Chapter 10

Social Contexts for Development

Learning About One's Own Context

Social Facultative Adaptation

- An adaptation designed to respond to specific cues in the social environment, allowing one to pursue the most advantageous social strategy.

- Learning about one's circumstances allows one to calibrate one's behaviour so that it is optimal for one's life circumstances.

- Some learning mechanisms are designed to do just that.

Psychological Adaptations for Culture

- Culture is unique to humans.
- Despite social learning in various animals, only humans have cumulative culture, because only humans have the cognitive machinery to permit and support the evolution and transmission of culture.
- Cumulative culture has allowed humans to design artifacts as complex as written language, jet airplanes, and the Internet.

Ecologically Dependent Parenting Strategies

- Culture, which is influenced by local ecology, has an effect on parenting.
- Unlike the !Kung, who live in harsher conditions, adults in the Hadza culture discipline their children less, pay more attention to their children, and do not expect their children to contribute to the work of the group until a later age.
- These differences are consistent with adaptationist interpretations.
  - The parent is optimizing reproductive success by allocating parental investment in the context of the ecological conditions.

table 10.1 Ecologically Situated Parenting

!KUNG	HADZA
Harder to find food	Easier to find food
Harder to find water	Easier to find water
Less attentive to children	More attentive to children
Longer birth intervals	Shorter birth intervals
More discipline	Less discipline
Children expected to work more and at an earlier age	Children not expected to work until a later age

Life History Theory

Life History Theory

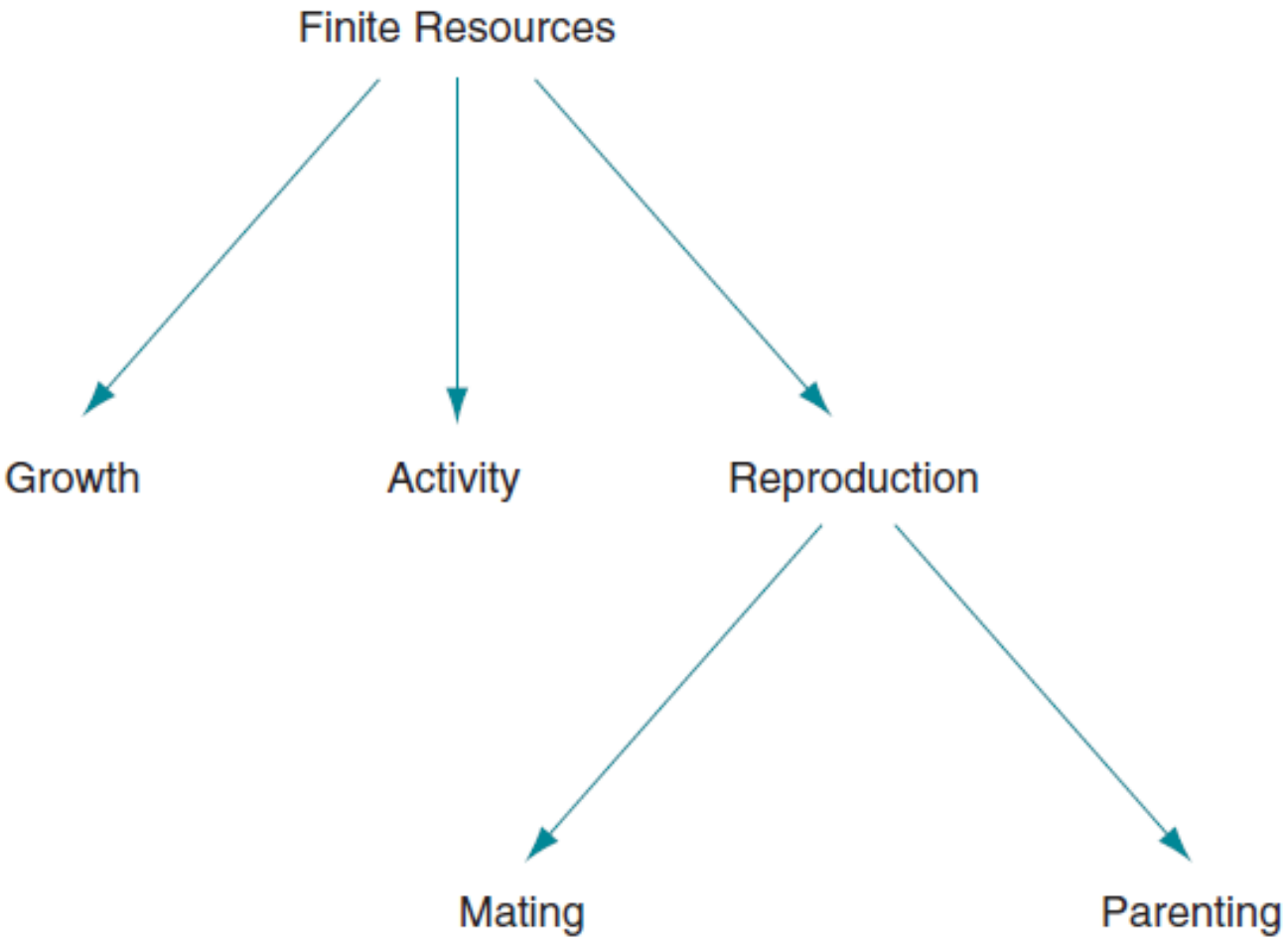
- Meant to account for, and predict the timing of, major life events across development, especially dealing with the trade-off in allocating resources to growth and reproduction.

Paternal Investment

- A father's investment in his offspring
- Does not occur in all species; varies across human societies
- Affects women's and men's optimal reproductive strategies
  - For a woman living in a high-investing society, the optimal strategy may be to postpone reproduction until she secures an investing mate.
  - In other societies, the best strategy may be to take advantage of reproductive opportunities.

figure 10.1 Life history theory

Life history theory examines how individuals optimally allocate their resources toward their own growth, energetic needs, and reproduction. Reproductive efforts are divided between pursuing new mates and investing in offspring.



If you are a woman of reproductive age, you could hold out on reproduction until you have secured the commitment and investment of a man who promises to be a good producer and committed father or you could get started on reproduction as soon as possible, taking advantage of more of your reproductive years and perhaps securing short-term investments from a number of men.

Is a man's best strategy to be a family man, commit to one woman, and allocate all of his resources to rear her children?

A question of evolutionary strategy, not morality.

- Depending on their social context, developing children and adolescents select one strategy and develop behaviours, emotions, and physiologies that promote that strategy.
- Example:
  - Whether a child's father is absent or present during early to mid-childhood informs whether they are likely to be in a high or low paternal-investment society, and thus influences their own sexual strategy.
    - Males growing up in father-absent homes show more manipulative behaviour and strive toward dominance.
    - Females growing up in father-absent homes are sexually active earlier in life, have more sexual partners, and less stable relationships.

table 10.2 Women whose fathers were absent or present

WOMEN	
FATHER ABSENT	FATHER PRESENT
Likely a low-investing society	Likely a high-investing society
Sexually active earlier	Later puberty
Have more sexual partners	More securely attached
More dominant	Smile more frequently
Better liars	Lower androgen levels

Whether there is a father present in one's childhood household has implications and developmental consequences. The specific developmental influences are different for men and women.

table 10.3 Men whose fathers were absent or present

MEN	
FATHER ABSENT	FATHER PRESENT
Likely a low-investing society	Likely a high-investing society
More manipulative	More stable romantic relationships
More competitive	

- Once a life strategy is ‘selected’, a whole suite of traits develop in tandem, including physiological, personality, and behavioural characteristics.
- Social context in early childhood can affect the timing of puberty and sexual maturation.
- Local mortality rates may affect a child’s development with respect to growth and reproduction.

Attachment

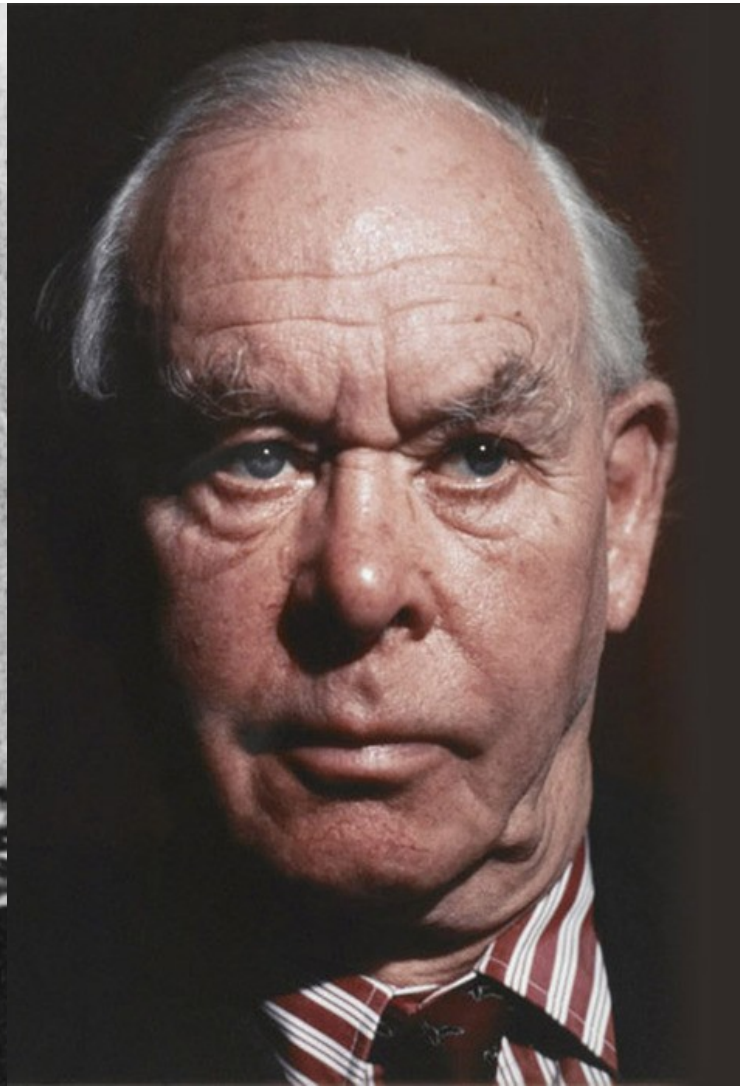
Contrary to behaviourist predictions, young rhesus monkeys prefer the comfort of a soft furry mother over a wire mother who provides food (Harlow's experiments).

