

# Chapter 5

## Gender Issues

### Male & Female, Masculine & Feminine definitions of terms:



- **Sex:** biological maleness and femaleness.
  - Genetic (chromosomes), anatomical (organs, structures).
- **Gender:** psychological, sociological, and cultural characteristics associated with sex.
  - Learned, not born.
  - “feminine,” “masculine”
- **Gender role:** attitudes & behaviors considered appropriate for people of a particular sex.
  - Culturally specific; not fixed.

- ### Are Gender Roles fixed?
- Evidence indicates that they're not...
- **Differ across cultures**
    - Margaret Mead, landmark 1935 book studied gender roles in three cultures in New Guinea
      - Arapesh culture: both men and women appeared to be mild-mannered, lacking in libido (i.e. “feminine”)
      - Mundugumor culture: both sexes seemed aggressive and ‘highly sexed.’ (i.e. “masculine”)
      - Tchambuli culture: women dominant, men emotionally dependent (approximate reversal of our gender roles)
  - **Change over time**
    - Dad staying home w/kids & mom working may have been ridiculed in 1950s, not considered odd today.
    - More women are entering formerly male-dominated occupations

### Discussion question (#5-A)

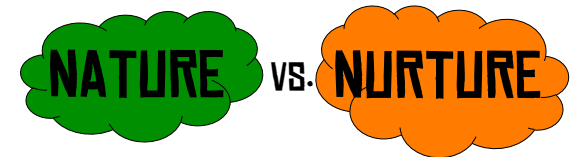
What are some common gender roles that are accepted in our society?

In other words:

- What does it mean to “Act like a man?”
- What does it mean to “Be ladylike?”

### How do we form our gender identities?

- Gender identity--how we come to think of ourselves as male or female--is formed from:
  - 1) **Biology**
    - Chromosomes, internal reproductive structures, external genitals, hormones, brain development
  - 2) **Socialization**
    - How the family and the culture in which we grow up influence our sense of femaleness or maleness.



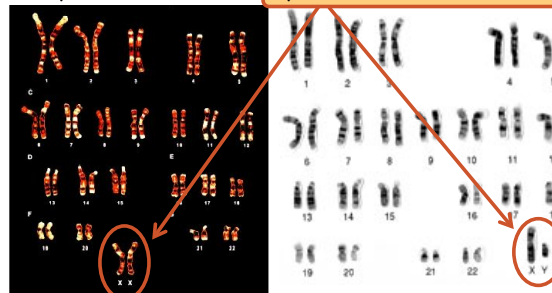
Let's start with the “nature” side of the story...

### Two different types of chromosomes

- **Sex chromosomes:** chromosomes that determine the sex of an individual.
  - In humans, these are the X and Y chromosomes.
  - Females (XX) have 2 homologous X chromosomes, while males (XY) have one X and one Y chromosome.
- **Autosomes:** all the chromosomes that are not sex chromosomes.
  - Come in matched pairs that are the same in males and females and do not have much influence on sexual differentiation.

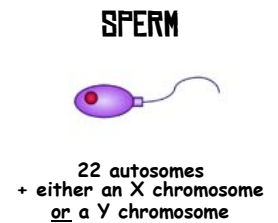
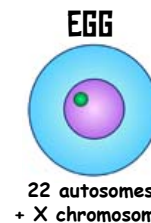
### Human chromosomes in nonreproductive cells (cells other than eggs & sperm)

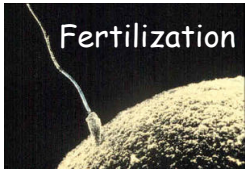
22 pairs of autosomes, 1 pair of sex chromosomes



### Chromosome number in our reproductive cells

- Egg cells and sperm cells contain 22 autosomes plus one sex chromosome





## Fertilization

• During fertilization, egg and sperm fuse, producing a cell with 46 chromosomes (22 pairs of autosomes and 1 pair of sex chromosomes)

