

Birth Abnormalities: Changing Interpretations Across Time

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What is a birth abnormality?

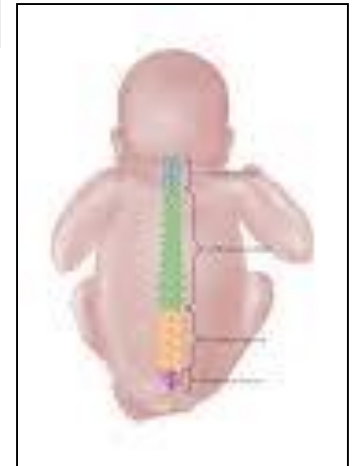
- A **congenital disorder** is an “abnormality of structure, and consequently, function of the human body arising during development”¹
- Described as congenital disorders, birth abnormalities, or birth defects

Commonly-known Birth Defects

- Congenital heart defects
- Cleft Lip and Cleft Palate
- Spina Bifida
- Club Foot
- Down Syndrome



Cleft Lip



Spina Bifida



Club Foot

Less well-known birth defects

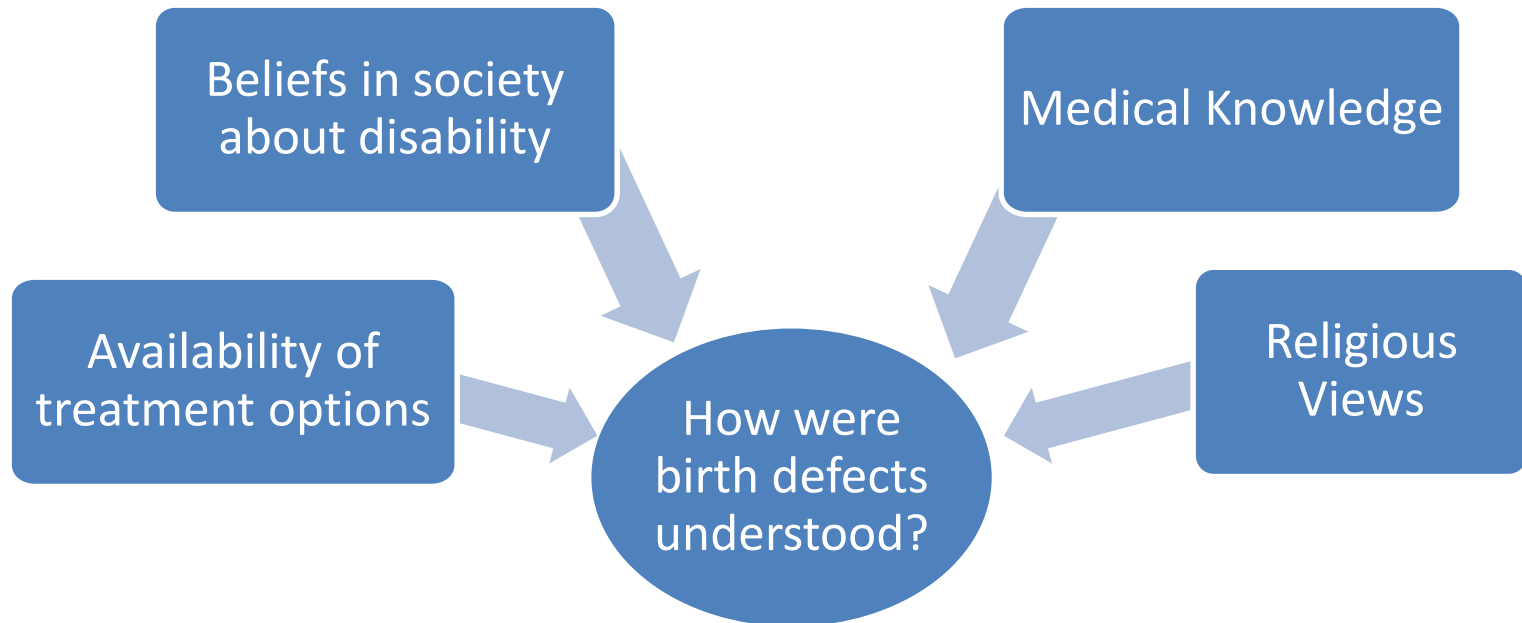
- Anencephaly: Brain fails to develop, resulting in small or missing hemispheres²
- Hermaphroditism: External genitalia and internal reproductive organs display male and female characteristics³
- Conjoined twins
 - There are 7 types of conjoined twins, depending on where the individual bodies are fused

Studying Birth Defects Today

- **Teratology:** the study of malformations or serious deviations from the normal type in developing organisms⁵
- Birth abnormalities are understood, interpreted, and treated in the scientific and medical fields today

Historical Views

- How were birth abnormalities understood in previous societies?
- What can this tell us about societal attitudes and medical knowledge?



Disabilities in the Ancient World

Features in Society:

- Polytheistic (worshipping many gods)
- Paternalistic (father is leader of household)
 - Agriculture is dominant
- The rise of empires: Hittites (1600-1200 BCE), Assyrians (911-612 BCE), Babylonians (626-529 BCE)
- Rise of Greek city-states and the Classical Age (448-404 BCE)
 - The Roman Empire (27 BCE- 476 AD)

What was the cause of deformity?