- There is something about comfort that is different from food.

Attachment

- The emotional bond a young child feels with another specific person.
- Attachment theory was developed by John Bowlby.
- Attachment is functional: it calibrates the balance between a child's exploration and his or her safety.
- Attachment is similar to imprinting (Lorenz) seen in some species.

John Bowlby (1907-1990)



Ainsworth enrolled in the psychology program at the University of Toronto in 1929 and was one of only five students to be offered admission to the program. She completed her BA in 1935, MA in 1936 and PhD in 1939, all from the same university. Ainsworth started teaching at University of Toronto until 1942 when she decided to join Canadian Women's Army Corps. After four years in the Army, where she was promoted to the rank of a Major, she returned to University of Toronto as Assistant Professor. There she became emotionally involved with a graduate student, Leonard Ainsworth, whom she later married. Though the marriage lasted only ten years, her subsequent trip to London for Leonard's doctoral research proved to be monumental in her career.

http://www.famouspsychologists.org/mary-ainsworth/

Mary Ainsworth
1913-1999

table 10.4 The Strange Situation Task

EPISODE	DESCRIPTION	DURATION	OF INTEREST
1	Caregiver, experimenter, and baby enter experiment room. Caregiver sits. Experimenter leaves while baby plays with toys.	30 seconds	
2	Caregiver and baby are in experiment room. Baby can explore. Caregiver is not to initiate contact but can respond to baby.	3 minutes	Baby's exploration and use of parent as secure base
3	Stranger enters the room, sits quietly, then talks to caregiver, then tries to interact with baby.	3 minutes	Reaction to stranger
4	Mother leaves baby alone with stranger. Stranger may try to comfort baby if needed.	Up to 3 minutes	Reaction to separation; reaction to stranger's attempts to comfort
5	Caregiver returns. Stranger leaves. Caregiver may try to comfort baby if needed.	Up to 3 minutes	Reaction to reunion and caregiver's attempts to comfort
6	Parent leaves infant alone.	Up to 3 minutes	Reaction to separation
7	Stranger returns and greets the infant. Stranger may try to comfort baby if needed.	Up to 3 minutes	Whether the infant can be quieted and comforted by stranger
8	Caregiver returns. Stranger leaves. Caregiver may try to comfort baby if needed.	3 minutes	Reaction to reunion and caregiver's attempts to comfort

Mary Ainsworth created the strange situation task, a standardized way for researchers to assess attachment.

Based on observations during the assessments, children are assigned an attachment style.

- Secure
- Resistant
- Avoidant
- Disorganized

Measures of attachment early in life predict some adult outcomes, especially the quality of adult relationships.

table 10.5 Attachment Types

TYPE	DESCRIPTION
Secure	High-quality, positive relationship with caregiver. In the strange situation task, the baby may be upset when the caregiver leaves and quickly comforted when she returns. The caregiver, when present, is used as a secure base for exploring the new environment.
Insecure / Resistant	This infant is clingy, staying close to the caregiver rather than exploring the new environment. In the strange situation task, this baby is very upset when left alone with the stranger and not easily soothed when the caregiver returns.
Insecure / Avoidant	The infant is indifferent to the caregiver or may avoid them. In the strange situation task, the baby does not use the caregiver as a secure base, is not upset when the caregiver leaves, and is indifferent when the caregiver returns. The baby can be as easily comforted by caregiver or stranger.
Disorganized	This baby has no consistent way to cope with novelty. The baby may appear confused or disoriented.

Attachment type	Caregiver Behaviours	Child Behaviours
Secure	• React quickly and positively to child's needs • Responsive to child's needs	• Distressed when caregiver leaves • Happy when caregiver returns • Seek comfort from caregiver when scared or sad
Insecure – avoidant	• Unresponsive, uncaring • Dismissive	• No distress when caregiver leaves • Does not acknowledge return of caregiver • Does not seek or make contact with caregiver
Insecure – ambivalent	• Responds to child inconsistently	• Distress when caregiver leaves • Not comforted by return of caregiver
Insecure - disorganized	• Abusive or neglectful • Responds in frightening, or frightened ways	• No attaching behaviours • Often appear dazed, confused or apprehensive in presence of caregiver

Emotional Development More Generally

Fear

- Appears at 6 or 7 months of age
- As attachment grows, fear of strangers becomes evident
- Separation anxiety emerges at around 8 months, increases between 8 and 15 months, and decreases thereafter.

Positive Emotions

- Social smiles directed at other people are evident at 6 weeks.
- Infants smile at people more than at objects and smile more at familiar people than unfamiliar people.

Negative Emotions

- Infants first show general distress and response to hunger, pain, or discomfort.
- At 2 months, they show distinct facial expressions of sadness and anger.

Parents, Alloparents, Siblings, and Peers

Why do parents love (invest in) their children?

Parental Investment Theory

- Theory that stresses the evolutionary basis of many aspects of parental behaviour, including the extensive investment parents make in their offspring.

Parental Investment

- An investment by a parent in an individual offspring that increases that offspring's chance of surviving and reproducing at the cost of the parent's ability to invest in other offspring (Trivers)

Inherent Conflict Between Parent and Offspring

- The parent is equally related to each offspring and would like to share resources equally among them.
- However, one offspring may show a greater need.

Inclusive Fitness

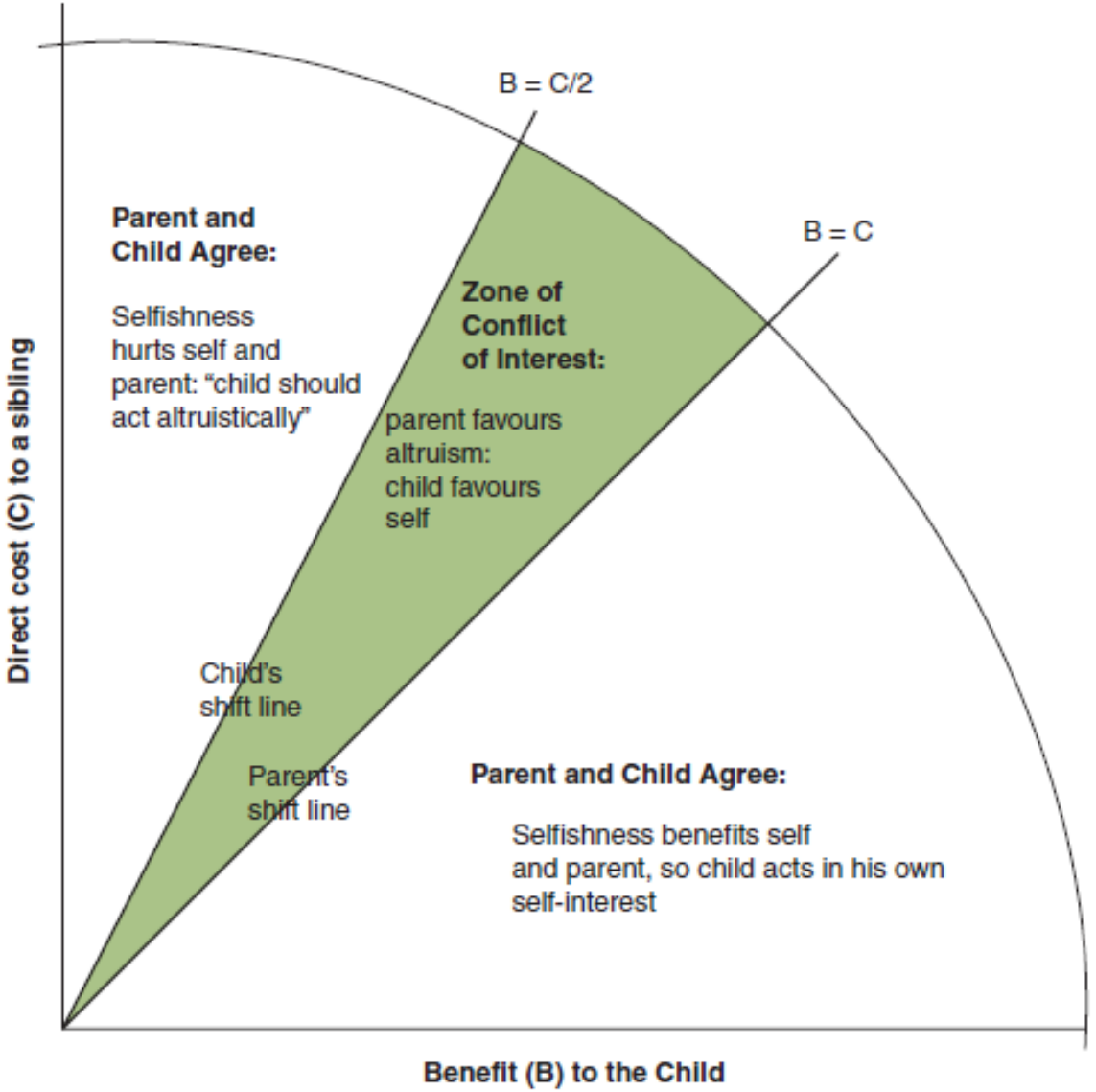
- One's evolutionary fitness (number of viable offspring) plus the number of viable relatives one has, discounted by the relatedness of those relatives.