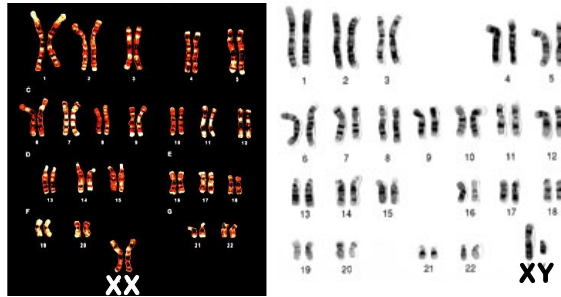
### • The sperm determines sex of the embryo

- If the sperm that fertilizes the egg has an X chromosome, the embryo will be XX (female)
- If the sperm that fertilizes the egg has a Y chromosome, the embryo will be XY (male)



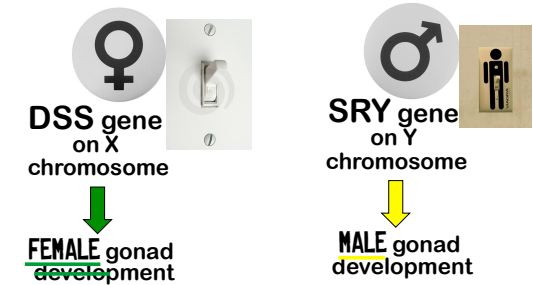
## Human chromosomes

Which would be female and which would be male?



## Chromosomal sex differentiation

- Sex chromosomes have “master switch” genes that initiate a sequence of events leading to development of male or female gonads



## Gonadal differentiation

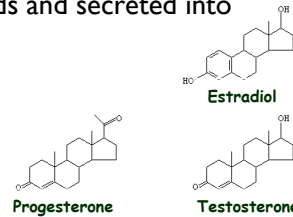
### • **Gonads:** male and female sex glands

(ovaries and testes).

- Male and female gonads are the same until about 6 weeks after conception.
- Genetic signals determine whether the gonads will develop into ovaries or testes.
- After the testes or ovaries develop, they begin releasing sex hormones that continue the process of sexual differentiation.

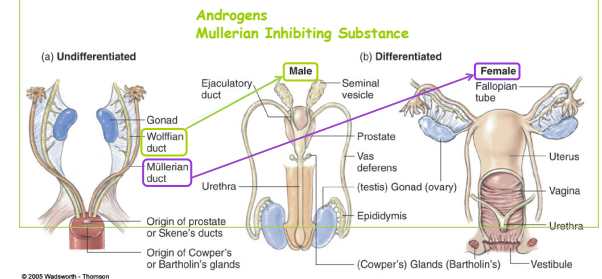
## Sex hormones

- Produced by gonads and secreted into bloodstream.
- Ovaries produce:
  - Estrogens
  - Progesterones
- Testes
  - Androgens (most important androgen is testosterone)
- Note: adrenal glands also produce estrogen and androgens in both sexes.

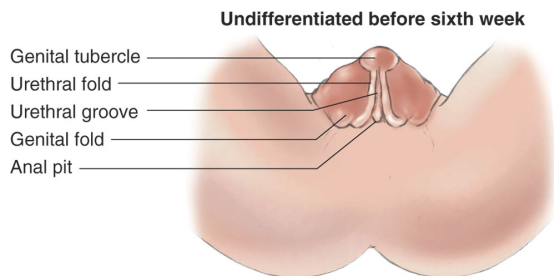


## Differentiation of internal structures

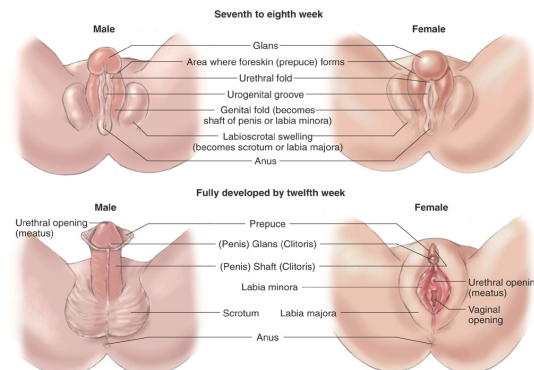
- Testes produce hormones that induce development of Wolffian ducts and Mullerian inhibiting substance to block Mullerian duct development