1) Maternal imagination: Images that the mother views during conception or in the early months of her pregnancy can imprint themselves on the fetus

Example: Galen of Pergamum (129-215 BCE) suggests looking at a portrait of a beautiful child to give birth to an attractive infant⁶

Example: Christian Bible, Genesis 30:39 “And the flocks conceived at the sight of the rods”
Jacob places speckled branches in front of mating sheep in order to produce speckled lambs

2) Conditions during conception and the womb: the temperature and age of the seed, the direction of the wind, and the quality of water⁷

3) The sins of the parents caused the deformity.

- Conceiving after bloodletting or a long journey leads to epilepsy in children
- Union with a woman during her menstruation produces children with abnormalities; Leviticus 18:19 in Christian Bible warns against this⁸

- 4) Children with disabilities are signs and warnings from the gods
- **Teratoscopy** or **fetoscopy** involve interpreting abnormal births for signs of the future¹²
 - Abnormal child seen as sign of conflict, loss of home or land, famine, or a power struggle¹³
 - “Monsters, signs, portents, prodigies are so called because they indicate, show, portent, and predict” - Cicero (106-43 BCE)¹⁴

Reactions in Babylonia

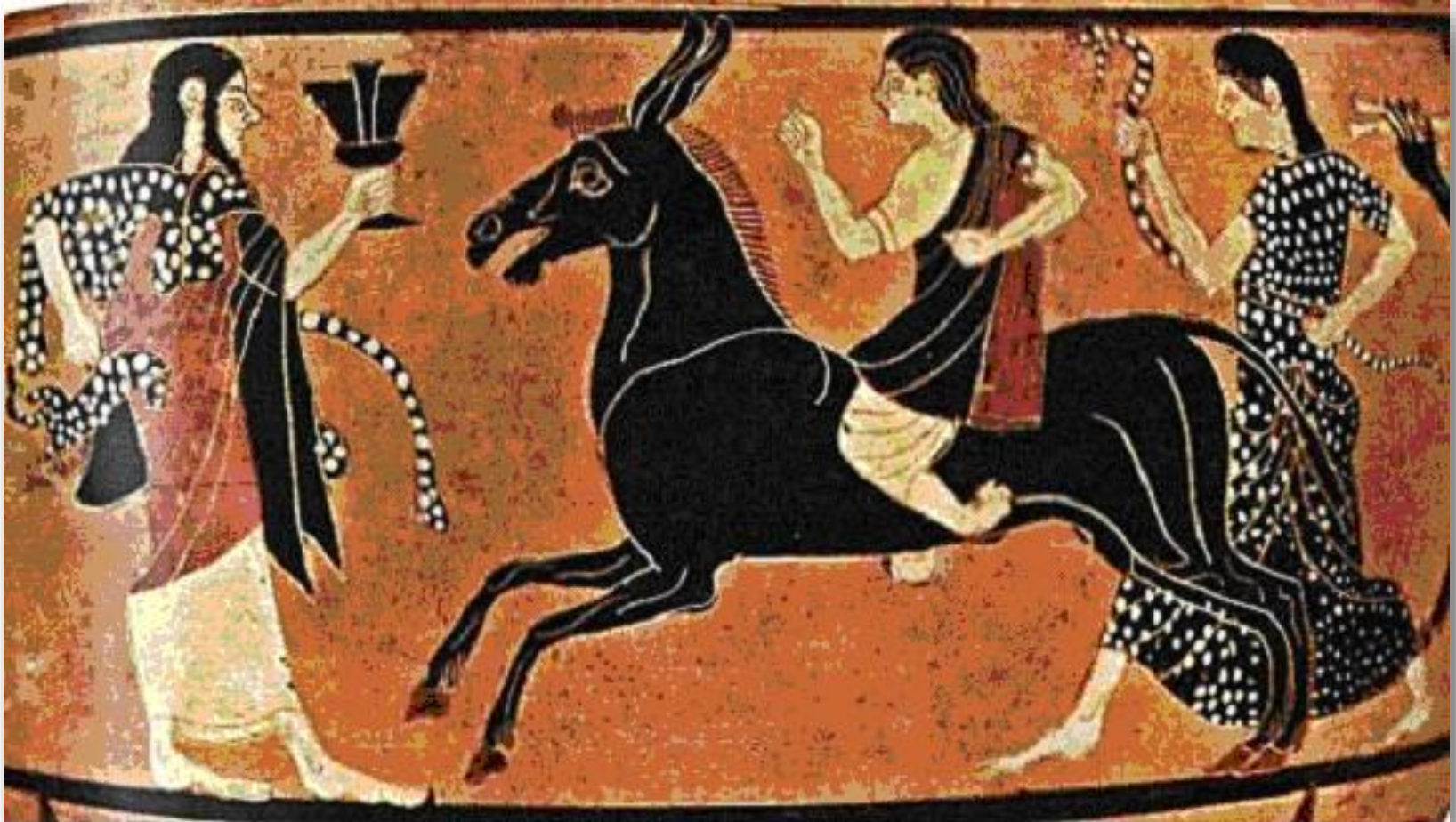
- The head of the household performed a religious ritual to the gods and disposed of the infant in a river

“Šamaš, I have turned to you! Avert from me the evil of this anomaly. May it not reach me. May its evil be far from my person, so that I may daily bless you!”¹⁷

Reactions in Greek City-States

- Lack of medical care meant most children died before or shortly after birth
- Child with abnormalities exposed in remote area to die
- The militaristic city-state Sparta required all deformed children to be abandoned; they would not be fully productive members²⁰

The Greek God Hephaestus



The Greek God Hephaestus is the middle figure in this scene, painted on a Greek amphora. His malformed feet are clearly visible

Reaction in Roman Empire

- Head of family (*paterfamilias*) responsible for disposing of abnormal child, often by throwing in the Tiber River
- In Imperial era, royal and upper class families owned individuals with disabilities for amusement (similar to a side-show)²²
- The *teraton agora*, or monster market, sold slaves with deformities²³
- Individuals with disabilities (particularly hermaphrodites) also the targets of violence from mobs of citizens²⁴

Were these children part of society?