Parent–offspring Conflict

- Conflicts between parents and their offspring that result from the fact that, in our evolutionary history, maximizing each offspring's inclusive fitness would have resulted from different, mutually exclusive courses of actions.

figure 10.2 Zone of parent–offspring conflict

If Shane is extremely hungry, his brother Billy will agree with their parents that the resources should go to Shane. If Billy is hungrier than Shane, Billy will agree with their parents that the resources should go to him. But the point at which their relative need dictates this switchover differs from Billy's and his parents' point of view, creating the zone of parent- offspring conflict.



The optimal moment for a parent's investment to end is different from the point of view of the parent and the offspring.

This discrepancy can be quantified by Hamilton's rule.

$$rB > C$$

Hamilton's Rule

- Altruistic behaviour toward close family members, including direct parental investment and investment in a younger sibling, is favoured by natural selection when the benefit (B) to the recipient, discounted by the relatedness (r) between the recipient and the actor, is greater than the cost (C) to the actor.

Differences in Parenting Make Little Difference

Good-enough Parenting

- Parenting that is sufficient to rear viable children.
- Term is based on Scarr's idea that extraordinary parenting makes little difference to the child's outcome compared to good-enough parenting.

Socialization

- The process believed to lead a child to acquire the beliefs, values, language, skills, and, in essence, the 'culture' of parents in order to become a member of that culture.

Peer Influence

Children are socialized in their childhood and adolescent peer groups; parental influence is minimal.

Group Socialization Theory

- Peers and siblings, especially acting in groups, have a measurable effect on the personality development of children as well as the development of children's culture, accents, and speech mannerisms.

Alloparents

- All of the people who contribute to the upbringing of a child other than the child's parents. ("It takes a village…")

Social Context Milestones

Age	Skills
Birth to 5 Years	Stability of early social relationships and food availability affect later life strategies (Belsky et al., 1991).
6 Weeks	Infants produce the first "social smile" in response to another person.
2 Months	Infants show some distinct facial expressions: sadness, happiness, and anger.
6 Months to 3 Years	This is the critical period in the development of attachment. Fear of strangers grows as attachment to caregivers grows.
7 Months	Infants smile more at familiar than unfamiliar people.
8 Months	Separation anxiety begins to be evident and increases to the age of 2 years.
9–18 Months	The strange situation task is an effective assessment of attachment style.
1–5 Years	The Attachment Q-sort is an effective assessment of attachment style.
Early to Mid-Childhood	A father's presence or absence can inform the developing life strategy.
10–14 Years	Pubertal timing can be affected by the presence or absence of a father in earlier childhood.
Teen Years	These are important years for peer socialization, according to Judith Harris.

Step-parents

A step-parent would not be expected to invest in stepchildren to the extent that the child's biological parent invests.

Stepfathers

- spend less time with their stepchildren
- are less likely to help with homework
- spend less time playing with their stepchildren
- report weaker feelings for stepchildren than for their own children

Children who have step-parents are at far greater risk of abuse than those who do not.

Birth order

Birth order

- is one's age rank (eldest, youngest, middle) among siblings.
- may be a significant social contextual factor that has an effect on the developing personality (Sulloway).

First-born and later-born children fill different niches and may develop differently in order to take optimal advantage of their specific niche.

- The oldest child identifies most strongly with the parents and with other authority figures generally, is conservative, and a supporter of tradition and the status quo.
- The younger child is more of a risk-taker and thinks outside of the box.

Chapter 11

Sex and Gender

Why Look at Gender?

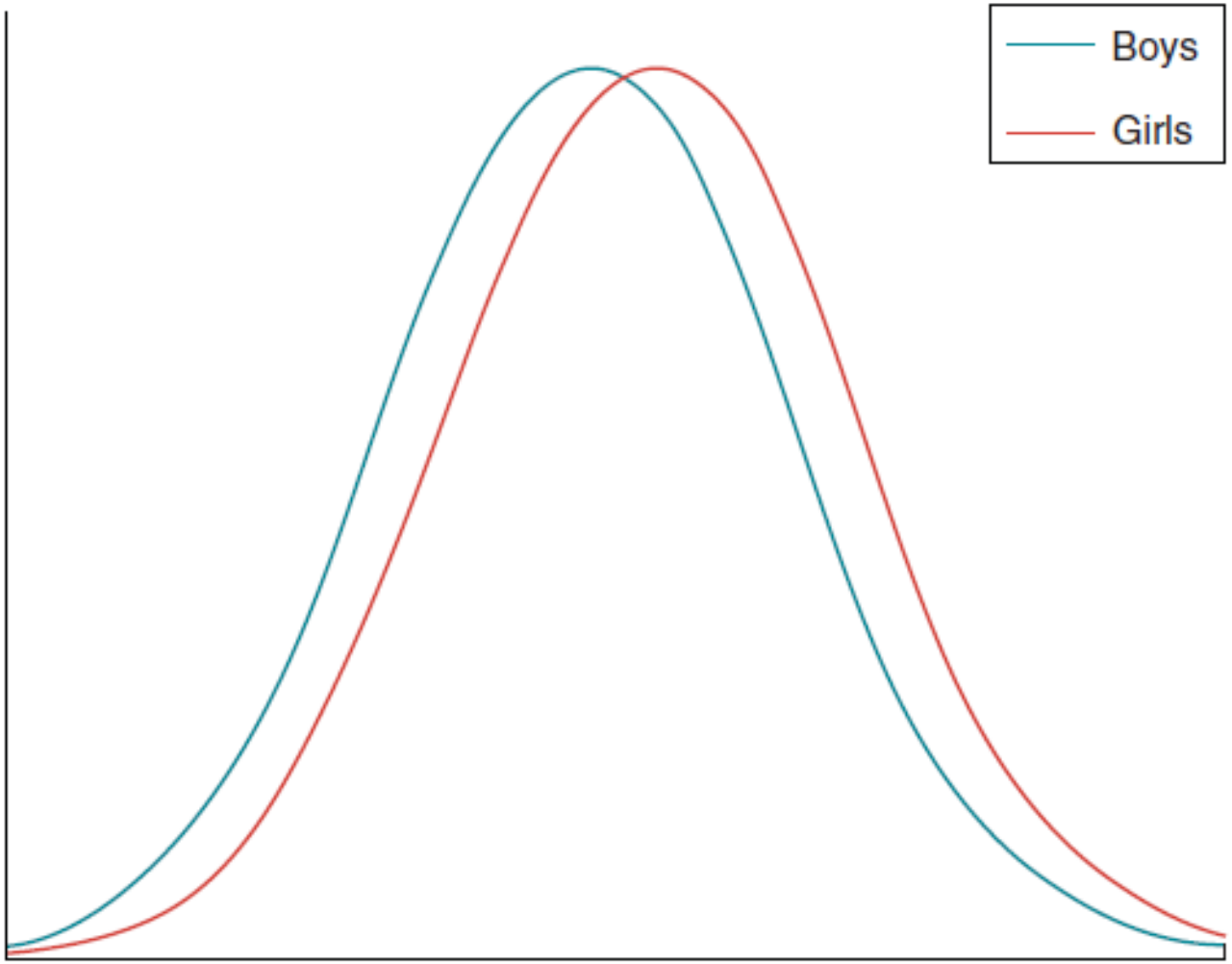
- The sexual dimorphism in our species provides a good ‘natural control group’ for some interesting cognitive adaptations.

- It is a good opportunity to put our commitment to viewing nature and nurture as working together, not in opposition, to the test.

- Looking at the adaptations of men as a group and of women as a group allows us an opportunity to consider the fit between adaptations and the adaptive problems we need to solve.

figure 11.1 Overlapping distributions

Many of the sex differences we talk about describe a difference in the average performance of men and women although there is great overlap between men and women as a group. A graph of height, running speed, or verbal fluency would show such an overlap, for example.



Gender Roles in the EEA

- Men and women experienced different selection pressures in the EEA.
- The biggest sex differences in terms of selection pressures were rooted in the social and familial division of labour.
- Hunting was mostly done by males.
  - Hunting in teams required a coalitional psychology and relatively sophisticated spatial-cognition and navigation skills.
- Foraging was mainly done by females.
  - Gathering fruit and vegetables required fine perceptual discriminations, including colour and texture.

Adaptive Sex Differences

- Males and females are two different morphs of the same species.
  - They are two different phenotypes, each of which shows a coherent set of complex adaptations.
- In addition to many shared complex adaptations, men and women also have some different complex adaptations—a rare exception to the rule that complex adaptations are universal.

- Each sex has a suite of adaptations that work together in tandem. These adaptations include morphological, physiological, endocrinological, and emotional adaptations.

The Development of Sex and Gender

Autosomes

- Any pair of chromosomes that are not sex chromosomes.
- They match and have the same set of loci on the mother's and father's chromosomal contribution.