## Differentiation of external structures



## Differentiation of external structures



## Homologous sex organs Fill in the blanks

Female	Male
Hood of clitoris	Glans of penis
Labia minora	_____
Ovaries	Scrotum
Skene's ducts	Prostate gland
Bartholin's glands	Cowper's glands

## "It's a \_\_\_\_!"

- How is biological sex determined?
  - Does the father's or the mother's gamete determine sex?
  - Explain the development of biological sex, step-by-step, incorporating the following terms:
    - Sex chromosomes**
    - "Master switch" genes**
    - Gonads**
    - Hormones**
    - Internal & external reproductive anatomy**

## Origins of atypical prenatal differentiation

- Sex chromosome disorders:** individuals born with one or more extra sex chromosomes or missing one sex chromosome.
  - Turner's syndrome (XO)
  - Klinefelter's Syndrome (XXY)
- Disorders affecting prenatal hormonal processes:**
  - Androgen Insensitivity Syndrome (AIS)
  - Fetally androgenized female
  - DHT-deficient male

## Atypical Prenatal Differentiation

- Intersex:** term applied to people who possess biological attributes of both sexes.
- True hermaphrodite** (very rare):
  - Have both ovarian and testicular tissue
  - External genitals are often a mixture of male and female structures.
- Pseudohermaphrodite:**
  - Gonads (ovaries/testes) match chromosomal sex
  - Internal and external reproductive anatomy has a mixture of male and female structures or structures that are "in between" male and female.

## How common is intersex?

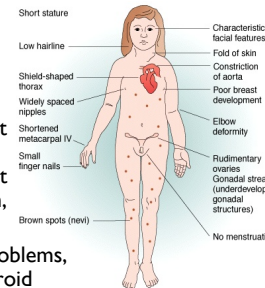
- Overall frequency that a child is born with genitals so atypical that a specialist is called in: **1 in 1500 to 1 in 2000.**
- There are also people born with variations in sexual anatomy that are more subtle, or may not show up until later in life.
  - 1 in a 100** have genitals that are "different" from the norm.

(Statistics from Intersex Society of North America)



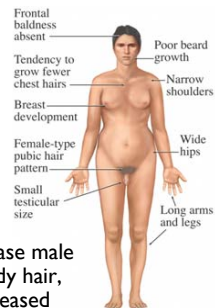
## Sex chromosome disorders: Turner's syndrome

- Turner's syndrome (XO):**
  - 1 in 2000 female births
  - Normal external female genitalia
  - Internal female anatomy not developed; no functional ovaries, therefore no breast development, menstruation, or fertility.
  - Often have other health problems, including heart, kidney, thyroid problems, and diabetes.

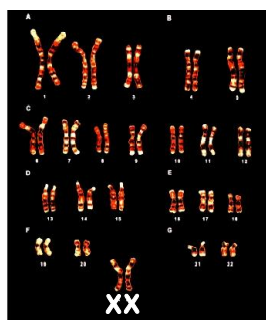


## Sex chromosome disorders: Klinefelter's syndrome

- Klinefelter's syndrome (XXY):**
  - 1 in 500 male births
  - Undersized penis and testes
  - Typically sterile
  - Low interest in sex
  - Somewhat feminized physical characteristics
  - If desired, the XXY boy can increase male secondary sex characteristics (body hair, reduced breast development, increased muscle development) w/testosterone treatment

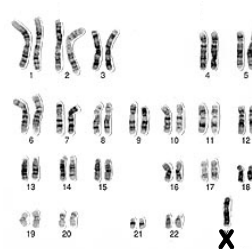


Q: Match the karyotype with the description.



- Normal female
- Normal male
- Klinefelter's syndrome
- Turner's syndrome

Q: Match the karyotype with the description.



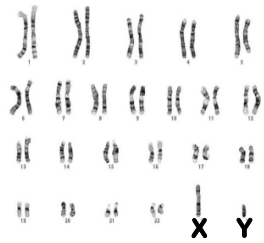
- Normal female
- Normal male
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- Turner's syndrome

Q: Match the karyotype with the description.



- Normal female
- Normal male
- Klinefelter's syndrome
- Turner's syndrome

Q: Match the karyotype with the description.