- Although called monsters, prodigies, and portents, children with disabilities **not** seen as supernatural or non-human

St. Augustine (354-430 AD) in *City of God*:

Individuals with disabilities show greatness and
supremacy of God

Demonstrate the beauty of normal humans²⁷

Pre-Modern Europe

Major Events

1060: William the Conqueror invades England

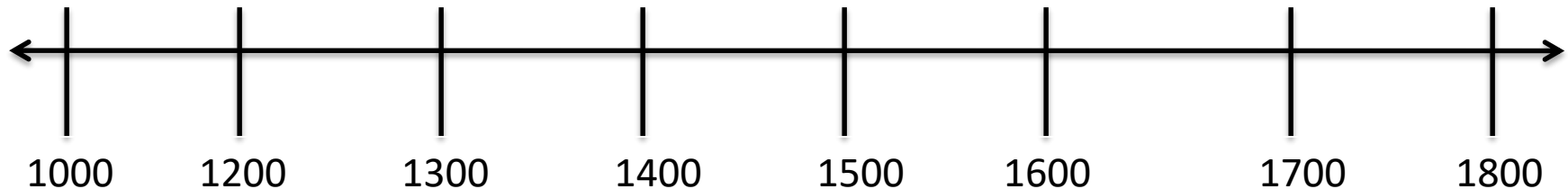
1095: First Crusade

1348-1358: Black Death

1453: Fall of Constantinople

1517: Protestant Reformation

1648: Peace of Westphalia



1543: Vesalius publishes *On the Fabric of the Human Body*

1674: Leeuwenhoek's microscope

1628: Harvey's *An Anatomical Study of the Motion of the Heart*

1796: Edward Jenner experiments with inoculation

1665: Robert Hooke coins the word *cell*

Medical History

Features of European Society

- Monotheistic; Catholic Church holds significant power until challenged by Protestant Reformation
- Constant warfare
- The rise of the sovereign state and the power of the monarchy
- Feudal system dominant until the Black Death (1348-1358), rise of city-states, and merchant class
- International trade increases; discovery of America

Causes of Deformity

From the ancient world:

- Maternal images and imagination
- Unclean intercourse during menstruation
- Punishment for sins of parents
- Warning to present or future society

Advice from this period:

Pregnant women should not gaze at disturbing or unattractive images for the first 30 to 35 days (for a male child) or 40 to 42 days (female child) of their pregnancy²⁹

- Human-animal hybrids existed mainly in legend
- Abnormalities compared with animal features possibly because defied other characterizations

Figure 28. Prodigious figure of a child having the face of a frog
Ambroise Pare , *On Monsters and Marvels*