SRY Gene

- The gene on the Y chromosome usually associated with male development in mammals.
- SRY is an acronym for sex-determining region Y.

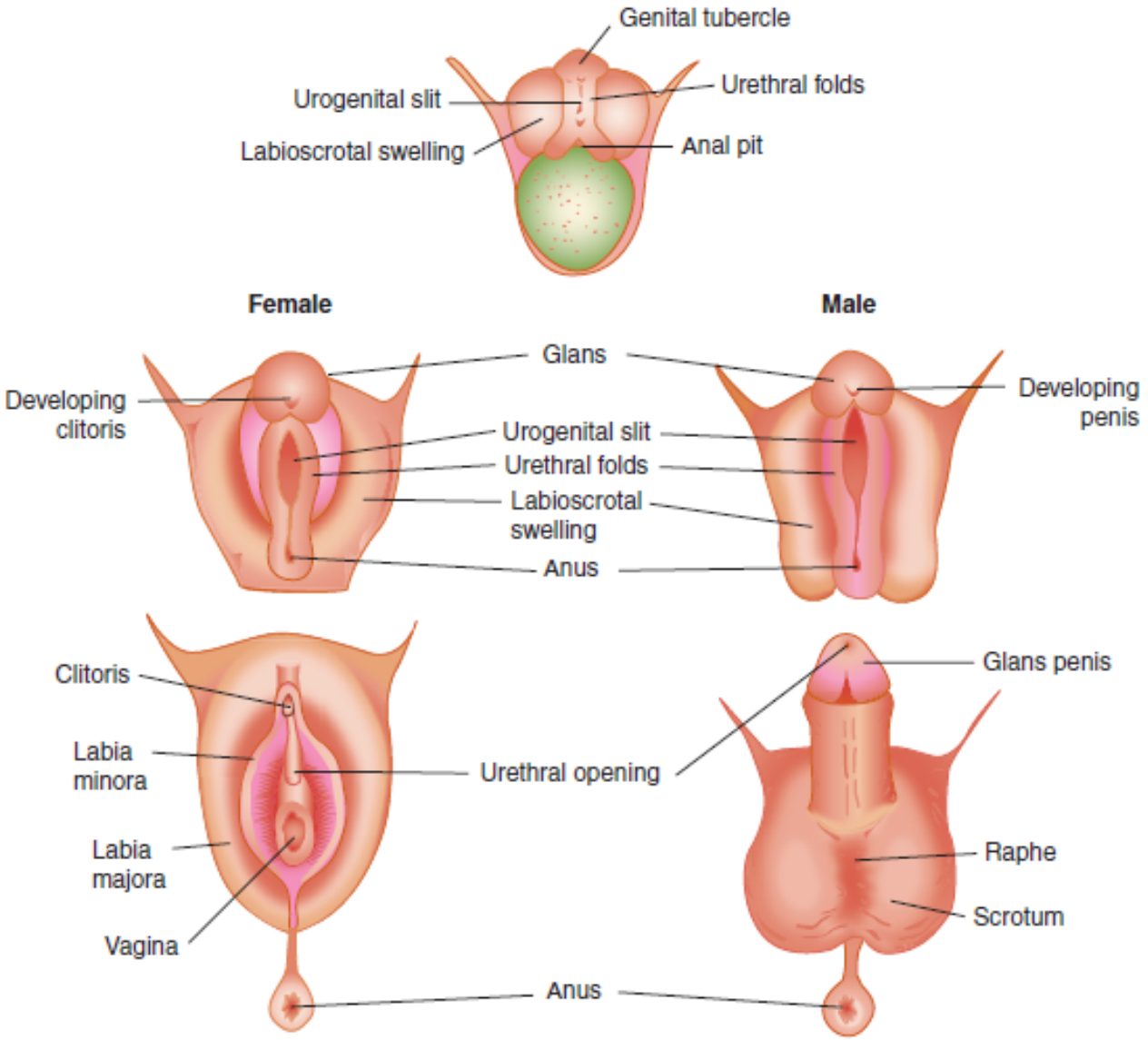
Testis Determining Factor

- A protein that will likely trigger the development of the fetus's testes in typical male development.

- There are sex differences right from the moment of conception.
  - Males are more likely than females to suffer from miscarriage, are more vulnerable to physical and mental forms of developmental abnormalities, and are more likely to die shortly after birth.
  - Males are more active in utero than females.
- In humans, the default body plan is female.
- Masculinization (genitalia, brain) relies on the production of relatively high concentrations of male hormones during pregnancy.

figure 11.2 Differentiation of the external genitalia

Male and female genitalia differentiate in the middle of the second trimester. Androgen typically leads to the masculinization of the external genitalia, whereas in the absence of androgen, female external genitalia will develop.



Postnatal Development

Physical Size and Strength

- Girls are measurably smaller, lighter, healthier, more mature, and less muscular right from birth.
- Boys and girls have similar growth rates, but boys continue to be measurably stronger.

Motor Skills

- At birth, girls are generally more coordinated than boys.
- By the age of 5, boys have an advantage on measures that require strength and power; girls are superior in fine motor skills and balance.
- The sex differences in motor skills, evident before puberty, increase with age.

Verbal Skills

- No consistent sex differences of general intelligence (test design).
- Girls tend to be slightly stronger in language development.
- Girls use words earlier; have larger, earlier vocabularies; show more grammatical complexity; and have superior verbal memories.

Quantitative Skills

- Males tend to be stronger than females in some aspects of visual-spatial processing.
- Girls do better on computational problems (calculation); boys do better on mathematical reasoning (word problems).

Social Skills

- As early as infancy there are sex differences in social orienting.
- Girls orient toward people more than boys do.
- Girls smile more at other people, maintain eye contact longer, participate more in face-to-face communication, show more empathy, show more facial expressions, orienting, and gestures compared to boys.
- Girls experience emotions more intensely (except anger)
- These findings are consistent with sex differences in adulthood.

Spatial Skills

- Boys outperform girls on tasks involving spatial transformations.
- Sex differences on spatial tasks are obvious in preschool children and increase through adolescence to adulthood.
- Boys are better at navigating, making maps, interpreting maps.
- Girls are better at recalling the identity of objects and their locations.

figure 11.3 Spatial rotation

Preschool boys are better than preschool girls at tasks that require spatial rotation. Sex differences on spatial tasks increase through adolescence and into adulthood.

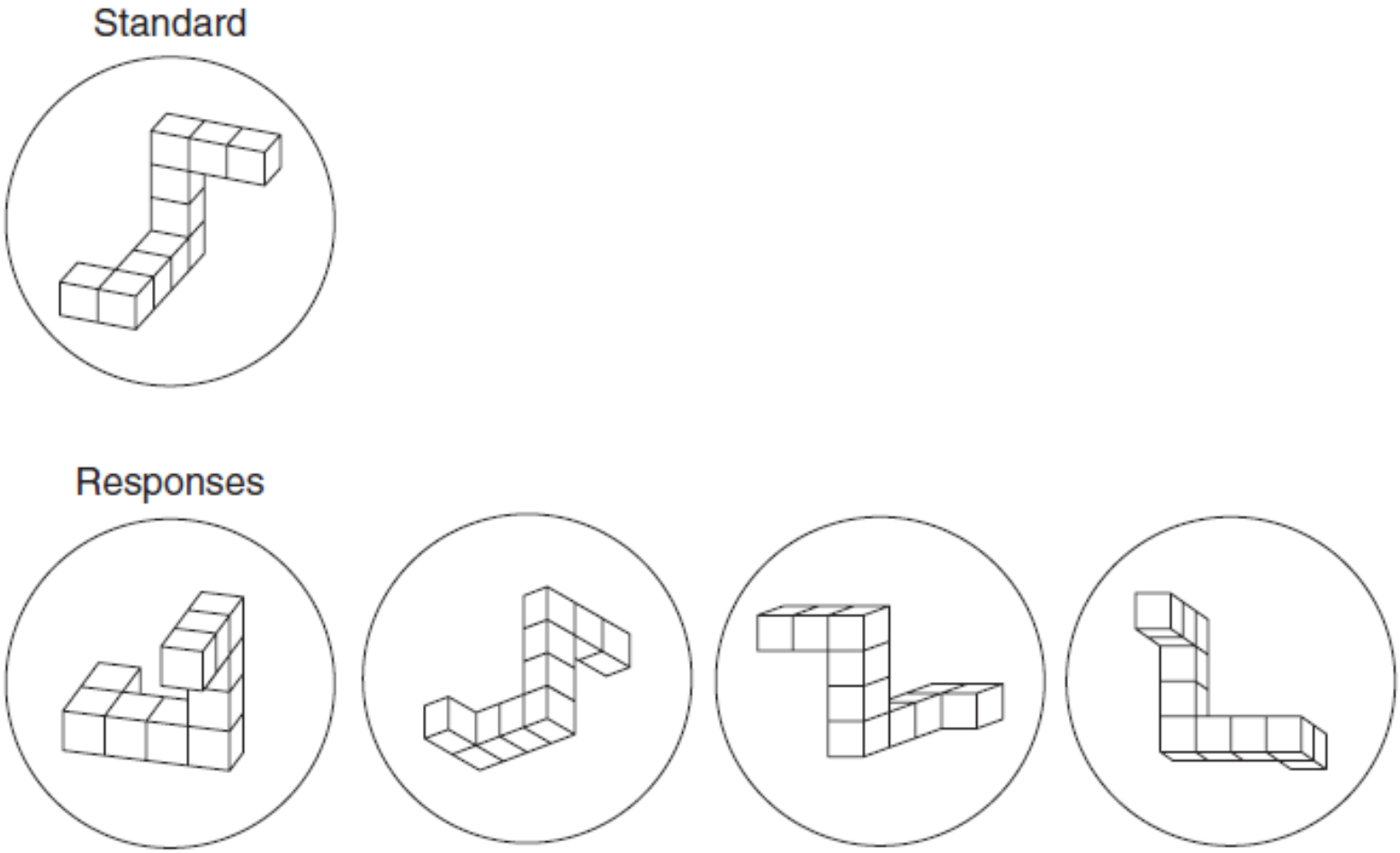


figure 11.4 Spatial skills

When shown an array of objects and later asked to recall which objects appeared where, girls were better than boys at recalling the identity and location of the missing object. Evolutionary thinking led to this discovery. Adapted from Silvermann and Eals, 1992.