- a) Normal female
- b) Normal male
- c) Klinefelter's syndrome
- d) Turner's syndrome

## Origins of atypical prenatal differentiation

- **Sex chromosome disorders:** individuals born with one or more extra sex chromosomes or missing one sex chromosome.
  - Turner's syndrome (XO)
  - Klinefelter's Syndrome (XXY)
- **Disorders affecting prenatal hormonal processes:**
  - Androgen Insensitivity Syndrome (AIS)
  - Fetally androgenized female
  - DHT-deficient male

## Prenatal hormonal disorders: Androgen Insensitivity Syndrome (AIS)

- Genetic defect causes chromosomally normal (XY) males to be insensitive to testosterone & other androgens.
- Develop female external genitals (vagina is shallow)
  - Often not discovered until late adolescence, due to lack of menstruation.
  - Internally, possess non-functioning undescended testes and no ovaries or uterus

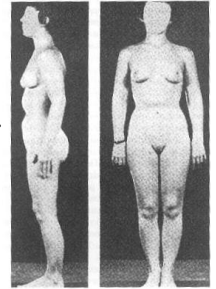
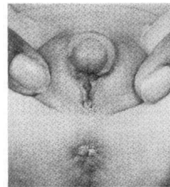


Figure 13.10 A woman with an XY chromosome pattern but insensitivity to androgens

## Prenatal hormonal disorders: Fetally Androgenized Females

- Chromosomally normal (XX) females exposed to excessive levels of androgens during prenatal sex differentiation.
  - Could be due to malfunctioning of adrenal glands
  - Could be due to androgen-like substances ingested by the mother during pregnancy (e.g. 1950s, drugs thought to prevent miscarriage)
- Develop external genitalia resembling those of a male
  - Enlarged clitoris that may look like a penis; fused labia that can resemble a scrotum.
  - Usually, surgery is performed and baby is raised as female.
  - Many fetally androgenized women have been reported to be uncomfortable w/female gender role ("tomboy," etc.).



## Prenatal hormonal disorders: DHT-deficient males

- Genetic defect prevents chromosomal male (XY) from converting testosterone to dihydroxytestosterone (DHT).
  - DHT is essential for normal prenatal development of male genitalia.
- At birth, genitalia looks more like a clitoris/labia than a penis/scrotum, and shallow vagina is partially formed; therefore, they are raised as girls until puberty
- At puberty, testes are still functional, the accelerated testosterone production reverses the DHT deficiency.
  - Testes descend
  - Clitoris-like organs enlarge into penises.
- In one study in Caribbean, 16 of 18 DHT-deficient males raised as girls "switched" to the male gender at puberty.

## Middlesexes: Redefining He and She

- Max's story

## Birth of an intersex newborn baby

Assume you are the leader of a team of health professionals who must decide the best treatment for an intersex infant.

- Would you assign a gender?
- If so, what gender would you select?
- Would you perform the surgical &/or hormonal treatments consistent with the assigned gender or wait on this decision?
- What kind of follow-up would you suggest during the child's developmental years?



## Gender Identity Formation as a biological process

Characteristic	Female	Male
Chromosomal sex	XX	XY
Gonadal sex	Ovaries	Testes
Hormonal sex	Estrogens	Androgens
Prenatal hormonal compounds		
Internal reproductive structures	Fallopian tubes Uterus Inner portions of vagina	Vas deferens Seminal vesicles Ejaculatory ducts
External genitals	Clitoris Inner vaginal lips Outer vaginal lips	Penis Scrotum
Sex differentiation of the brain	Hypothalamus becomes estrogen sensitive, influencing cyclic release of hormones. Two hypothalamic areas are smaller in the female brain. Cerebral cortex of right hemisphere is thinner in the female brain. Corpus callosum is thicker in the female brain. Less lateralization of function in the female brain compared to the male brain.	Androgen-insensitive male hypothalamus directs steady production of hormones. Two hypothalamic areas are larger in the male brain. Cerebral cortex of right hemisphere is thicker in the male brain. Corpus callosum is thinner in the male brain. More lateralization of function in the male brain compared to the female brain.