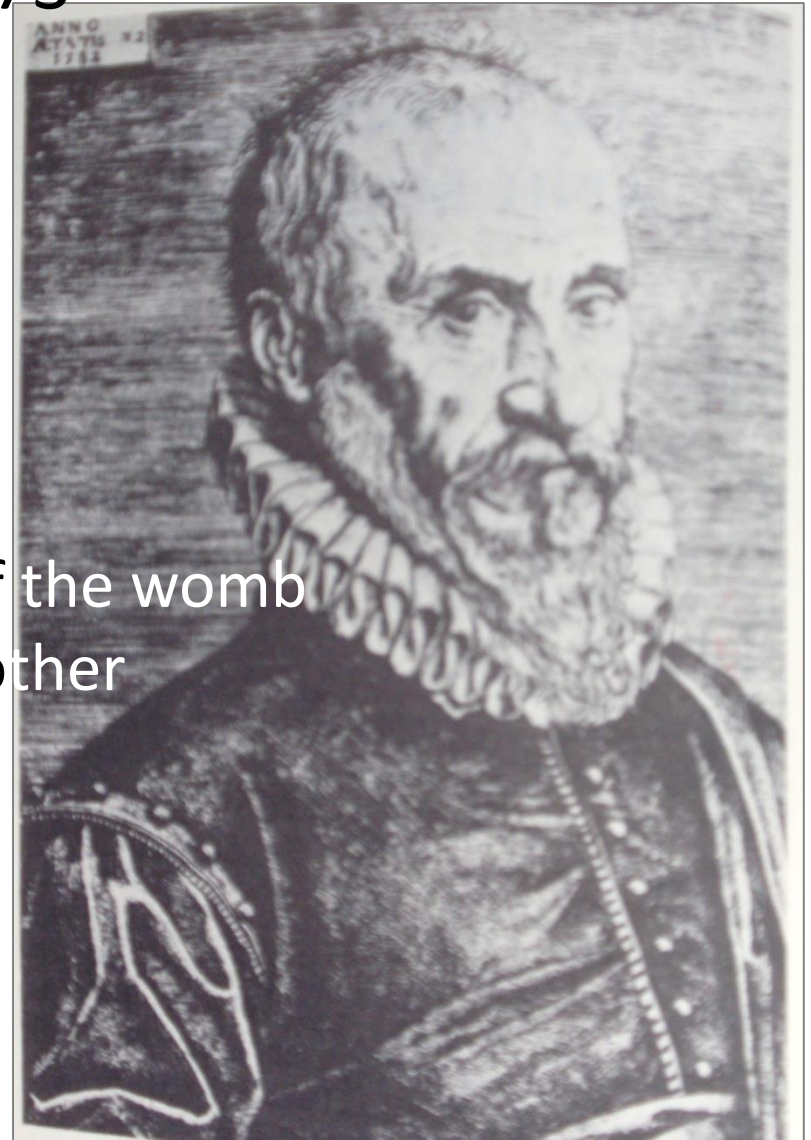


In pre-modern Europe, a child born with anencephaly was often said to have the face of a frog. The underdeveloped brain and skull created facial qualities that could be compared to a frog

28. Prodigious figure of a child having the face of a frog

On Monsters and Marvels 1573

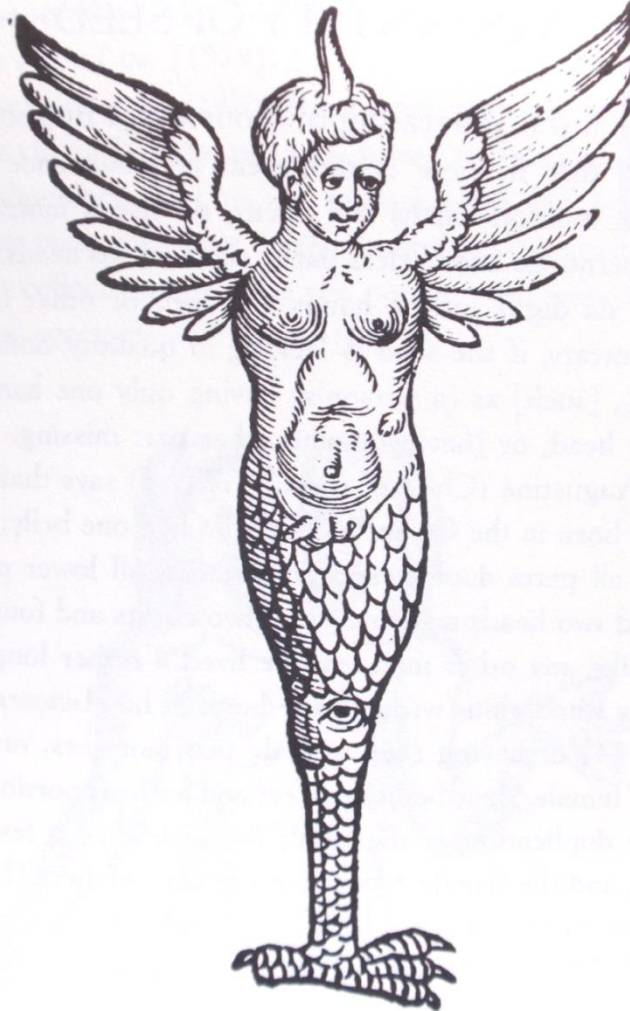
- 1) the glory of God
- 2) his wrath
- 3) too greatly a quantity of seed
- 4) too little a quantity
- 5) the imagination
- 6) the narrowness or smallness of the womb
- 7) the indecent posture of the mother
- 8) fall or blows to the womb
- 9) hereditary or accidental illness
- 10) rotten or corrupt seed
- 11) mixture or mingling of seed
- 12) Artifice of wicked beggars
- 13) through demons and devils



Ambroise Pare, *On Monsters and Marvels*

The Monster of Ravenna

The birth of this malformed child was seen as a sign of the defeat of the Italians at the Battle of Ravenna



2. Figure of a winged monster

“It is evident what evil the monster had meant for them! It seems as if some great misfortune always befalls the city when such things are born.”

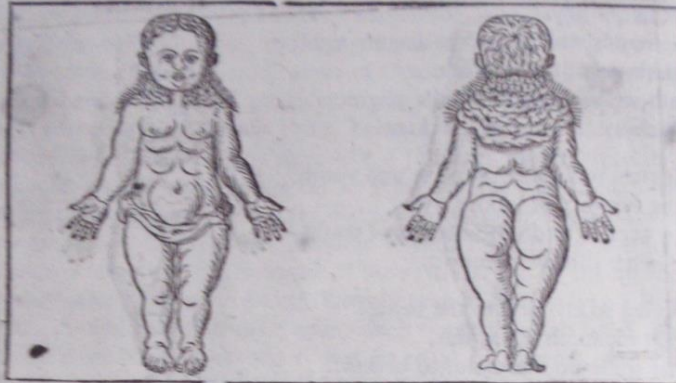
-Lucca Landucci,
(1436-1516)
Florence, Italy

The true discription of a Childe with Ruffles bozne

in the parish of Wykeham in the Countie of Surrey in the yeere of our Lord. 1566.