Aggression

- Boys and girls are aggressive in different ways.
- Boys are more physically aggressive than girls, cross-culturally and throughout development.
- Girls are more likely to use relational aggression.

Relational Aggression

- The attempt to harm others by damaging social relationships.
- This type of aggression may take the form of gossip, spreading rumours, or ostracism.

Interests and Free Time

- Behavioural differences between boys and girls are evident early in preschool.
- Boys tend to interact with other boys and play with more active and constructive toys.
- Girls tend to spend time among other girls and play with quieter toys associated with fine motor skills.
- Early sex differences are seen cross-culturally.

Boys and girls are attracted to different types of play in early childhood, and those different types of play contribute to sex differences in cognitive development that are adaptive, given sex-specific tasks living in the EEA.

Male vervet monkeys spend more time playing with boy-preferred toys; females showed opposite (Alexander & Hines, 2002)

Children's Understanding of Gender

- At the age of 2, children form gender-related expectations and come to know which gender group they belong to.
- At the age of 3, they uses gender terms.
- At the age of 4, they quickly become adept at categorizing the gender cues, associating toys, tools, activities, and occupations with one sex or another. They will demonstrate gender-appropriate responses to peers. Become 'gender enforcers'.
- Between the ages of about 9 and 12, boys increasingly adhere to gender expectations during a time when girls relax their adherence to feminine expectations.
- This period of gender freedom for girls ends in early adolescence, a period of intensifying attitudes toward gender norms.

Milestones in the Development of Sex and Gender

Age	Skills
Conception	A sperm cell joins an egg cell, combining genetic material. The sperm contributes either an X or a Y sex chromosome. The X chromosome is associated with the development of a girl and the Y chromosome with the development of a boy.
10 Weeks Post-Conception	Male fetus produces testosterone and other androgens. External genitals begin to differentiate by sex.
In Utero	Boys are more active than girls. Masculinization of the brain (and gender identity) takes place just prior to birth and relies on a surge of androgens at that time.
At Birth	From birth, girls are more coordinated than boys. Girls orient to people's faces and voices more than boys.
3 Months	Girls participate in more face-to-face communication than boys.
12 Months	Girls show more evidence of empathy than boys.
3 Years	Children categorize people by gender and identify themselves as "girl" or "boy."
4 Years	Sex differences in visual-spatial processing emerge. Boys are better at navigation and map-making than girls. Children spend three times as much time with same-sex compared to opposite-sex playmates. Boys are more physically aggressive.
5 Years	Boys jump farther, run faster, and throw a ball farther than girls.
9 to 12 Years	Boys become more rigid in rules about masculinity, while girls relax their adherence to feminine expectations.
12 Years	Girls return from the period of gender freedom and again adhere to feminine expectations.

Puberty

Puberty

- is a coordinated set of changes that lead to sexual maturation and entry into the sexually reproductive years.
- Girls are not sexually mature until their growth spurts, when their bodies are big enough to carry a pregnancy. Boys sexually mature before growth is complete.

Menarche

- The point in female puberty at which the first menstrual bleeding occurs.

Spermarche

- The point in male puberty at which sperm is first ejaculated.
- It typically occurs around the age of 11 to 15 and is an early puberty event, occurring before secondary sexual characteristics are fully developed.

Views of Gender Development

Gender Socialization Theory (social learning)

- Boys behave like boys because they are rewarded for masculine behaviour and punished for feminine behaviour.

- Girls learn to behave like girls because they are rewarded for doing so and punished for masculine behaviour.

- General learning mechanisms, such as observation, imitation, and reinforcement, are seen as the cause of differing behaviours and gender-defined roles in girls and boys.

Gender feminism

- Differences between male and female are socially constructed.
- Newborns are ‘bi-sexual’ or ‘equipotent’ with respect to gender.

The Reimer Twins: A Natural Test of the Socialization Theory of Gender

- Bruce Reimer was born a healthy, typical boy, with no physical or psychological anomalies. He was born with an identical twin brother (Brian).
- At the age of 8 month his penis was destroyed accidentally. After this, Bruce, now called Brenda, was raised as a girl.
  - Brenda was miserable. She never felt like a girl. She hated being raised as a girl. She was ostracized and bullied, as her peers rejected her as a girl. She was far too aggressive to fit in as a girl in her social milieu.
- At the age of 13, Brenda's parents told her the whole story. Brenda almost immediately decided to live as a male and become David.

NEW YORK TIMES BESTSELLER

"Riveting, cleanly written, and brilliantly researched."
—Natalie Angier, *New York Times Book Review*

AS NATURE MADE HIM

THE BOY WHO WAS RAISED AS A GIRL

JOHN COLAPINTO

P.S.
INSIGHTS, INTERVIEWS & MORE...

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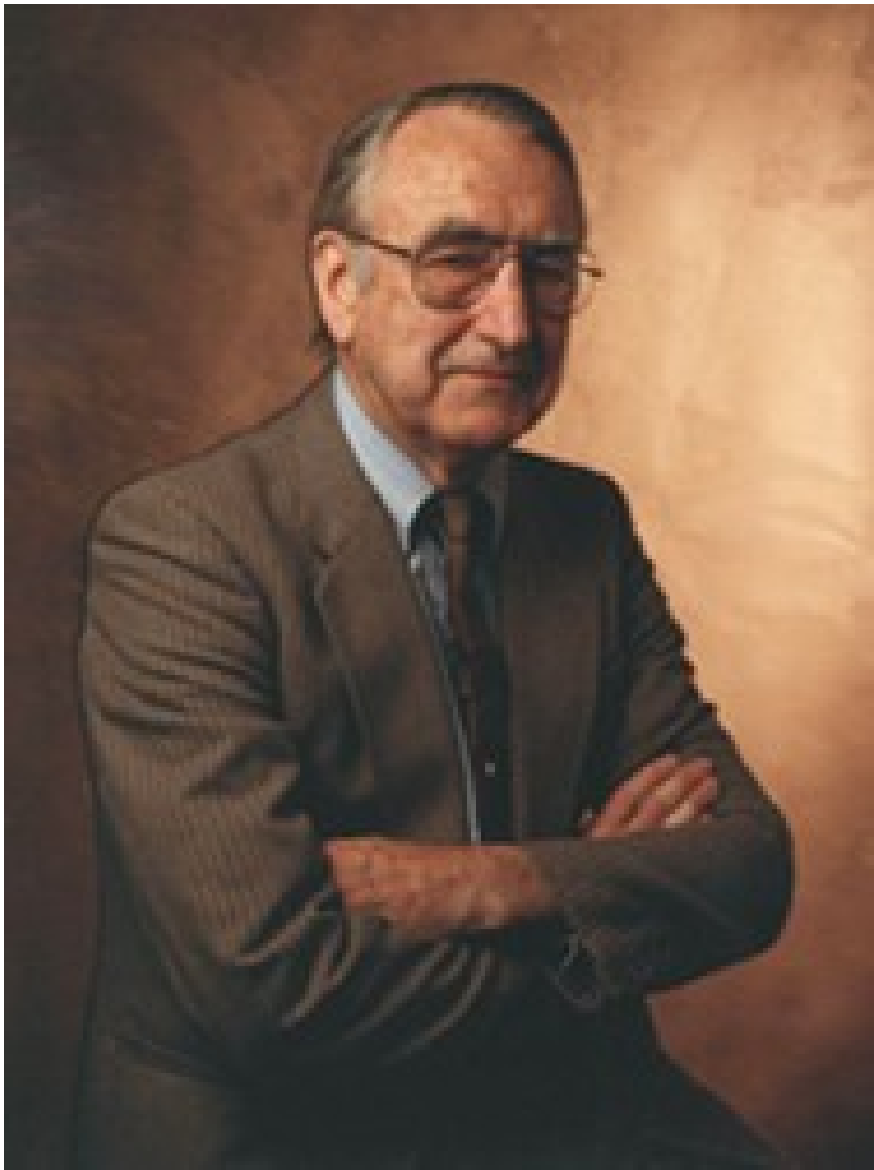


Intersex

Intersex

- An umbrella term describing conditions in which an individual has some combination of chromosomal, genital, and brain development that is not typically male or female.

5-alpha-reductase deficiency

- A developmental condition caused by the failure of the body to produce sufficient levels of enzyme 5-alpha-reductase.
- Babies with male genotypes, or an XY chromosome configuration, will be born with typical internal male reproductive organs but with female-appearing external genitalia.
- Thus, they are identified as female and reared as a girl.
- At puberty, these individuals produce sufficient concentrations of testosterone to prompt some masculinization.