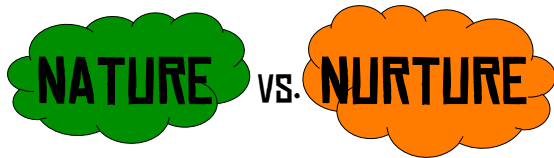
Table 3.1 Gender Identity as a Biological Process: Typical Prenatal Differentiation

Syndrome	Chromosomal Sex	Gonadal Sex	Reproductive Internal Structures	External Genitals	Fertility	Secondary Sex Characteristics	Gender Identity
Turner's syndrome	45,XO	Fibrous streaks of ovarian tissue	Uterus and fallopian tubes	Normal female	Sterile	Undeveloped; no breasts	Female
Klinefelter's syndrome	47,XXY	Small testes	Normal male	Under-sized penis and testes	Sterile	Some feminization of secondary sex characteristics; may have breast development and rounded body contours.	Usually male, although higher than usual incidence of gender identity confusion.
Androgen insensitivity syndrome	46,XY	Undescended testes	Lacks a normal set of either male or female internal structures	Normal female genitals and a shallow vagina	Sterile	At puberty, breast development and other signs of normal female sexual maturation appear, but menstruation does not occur.	Female

(continues . . . See full figure in book)

Table 3.3 Summary of Some Examples of Atypical Prenatal Sex Differentiation

So far, we've addressed the biology of gender development...



Now let's take a look at the "nurture" side...

## Development of social gender identity

- **2-3 years old:** children can "name" their gender, but most don't really know what it means.
  - Don't know that gender is constant (i.e. that a little boy can't grow up and have a baby one day)
- **Around 4-5 years old:** children embrace gender, start experimenting with stereotypical objects and behaviors.
  - This is part of how kids try to grasp gender constancy--by behaving as expected for their gender, so that their gender doesn't "change."
- **By 7-8 years old:** children can accept that gender roles are not rigid if they've been previously exposed to nonstereotypical ideas about gender.



## Social-Learning Influences on Gender Identity

- Parents and people in general have preconceived ideas about how boys and girls behave even before a baby is born.



## Social-Learning Influences on Gender Identity

- **Social-learning theory:** gender identity (identification with masculine, feminine, or androgynous roles) results primarily from sociocultural influences during early development.
- Gender role expectations strongly influence the environment in which the child is raised.
  - Color of the room, toy selection, etc.
  - How parents respond to children (i.e. boy encouraged to suppress tears, be independent, even aggressive ("boys will be boys"); girl may be encouraged to be nurturing and cooperative)

## Evidence for social-learning model of gender identity formation

- 1) Anthropological studies: gender identity is not fixed across cultures.
  - Some cultures have masculine and feminine gender roles that are reversed from the typical American gender roles, yet there is no biological difference.
  - Margaret Mead's studies from 1930s.
- 2) Gender role expectations change over time.
  - Therefore, social learning must make some contribution to gender identity, since men and women aren't changing biologically.

## Interactional Model

- Gender is a product of both biology and social learning/environment.



- Evidence shows that infants aren't psychosexually neutral at birth—there's a biological predisposition toward a male or female identity.
- Gender identity is not exclusively biological—life experiences are important in shaping our identities.

## Traditional Binary Gender Model

	Male	Female
▪ <b>Biological Sex:</b> <i>Hormones, genitalia secondary sex characteristics</i>	↓	↓
▪ <b>Gender Expression</b> <i>Dress, posture, roles, identity</i>	Masculine	Feminine
	↓	↓
▪ <b>Sexual Orientation</b> <i>Attracted to:</i>	Attracted to Women	Attracted to Men

Adapted from Samuel Lurie Asilomar Conference, Oct. 2004; see www.tgtrain.org

## Modern Continuum Gender Model

	Male	Intersexed	Female
▪ <b>Biological Sex:</b> <i>Hormones, genitalia secondary sex characteristics</i>	←-----→		
▪ <b>Gender Expression</b> <i>Dress, posture, roles, identity</i>	Masculine	Androgynous	Feminine
	←-----→		
▪ <b>Sexual Orientation</b> <i>Attracted to:</i>	women	mostly women	both
			mostly men
			men
	←-----→		