The face

and the back part



This picture of our Ld. 1566. the .xii. day of June one Helens Termin the wife of John Termin Wykeham dwelling in the parish of Wykeham was delivered of a Roman Child named Childe during this manner a picture following. That is to say. the face comely & of a cheerful countenance. The Armes and hands. Legs and feet of right shape. and the Body in all other members proportionate appearing. And proportioned in our forme & order. having it as if it were wonderfully clothed with such a fine skin as the like at any time hath been. For it hath the said ruffles then behinde like unto a pelerinet growing rounde & rounde of the backe by the necke the necke beinge here growing on the edges of the same. & in Ruffles cominge over the shoulders and coveringe some part of the Armes. accordinge unto the shape of the necke behinde and almost round about the necke like as many womens Colours be not close to gather before: but the necke beinge double and as it were a thick gathered. muche like unto the Ruffles that many do use to weare about their neckes. This Childe behinde the day of the birth under wisdomes robe seeme in Saint Mary in Southward beinge alive and 6 weeks old and as I hope not to be long.

An admonition unto the Reader,

This picture of our Ld. 1566. the .xii. day of June one Helens Termin the wife of John Termin Wykeham dwelling in the parish of Wykeham was delivered of a Roman Child named Childe during this manner a picture following. That is to say. the face comely & of a cheerful countenance. The Armes and hands. Legs and feet of right shape. and the Body in all other members proportionate appearing. And proportioned in our forme & order. having it as if it were wonderfully clothed with such a fine skin as the like at any time hath been. For it hath the said ruffles then behinde like unto a pelerinet growing rounde & rounde of the backe by the necke the necke beinge here growing on the edges of the same. & in Ruffles cominge over the shoulders and coveringe some part of the Armes. accordinge unto the shape of the necke behinde and almost round about the necke like as many womens Colours be not close to gather before: but the necke beinge double and as it were a thick gathered. muche like unto the Ruffles that many do use to weare about their neckes. This Childe behinde the day of the birth under wisdomes robe seeme in Saint Mary in Southward beinge alive and 6 weeks old and as I hope not to be long.

By nature's light. what he 3 layer
hath nature rule the ruler
For yet it is day not 3 ways
by nature's light.

Childe's face. the members all,
in order then and place.
For yet be made by nature's light,
hath nature a great place.

This rufflinge be like in ruffles of colour,
hath the face and face.
For yet be made by nature's light,
of Childe's face of face.

What nature's light. the ruffles by nature's
face of face. For yet be made by nature's light,
For yet be made by nature's light,
For yet be made by nature's light.

Over nature's light. what he 3 layer
hath nature rule the ruler
For yet it is day not 3 ways
by nature's light.

Childe's face. the members all,
in order then and place.
For yet be made by nature's light,
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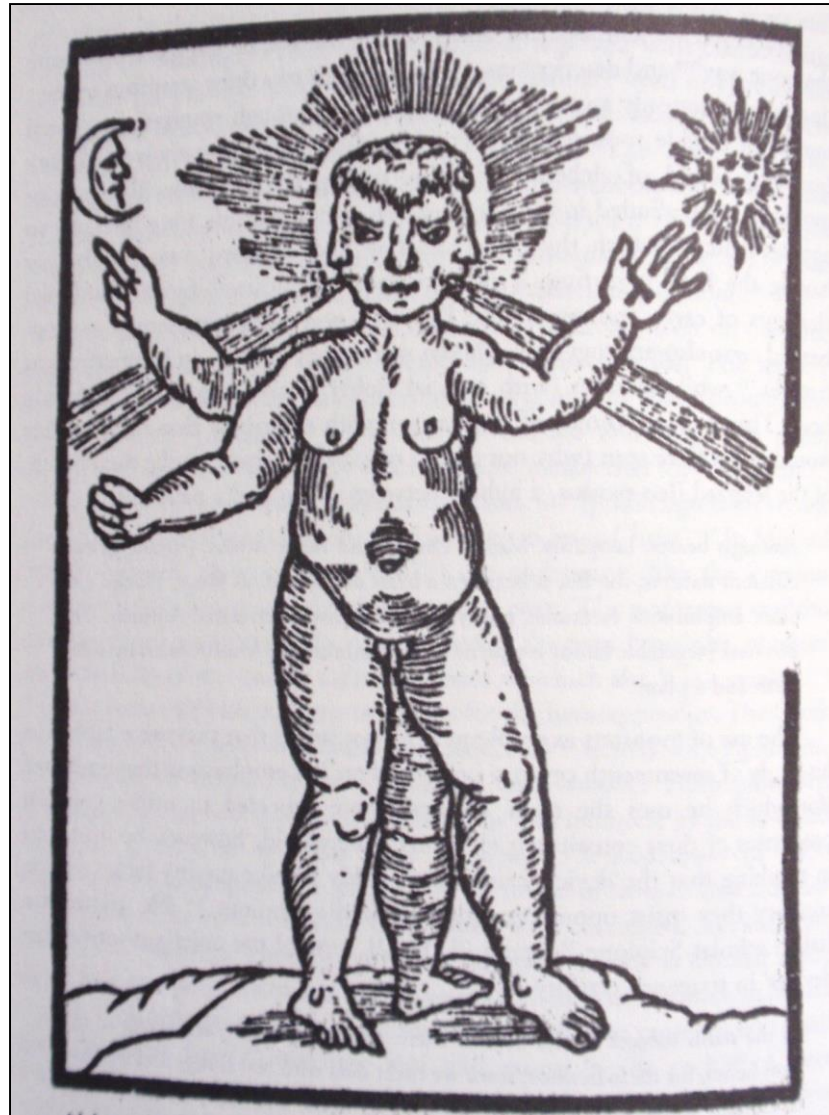
In this advertisement, an infant born with 'ruffle-like' skin is seen as a warning against vanity. Ruffles were popular details on clothing at the time. The author of this advertisement viewed the birth as a visual sign of his society's conceit.