Congenital Adrenal Hyperplasia

- A condition resulting from a mutation in genes associated with cortisol production, in which the excessive production of androgens results in the masculinization of primary or secondary sex characteristics in developing girls.
- In most cases parents are advised to raise the child as a girl, and in 90% of the cases, the individual develops a female gender identity.

Androgen Insensitivity Syndrome (AIS)

- People with complete AIS will typically appear completely female, will be identified and raised as female, despite their XY karyotype.
- The existence of women with complete AIS who have a XY karyotype and female identity shows the disconnect between genes and gender.

Turner's Syndrome

- A condition in which an individual has only one sex chromosome, always an X chromosome.

• Genomic Imprinting

- The chemical tagging of an allele that alters the likelihood that it will be expressed in the phenotype.

The Transgender Experience

- Some children may have a gender identity that is not consistent with others' evaluations.
- Once old enough, these children may choose to transition in order to live as the gender that fits with their gender identity.
- Gender identity is robust and is not easily changed no matter how insistent and consistent parents and doctors are.

Relative Life Expectancy

- As in many species, human males die at a younger age than females.
- Reasons for this are related to
  - greater risk-taking associated with male behaviour.
  - male hormones. Testosterone suppresses the male immune system, leaving males open to the risk of exposure to pathogens.
  - Pleiotropy occurs when a single gene has an effect on more than one phenotypic trait. Pleiotropy is thought to be a good explanation for sex differences in senescence (old age). Men are more vulnerable than women to the senescent effects of pleiotropic genes.

Cultural Differences in Mating and Parenting

- Greater male variance in reproductive success has implications for child rearing.

- Greater polygyny in a society leads to greater sex differences.
  - The more polygyny in the society, the more boys were taught to exhibit aggression, fortitude, and industriousness.
  - There is a correlation between harem size and training boys to be competitive.
  - In polygynous societies, girls are taught to be responsible and to show sexual restraint.

Chapter 12

Moral and Prosocial Development

Morality and Prosocial Behaviour

Morality

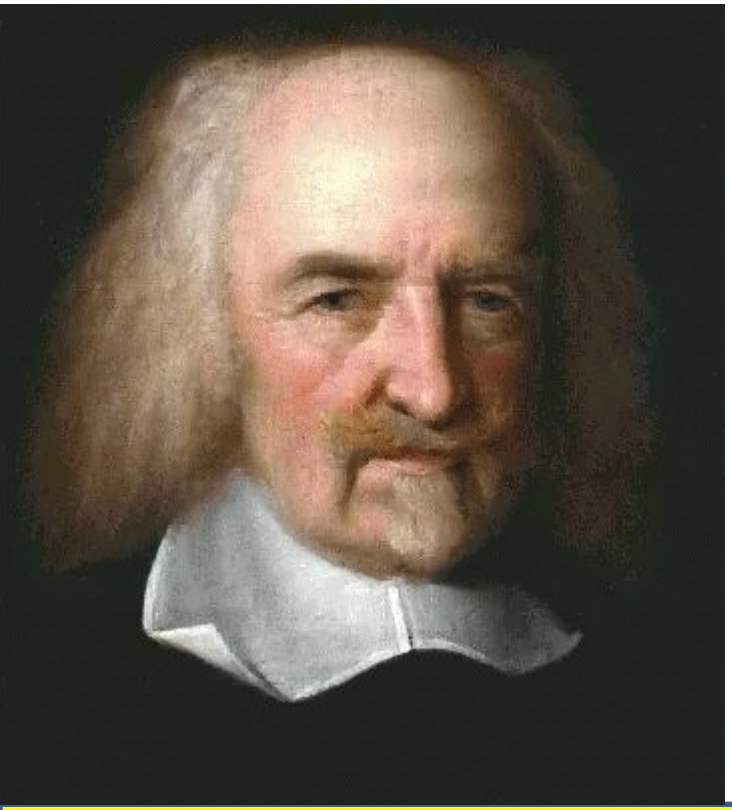
- The intuitive sense of right and wrong that guides our own behaviour and leads us to judge and possibly condemn others' behaviour.
- Morality is part of our human psychology.

Prosocial Behaviour

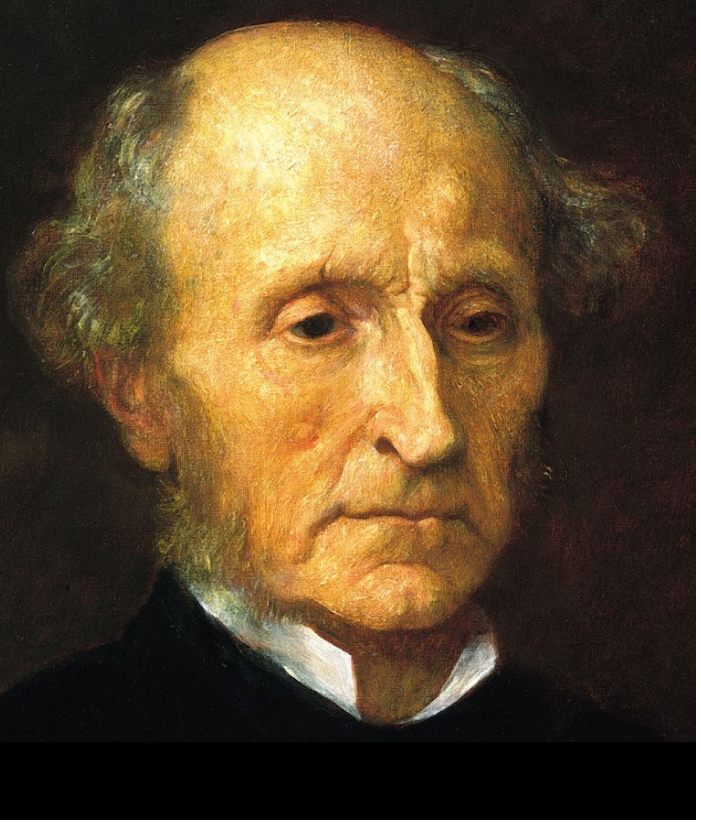
- All the nice things we do for, and to, others, including altruism, friendship, coalitional behaviours, and even parental behaviours.

Traditional Views on Moral Development

Traditional discussions on moral development have been framed in terms of the nature vs. nurture question.



Hobbes (1651) was very much of the opinion that our minds were blank slates with respect to morality.



John Stuart Mill (1806–73) believed that one could sum up the advantage or 'utility' conferred by a given course of action across everyone; whichever course of action conferred the greatest utility was the morally correct path.

- Utilitarianism

George Edward Moore (1903) pointed out what he called the *naturalistic fallacy,* which describes the error of equating what is good with what is natural.

Piaget based this moral theory on two lines of research. The first of these was to observe children of different ages playing marbles, and ask them questions about the rules of the game. Children younger than five essentially had no rules at all. Between five and ten, there were rules, but the children saw them as fixed. Finally by the age of ten, the children were able to think of their own rules and recognise that these could be adopted by mutual consent.

Piaget's other technique was to present to children moral dilemmas, each consisting of a pair of stories. In one, a child deliberately caused a small amount of damage. In the other, the damage was accidental but much greater. Piaget asked children which of the characters deserved to be punished the most, and tried to find out not just their answers but the reasoning they used to arrive at them. As came out in his theory, younger children focused on consequences, while older children also took intent into account.

http://everything2.com/title/Piaget%2527s+theory+of+moral+development

Piaget's Stages of Moral Development

Morality of constraint (younger than 7 or 8 years)

- Children see rules as unchangeable and non-negotiable.
- A rule is a rule because an authority figure says it is.
- Children overlook intentions of the actor; morality is evaluated in terms of objective consequences.

Transitional period (between 7 and 10 years)

- Children spend more time with peers; rules can be changed.
- Children learn how to appreciate another person's perspective and consider intentions.

Autonomous morality (older than 10 years)

- Children believe that rules are social contracts that can be negotiated and re-negotiated.

Lawrence Kohlberg (1927-1987)

The Heinz Case [Kohlberg, 1963]

"A woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $200 for the radium and charged $2,000 for a small dose of the drug.

The sick woman's husband, Heinz, did not have enough money to buy the drug. He went to everyone he knew to borrow the money, but he could only get together $1,000. He told the druggist that his wife was dying and asked him to sell it cheaper. But the druggist said: 'No, I discovered the drug and I'm going to make money from it.' Heinz got desperate and broke into the man's store and stole the drug for his wife.".

Should Heinz have broken into the store and stolen the drug for his wife?

Why or why not?

Kohlberg's Stages of Moral Reasoning

Pre-conventional reasoning (Stage 1 and 2)

- Children are focused on punishment and how to avoid it.
- Children follow the law in order to avoid or to mitigate punishment.

Conventional reasoning (Stage 3 and 4)

- Children recognize that rules are social contracts and follow rules and laws in order to preserve and promote social relationships and social order.

Post-conventional reasoning (Stage 5 and 6)

- Reasoning according to ideals or moral principles.