Adapted from Samuel Lurie Asilomar Conference, Oct. 2004; see www.tgtrain.org

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	Male	Intersexed	Female
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			mostly men
			men
	←-----→		

Adapted from Samuel Lurie Asilomar Conference, Oct. 2004; see www.tgtrain.org

## Transsexualism and Transgenderism

- **Transgendered:** general term for people whose gender identities don't match their birth sex.
- **Transsexual:** person whose gender identity is opposite to his or her sex to the extent that he/she will usually seek hormonal and surgical sex reassignment.
  - Exhibit **gender dysphoria**: feel that he/she is trapped in the body of the "wrong" sex.



- Main difference between the two:
  - transgendered person does not want to change his or her physical body to agree with their gender identity,
  - whereas a transsexual person does want to change their body to fit their gender identity.

## Etiology of transsexualism is not known

- Some suggest biological factors (prenatal hormone exposure, etc.)
- Some suggest social-learning experiences condition behavior appropriate for the opposite sex.
- Larger question--does it matter?
  - Research into causes of transsexualism assumes the legitimacy of binary gender identity
  - Research does not necessarily increase acceptance of transsexualism in society
  - One organization representing transsexual people suggested referring to transsexualism as a *condition requiring medical intervention*, similar to childbirth.

## Sex change surgery

### • Female-to-male:

- Breasts, uterus, and ovaries removed; vagina sealed off.
- **Metoidioplasty:** skin surrounding clitoris is removed & clitoris released from pubis



- Maintains sensitivity of clitoris
- **Glansplasty:** penis is constructed from abdomen & erectile device is inserted

- Penis can become erect sufficient for penetration, but has no sensation
- Nervous tissue from clitoris is left embedded at base of the surgically constructed penis, and orgasm is therefore possible.



## Middlesexes: Redefining He and She

- Noah's story
- Calpurnia & Andrea's story

## Sex Reassignment Procedures

- **Step 1: extensive screening interviews**
  - Individuals with confusion about gender identity are not considered for surgery
  - Individuals w/genuine incongruence between gender identity and biological sex go to step 2.
- **Step 2: adopt lifestyle consistent w/gender identity** (dress, behavior)
- **Step 3: hormone therapy**
  - FTM: treated w/testosterone
    - Reduce breast size, increase body/facial hair, deepen voice
  - MTF: treated w/estrogen + testosterone inhibitors
    - Some breast growth, reduce body/facial hair, soften skin
- **Step 4: surgery** (usually after person has lived for at least 1 year as the other sex, w/hormone therapy).

## Transgender SF speakers recap

What did you think about our speakers from Transgender SF? What new information did you learn? What thoughts and/or feelings came up for you?

What kinds of challenges do you think a transgendered or transsexual person might face in our society?

Respecting a transsexual or transgendered person through communication

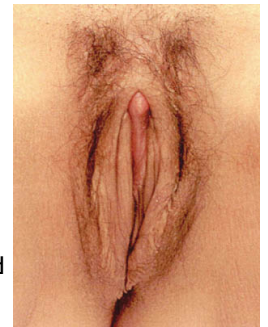
- If someone identifies as male, refer to him as **he**; if someone identifies as female, refer to her as **she**.
- Never "out" a person by telling others that he or she is transsexual or transgendered.
- Never ask transsexual or transgendered people what their genital anatomy looks like or how they relate sexually to others.
- Do not make assumptions about a person's sexual orientation (this is a good idea for everyone, not just transsexual or transgendered people).

From Alexander John Goodrum (2000)

## Sex change surgery

### • Male-to-female:

- Scrotum and penis are removed.
- Vagina constructed through from penile & scrotal tissue.
- Neoclitoris is formed from glans of penis
- Intercourse, arousal, and orgasm are all possible



We've been talking about gender identity, our own subjective sense of being male or female

But what about **gender roles** and **gender stereotypes**?

These are decided by our surrounding culture, and they affect all of us...