Printed at London by John Wolfe and Richard Iohnes and are to be sold at the Long Shop adjoining unto St. Dunstons Church in the Shewerie and at the little Shop adjoining to the Southward more of Dunstons Church. Anno Domini. 1566. the .xii. day of June

The True Discription of a Childe with Ruffles from 1566

Figure 8 From The true discription of a Childe with Ruffles (1566). There is a decided flavour of the fashion plate about this picture. Reproduced by permission of the British Library (Huth Collection 50 (34)).

“Watch! For the Lord our God comes”³³



*A 'manne chylde,
having three armes,
three legges and
very terrible to
beholde.'*

From 1581

Pregnancy and Childbirth in Pre-Modern Europe



The picture of Dorothy, pregnant with many children
Ambroise Pare, *On Monsters and Marvels*

Birth Superstitions

- Legend holds that Countess Margaret gave birth to 365 children in one day³⁵
- A sooterkin was a mole-like creature present in the womb with a child; it acted as a parasite and sucked on the fetus' blood³⁶

The forme and shape of a monstrous Child / bozne
at Baydstone in Kent, the xxij. of October. 1568.

As yet this shape abhorre
In body for to haue:

In such power
all his bones,
Nath day in the
waters heuon.

As yet such view ferre
At night the foule deprent

No such power
as he wast,
In such shape
as in fit.

At Baydstone in Kent there was one Marger Here, Daughter to Richard Here of the sayd
Towne of Baydstone, who being vnnarried, played the naughty pache, and was gotten with
childe, being deliuered of the same childe the xxij. daye of October last past, in the yeare of our
Lord. 1568. at. vii. of the clocke in the after noone of the same day being Sonday. the said childe
being a man childe, had first the mouth sturted on the right side like a T. thardes mouth terrible to behold,
the left arme lying vpon the brest, fast thereto ioynd, hauing as it were dumps on the handes, the left leg
growing upward toward the head, and the ryght leg bending toward the left leg, the foot therof grow-
ing upward toward the head, and the ryght leg bending toward the left leg, the foot therof grow-
ing upward toward the head, and the ryght leg bending toward the left leg, the foot therof grow-

[illegible]



Lazarus Colloredo and his twin

The two inseparable brothers.

O R

A true and strange description of a Gentleman (an Italian by birth) about seventene yeeres of age, who hath an imperfect (yet living) Brother growing out of his side, having a head, two armes, and one leg, all perfectly to be seen. They were both baptized together; the imperfect is called *Iohn Baptis*, and the other *Lazarus*. Admire the Creator in his Creatures.

To the tune of *The wandering Jewes Chronicle*.

England lately neemes is come,
Which many parts of Christendome
Have experienced found
To be the strangest and most rare,
That euer sight the world declare,
Since man first walkt on th' ground.

A many wonders have bene,
Creatures that have preposterous bene,
In nature in their birth,
But nothing as this wept theme,
Which all the rest seeme but a dream,
As like was nere on earth.

A Gentleman well on all side,
Whom beate his brother at his side,
Inseparably knit,
As in this figure you may see,
And both together living be,
The world admires at it.

In Italy this youth was borne,
Whom nature freely did adore,
With shape and pulchritude,
The other men each espied,
As none hath at a better time.

This young man both compleatly make,
He can both read, write, sing, or talke,
Without paine or detraction,
And when he speakes the other head,
Doth moue the lips both thus red,
Not speaking but in action.

This head and face is rightly seem'd,
Which every part that can be nam'd,
Eares, eyes, lips, nose, and chin,
His hyperlip both some beard on't,
Which he who beares him yet both want,
This may much wonder win.

One arme's about his brother cast,
That both embrace his body fast,
The other hangeth by,
Whose armes hang hand with fingers all,
Yet as a child they are too small,
Pinch any part he'll cry.