Kohlberg's Stages of Moral Development

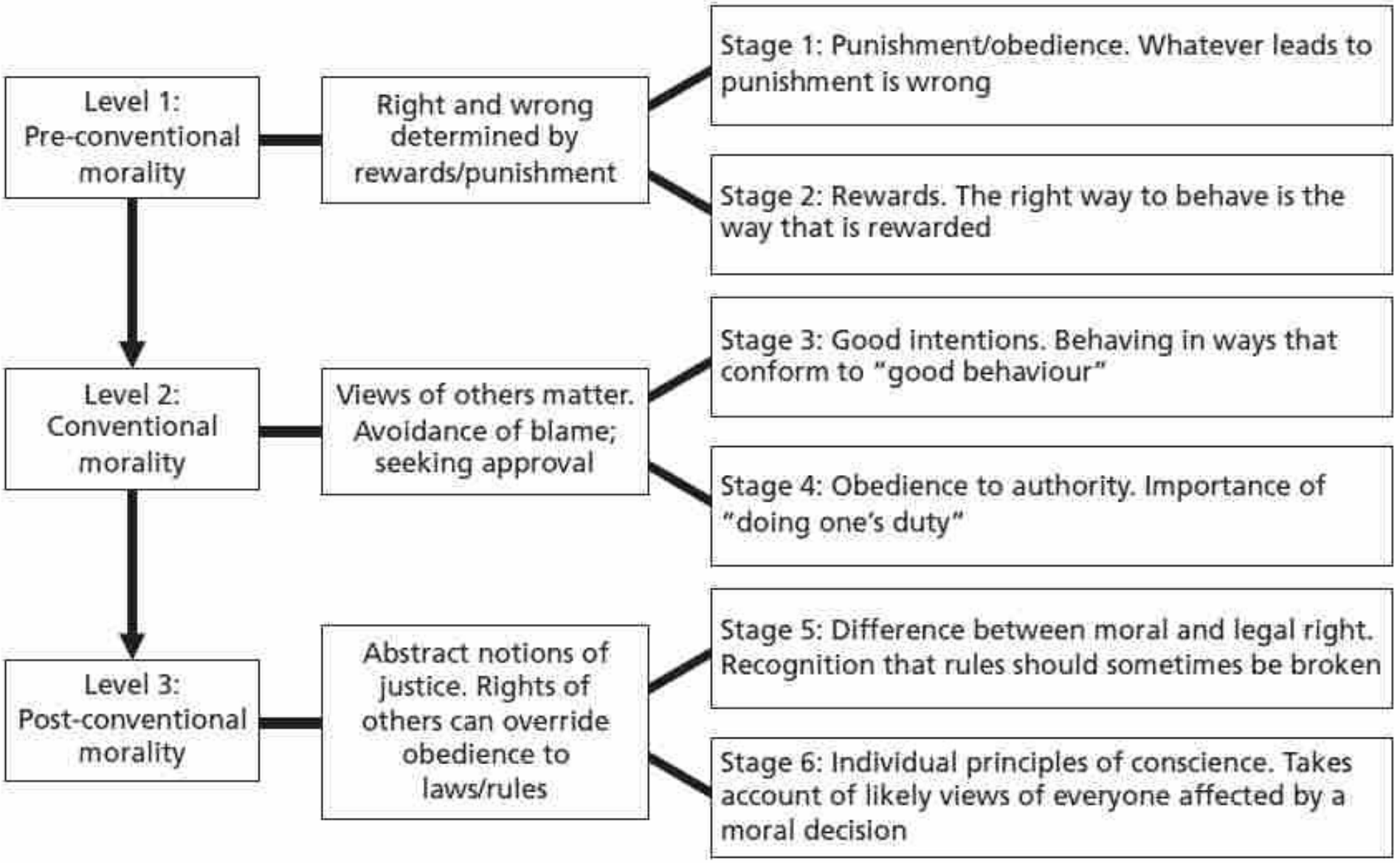


Table 4-1 **Kohlberg's stages of moral development**

Stage description	Examples of moral reasoning in support of Heinz's stealing	Examples of moral reasoning against Heinz's stealing
Preconventional Morality		
1. Avoids punishment	"If you let your wife die, you will get in trouble."	"You shouldn't steal the drug because you'll get caught and sent to jail if you do."
2. Gains concrete rewards	"If you do happen to get caught you could give the drug back and you wouldn't get much of a sentence."	"He may not get much of a jail term if he steals the drug, but his wife will probably die before he gets out."
Conventional Morality		
3. Gains approval/ avoids disapproval	"Your family will think you're an inhuman husband if you don't."	"It isn't just the druggist who will think you're a criminal, everyone else will, too."
4. Does duty to society/avoids dishonor or guilt	"If you have any sense of honor, you won't let your wife die because you're afraid to do the only thing that will save her."	"You'll always feel guilty for your dishonesty and lawbreaking."
Postconventional Morality		
5. Affirms agreed-upon rights	"If you let your wife die, it would be out of fear, not out of reasoning it out."	"You'd lose respect for yourself if you're carried away by emotion and forget the long-range point of view."
6. Affirms own ethical principles	"If you don't steal the drug you would have lived up to the outside rule of the law but you wouldn't have lived up to your own standards of conscience."	"If you stole the drug, you wouldn't be blamed by other people but you'd condemn yourself because you wouldn't have lived up to your own conscience and standards of honesty."

- According to Kohlberg, children everywhere passed through the stages in the same order but not every person made it to the same level.
- Gender and cross-cultural critiques
- Each of Kohlberg's stages of moral development is functional (self-serving) and changes with age, reflecting changes in the adaptive problems children and adults face (Alexander).

Carol Gilligan

What Evolutionary Theory Adds to Moral and Prosocial Development

The evolutionary psychology perspective rejects the idea that the acquisition of morality should be left to general purpose learning mechanisms.

Moral learning is constrained by learning mechanisms designed by natural selection.

1. Learning mechanisms of humans include ones specialized for solving the adaptive problems of the EEA.
2. Specialized learning mechanisms include content that led to learning, which would have been adaptive in EEA.
3. Developing children can 'learn' their culture or become socialized to the extent that these specialized learning mechanisms are designed for this purpose.

The Function of Morality

- The function of our moral psychology is to enable us to behave in the world in a way that maximizes our evolutionary fitness.

- Cognitive adaptations that support moral behaviours are part of a suite of social cognitive adaptations that allow us to be a large-group social species.

Social Behaviour and Fitness

- We have a complex social psychology that is unique to humans.
- The importance of social cognition and getting along with others in the EEA cannot be overstated.
- Ostracism would mean isolation and very likely lead to death.
- Moral psychology allowed people to remain living within the community.
- The social skills allowing for alliances and friendships and avoiding offences were a matter of life and death in the EEA.

Getting Altruism off the Ground

- The fact that humans and other animals behave altruistically was a puzzle for biologists. How can you explain an individual incurring a fitness cost in order to provide another fitness benefit?
- An early attempt to explain altruism was a group selection theory.
  - Individuals would self-sacrifice for the good of the group.
  - Group selection theory regards the group, not the individual or the gene, as the unit of selection.
  - However, the theory could not account for a selfish individual exploiting the group good.

Kin-selected Altruism

Kin-selected Altruism

- Altruism that is shaped by the fitness advantage provided by the increasing frequency of one's gene via the fitness success of genetic relatives.
- An allele can spread if an individual with that allele promotes the fitness of others who are closely related.
- According to the inclusive fitness theory, the probability of prosocial behaviours such as co-operation and altruism will increase with the relatedness between the actor and the recipient.

Even in contemporary societies, kin are a high proportion of adults' social networks.

Co-operation among Non-Kin

Reciprocal Altruism

- Helping another individual and then having the favour returned.
- If I give you an item that is of greater value to you than it is to me, you may someday repay me with an item that is of greater value to me than it is to you.
- The overall benefit for both parties is greater than the cost once the altruism is reciprocated; benefits exceed the costs, regardless of relatedness.

The Tit-for-Tat Strategy

- Starting out nice and repaying others' kindnesses but excluding anyone who has cheated you from further exchange.
- In species that practice reciprocal altruism, cognitive mechanisms are necessary to ensure that the tit-for-tat strategy is enforced.

- **Evolutionarily Stable Strategy**
  - A strategy which, if played by a number of individuals in a population, cannot be invaded via natural selection by an alternative strategy that is introduced at a low frequency.

Prisoner's Dilemma

		Person A	
		Accuse Partner	**Stay Quiet**
Person B	**Accuse Partner**	A: 5 years B: 5 years	A: 10 years B: 0 years
	Stay quiet	A: 0 years B: 10 years	A: 1 year B: 1 year

By-product Mutualism

- There can be benefits to hanging around others, perhaps because of their status or knowledge.
- As friendship grows, each person values the other more.

table 12.2 Three Evolutionary Pathways to Altruism

EVOLUTIONARY PATHWAY	DESCRIPTION
Kin-Selected Altruism	Behaviours that enhance the reproductive success of genetic relatives are selected for.
Reciprocal Altruism	Individuals can trade goods and services, and both increase fitness if a commodity has greater value to the recipient than to the donor.
By-Product Mutualism	There can be benefits to hanging around others, perhaps because of their status or knowledge. As the friendship grows, each person values the other more.

These theories describe three different evolutionary routes to altruism.

Moral Intuition or Rational Moral Decision-making?

Moral decisions are made by the human mind.

- Decisions about how to act are fast, spontaneous, and automatic.
- Next, cognitive machinery looks up principles, precedents, and reasons in support of our decisions.
- Finally, a coherent moral reason is assembled.

Moral Grammar (Hauser)

- The rules, heuristics, and intuitions that are a part of our human psychology and allow us to make moral decisions fast and automatically.
- Is acquired by specialized cognitive machinery, analogous to language acquisition.

“Why does everyone take for granted that we don’t learn to grow arms, but rather, are designed to grow arms? Similarly, we should conclude that in the case of the development of moral systems, there’s a biological endowment which in effect requires us to develop a system of moral judgment and a theory of justice, if you like, that in fact has detailed applicability over an enormous range.”