## Gender roles & stereotypes

- **Gender role** = behaviors that are considered appropriate and normal for men and women in a society.
- **Gender stereotype** = generalized notion of what a person is like based only on that person's sex.
  - Stereotypes don't take individuality into account.

## Parents as shapers of gender roles

- Baby girls often receive more attention than baby boys do.
- Baby girls often treated as fragile.
- Girls may be comforted when they cry; boys may be told that "boys don't cry."
- Parents are more protective and restrictive of girls; boys receive more freedom.
- Boys receive parental encouragement for being assertive and limiting emotional expression; girls are rewarded for positively interacting with others.



## How do we learn gender roles?

- **Socialization**: the process by which our society conveys behavioral expectations to the individual.
- Five agents of socialization
  - parental expectations
  - peers influence how child plays
  - school teachers and textbooks
  - television and gender-based stereotypes
  - religious training

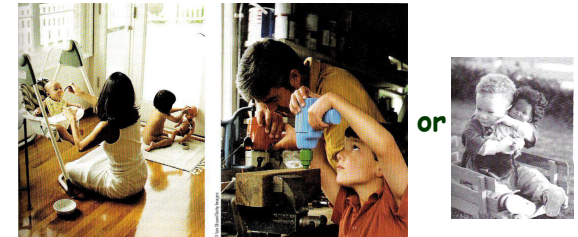
## Schools & educational environment

- Teachers call on and encourage boys more.
- Boys who call out answers w/o raising their hand aren't usually reprimanded, but girls are.
- Teachers tolerate bad behavior in elementary school boys more than girls. ("boys will be boys")
- Boys are more likely to receive attention, help, and praise from teachers.
- Teachers give girls more attention when they act dependently, but give boys more attention for acting independently or assertively.
- Girls frequently suffer a loss of confidence in their math and science abilities in middle school years (around adolescence/puberty).



## Parents as shapers of gender roles

- Encouragement of gender-typed play activities and household chores.
- Modeling gender-typed behaviors.



## Media & gender stereotypes

- Men appear as active, intelligent, adventurous, in charge—more emphasis placed on ability.
- Women appear as passive, less competent, more domestic—more emphasis placed on appearance.
- Some gradual improvement...
  - Better than it was in the 1950s
  - Still far from gender-neutral.



## Organized religion & gender roles

- Jewish, Christian, and Islamic traditions
  - Emphasis on male supremacy
  - God presented as male using language as *Father, He, or King*.
- Leadership of most religious organizations in the U.S. is mostly male
  - No female Protestant clergy until 1970.
  - No female rabbis until 1972.
  - Roman Catholic church still does not allow female priests.
- There are current movements to change traditional patriarchal nature of organized religion in U.S.
  - More females becoming religious leaders.
  - Efforts to reduce sexist language in religious writings (i.e. replace "God the Father" w/"Creator"; replace "mankind" with "humanity"; replace "sons of God" w/"children of God.")

## How do gender roles & stereotypes affect us?

### How might gender roles and stereotypes be harmful or limit our life experiences?

### How might gender roles and stereotypes affect our sexual and romantic relationships?

## Impact of gender role expectations on our sexuality

- Women as undersexed, men as oversexed
  - Mistaken belief that women don't want sex or don't enjoy sex as much as men.
- Men as initiators, women as recipients
  - Idea that men should initiate sex (first time, or after years...).
- Men as "sexperts"
  - Idea that men know what to do, that they don't need to ask women, and that women shouldn't make suggestions.
- Women as controllers, men as movers
  - Especially in adolescent years, women are "supposed" to pay more attention to regulating "how far the guy gets" than to her own sexual enjoyment.
- Men as unemotional and strong, women as nurturing and supportive ("men lust, women love")

## Transcending gender roles: Androgyny

- **Androgyny:** a blending of typically male and typically female behaviors in one individual.
  - Describes flexibility in gender roles, integration of different aspects of masculinity and femininity into one's personality.
  - Don't need to limit behaviors and interests to those considered gender appropriate.
- Research suggests that androgynous people
  - have higher self-esteem,
  - exhibit more social competence,
  - are more independent,
  - Have more positive attitudes toward sexuality
  - Androgynous women are more orgasmic.