intended to restore fundamental rights to a class of human beings that currently do not enjoy those rights. These rights and duties of individuals are enumerated in the Bill of Rights, which is applicable to all other laws of the State of Colorado.

Some Sections are omitted because they simply do not apply to the class of human beings that our state has currently stripped of their rights. For example, the freedom to worship (Sec. 4) and practice a particular religion does not apply to an embryo, neither does the freedom from warrantless searches (Sec. 7) and seizures of the papers and possessions of a person, nor the protection against a prosecution without an indictment of that person (Sec. 8.) Although all of those rights are also necessary to a free society, they are all predicated on the right to be born.