Chomsky

Specialized Cognitive Machinery Underlying Morality

- The premise of the evolutionary perspective on morality is that there is specialized cognitive machinery underpinning our moral thinking.
- There is evidence that brain damage affects moral reasoning (Damasio).
  - People with orbitofrontal damage behave as if they are not guided by normal moral intuitions (quick, automatic).
  - People who have acquired this brain damage early in life also showed abnormal performance on Kohlberg's measures of moral reasoning (slow, deliberate).
- People in different positions, with respect to power and strength, may behave differently regarding moral decisions.
  - Morality seems to be a creation of the human mind and can differ from situation to situation.

The Development of Social Exchange Reasoning

Delayed Social Reciprocation

- You give your altruistic act and have to trust that your social exchange partner will reciprocate in the future.
- In this case, it is necessary to detect and exclude cheaters.

'Cheater Detection'

- Specialized cognitive machinery in order for reciprocal altruism to evolve.
- Children as young as 3 years of age are good at cheater detection.
- Adults are better in detecting a cheater if a 'social contract' or an agreement between the two parties is involved.

figure 12.6 Cheater detection

In this task, subjects must evaluate the rule "If there is a 'D' on one side of the card, then there is a '3' on the other side of the card." Which card or cards would you have to turn over to see if the rule has been violated? Adapted from Cosmides & Tooby, 1992.

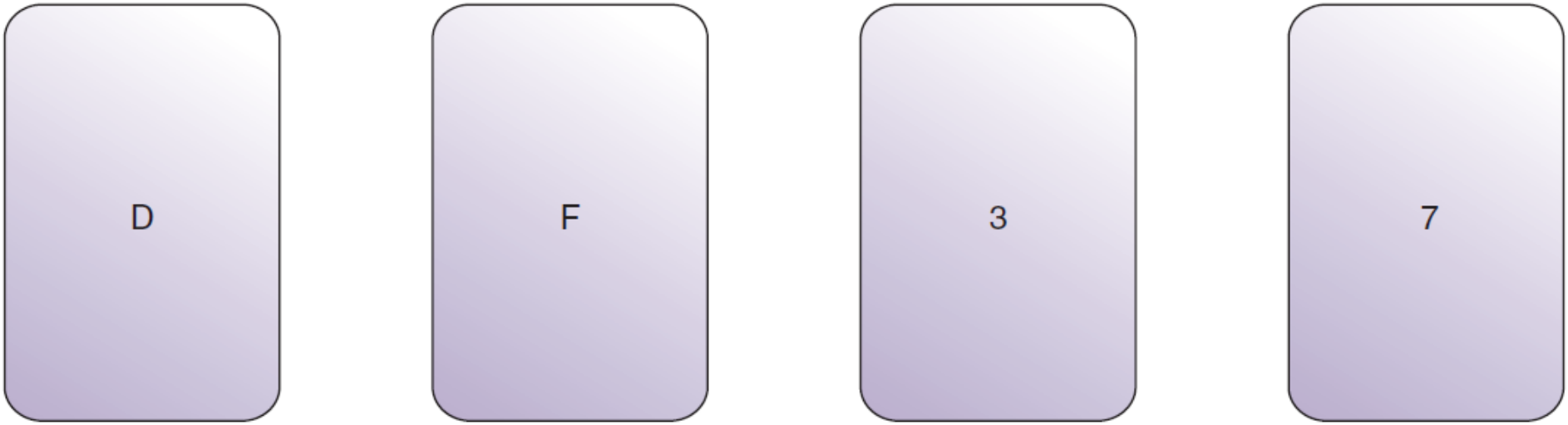
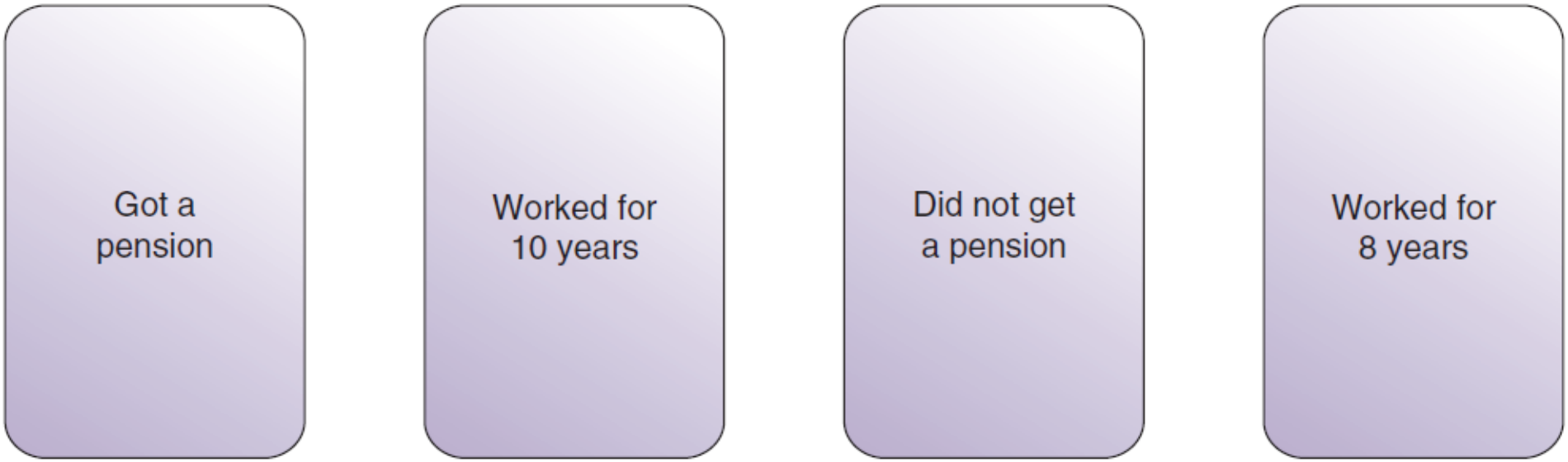


figure 12.7 Cheater detection

Now identify the cards that you need to turn over to see if the following rule has been violated: "If a previous employee gets a pension from the firm, then that person must have worked for the firm for at least 10 years." If this task is easier than the last, it is due to your cheater detection mechanism Adapted from Girgerenzer & Hug, 1992.



The Development of Sexual Morals

- In many species, incest is a bad evolutionary strategy because it leads to a greater chance that any resulting offspring will inherit the same harmful recessive alleles, which could lead to maldevelopment (inbreeding depression).
- Incest avoidance is part of the human cognitive architecture.

Westermarck Effect

- A psychological process that makes sexual attraction unlikely between two people who lived together as young children.
- This process is thought to be designed to avoid incest.
- Minor marriage

Universal Rules versus Conventions

- Some moral rules are cross-culturally *universal*, such as prohibitions, permissions, or obligations.
- *Conventions* are moral rules that vary from culture to culture, such as rules about nudity and rules about familiarity with people of various sexes, ages, and status levels.
- Children recognize differences between these types of rules.
  - They explain moral rules in terms of harm to others but explain conventions in terms of what is socially acceptable.
  - Conventional rules can be overturned by authority figures, but moral rules cannot.

Moral and Prosocial Development Milestones

Age	Skills
3 Years	Children solve the "cheater detection" problem (Cummins, 1996; Harris & Núnez, 1996).
Birth to 30 Months	Sensitive period for the Westermarck effect. People who live together in early childhood are unlikely to find each other sexually attractive.
Early Childhood	Sensitive period for culture-specific rules such as modesty and comfort with nudity.
Birth to 7 Years	Piaget's morality of constraints stage. Children take rules as unchangeable and non-negotiable.
7 to 10 Years	Piaget's transitional period. Children spend more time with peers and have more opportunities to negotiate. They learn that rules can change.
10 and Older	Piaget's stage of autonomous morality. Children believe that rules are social contracts that can be negotiated and renegotiated.
Mid-Childhood	Children may consider height as a factor in fairness. Taller children are expected to, and do, keep larger portions of resources when given the option of sharing those resources (Harbaugh et al., 2003).

Teaching Morals: Over-reward or Internalize?

- Parents who employ more authoritarian parenting styles have children who are less morally mature, will lack sympathy, and display little prosocial behaviour.

- Constructive parenting is associated with greater prosocial behaviour and internalization of prosocial values.

- The best parenting strategy to encourage prosocial behaviour in children is to ask the child to consider the effect of her behaviour on others.

	Supportive Parent is accepting and child-centered	**Unsupportive** Parent is rejecting and parent-centered
Demanding Parent expects much of child	**Authoritative Parenting** Relationship is reciprocal, responsive; high in bidirectional communication	**Authoritarian Parenting** Relationship is controlling, power-assertive; high in unidirectional communication
Undemanding Parent expects little of child	**Permissive Parenting** Relationship is indulgent; low in control attempts	**Rejecting-Neglecting Parenting** Relationship is rejecting or neglecting; uninvolved

EXAM Monday, April 20 Noon-2:00 p.m. Dalplex

Multiple Choice: 3 or 4 x 12 chapters	40 marks
Fill in the blanks: 3 x 12 chapters	36
True/False: 2 x 12 chapters	24
Short essays: 4 of 8 x 5 marks;	20
– Paragraphs	
– Chs 1-3, 4-6, 7-9, 10-12	_____
	120 marks

Exam counts 40% to final, so Exam Mark/3 = 40