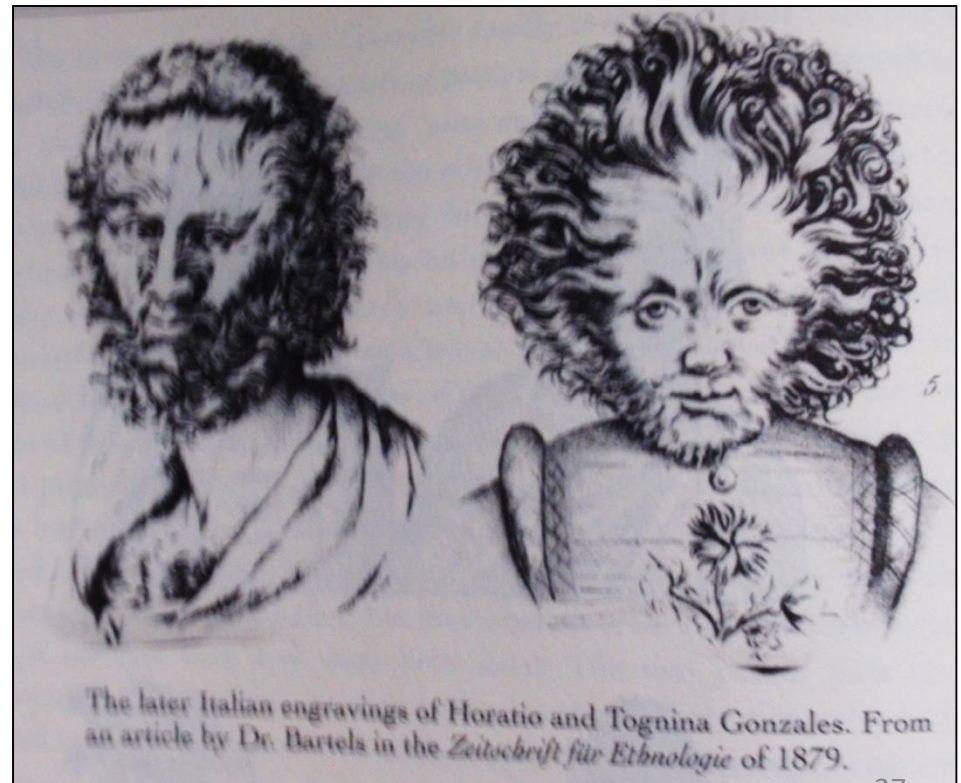
Wholly one legge with foot and toes
Is to be seene, and some suppose,
The other is contain'd
Within his brothers booe, yet
As none hath at a better time.

A broadside advertising Colloredo



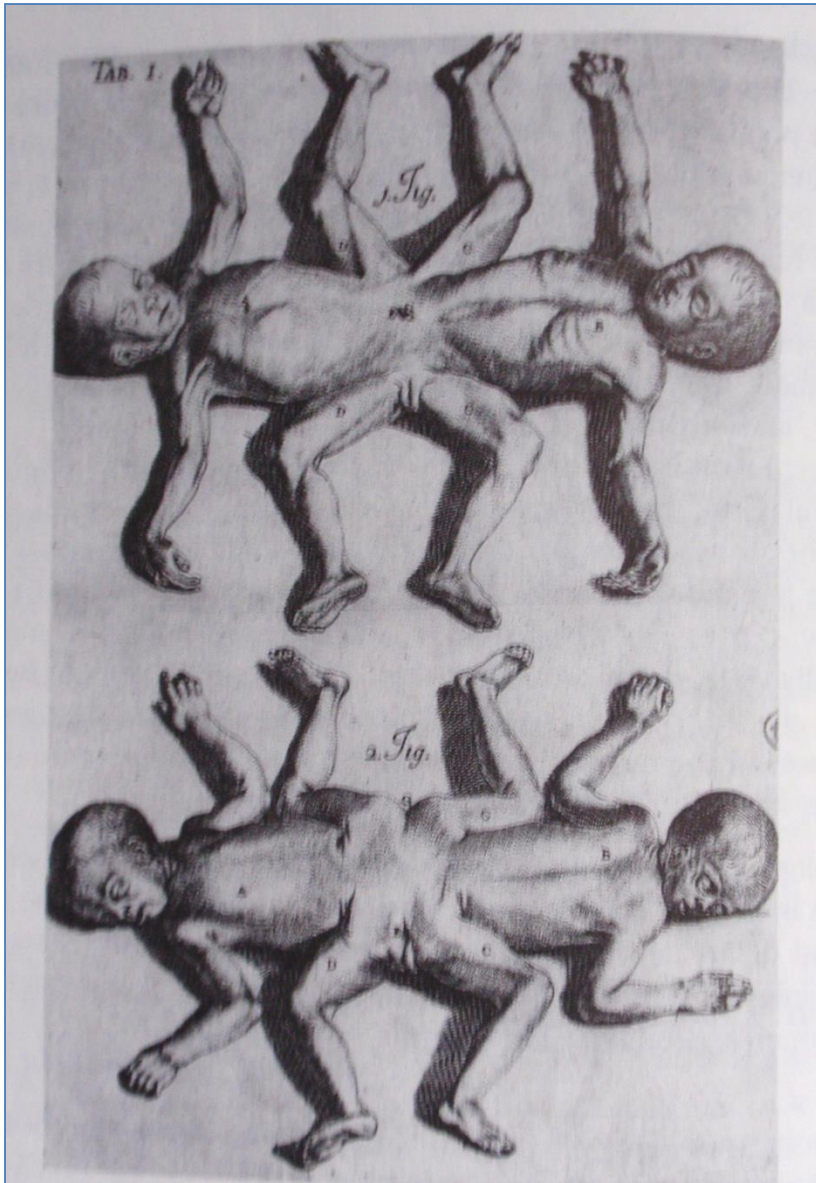
- Images of the Gonzales family, who suffered from congenital hypertrichosis, extreme hairiness.
- Although originally from the Canary Islands, the family was relocated to Europe

Their fashionable clothing shows that the family lived in comfortable surroundings



The Scientific Revolution

- Occurred from approximately 1543 to the 18th century
- Ancient and medieval theories replaced with new ideas
- Fields of anatomy and biology expanded
- Dissection more acceptable for physicians



A more scientific illustration from 1708

Rise of the Sideshow

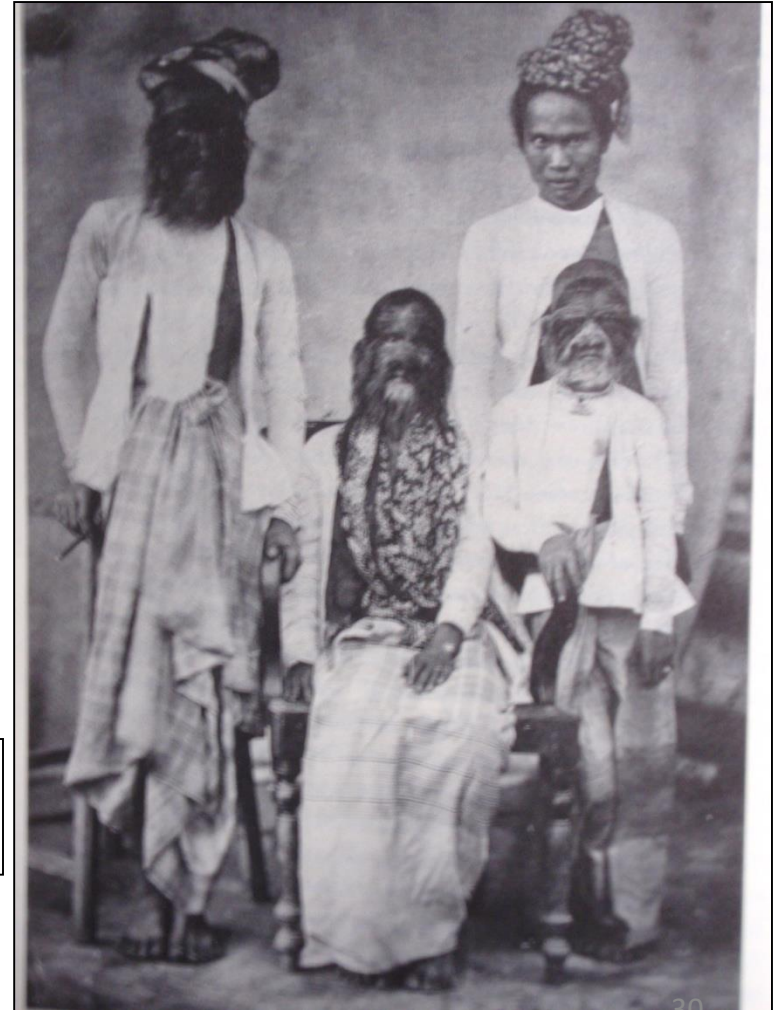


This man was nicknamed "Lionel the Lion-man" by Barnum and Bailey Circus



Krao with a European gentleman and a sideshow poster featuring Krao.

1872: The Burmese family of MOUNG-PHOSET, Mapphoon, Mah-Me, and a nonhairy relative.



Abnormalities in the Modern World

- Medical advances have improved treatment options and quality of life for infants with abnormalities
- Fetal and infant surgery can correct abnormalities, including cleft lip, cleft palate, and many heart defects
- Many conditions can be diagnosed in the womb
- Research into the human genome has helped parents predict if they will pass a genetic condition to their child

Abnormalities in the Modern World

“My husband and I felt so devastated and guilty and alone. How could this have happened? We did all the right things. I took care of myself and followed the doctor’s instructions during my pregnancy. There was no one else in our families that had been born with this birth defect. I felt lost”⁴⁸

Living with Abnormalities

Children born with abnormalities may need:

- Medical equipment
 - Specialized care
- Frequent doctor's visits

Arrangements for health insurance and education can be time-consuming and difficult

Thalidomide

- Thalidomide was meant as a sleeping aid but prescribed to pregnant women to treat anxiety and nausea
- The drug caused serious birth abnormalities for hundreds of children⁵⁰
- Mothers of thalidomide babies felt responsible for the conditions of their children
- Thalidomide led to stricter tests to determine a drug's impact on a fetus



An infant with birth abnormalities from thalidomide

Americans with Disabilities Act 1990



President Bush signing the Americans with Disabilities Act into law, 1990
Amsvans.com

Discrimination in the 20th Century

- Sideshows remained popular until late 1930s
- During the Holocaust in Nazi Germany (1939-1945) as many as 200,000 individuals with disabilities were killed at Hadamar Concentration Camp⁵²
- Forced sterilization policies were carried out against individuals with disabilities in many countries

Contemporary Beliefs

- Belief in material imagination can be compared to playing classical music for the fetus⁵⁵
- In 1958, a publication still argued that emotional distress to the mother could negatively affect the fetus⁵⁶
- In 2010, a video circulating on the Internet claimed that “Cat Gives Birth to Puppy”⁵⁸

Contemporary Concerns

- Ethical and legal issues exist around infants with birth abnormalities and their projected quality of life
- Does our current medical knowledge focus more on diagnosis than treatment?
- Do our methods of handling birth deformities add more difficulties to individuals?

The Future

“We no longer gawk at the handicapped, disfigured, or mentally ill in freak shows, but do we regard them as equals, or as friends?”⁶²

- How can we better predict and prevent birth abnormalities?
- How can we ensure that individuals with these abnormalities receive proper care and lead productive lives in society?