Goals

- “Roadmap” of child/adolescent development

- Develop an understanding of infancy as a stage of child development using different theoretical points of view

- Identify concepts that will be important in clinical work and in future tests (i.e., USMLE)
Challenges

- Making some sense out of several (8) different theories, each of which is complex in itself

- Once you understand it at some level, remembering it in a way that’s useful to you

- Maintaining consciousness in the spite of your comfortable seats and the early hour
A 9-month-old girl maintains a sitting position without support and has begun to crawl on her hands and knees. When food is put into her high chair tray, she picks up each piece carefully with her thumb and forefinger and puts it into her mouth. When approached by unfamiliar person, she seems fearful and clings to her mother.

Q1. Are this child’s motor skills and social behavior consistent with her development?
Mr. And Ms B bring in their 2-week-old child to see you. Ms. B says that the baby has been eating and sleeping on and off for much of the day, but they notice that when he’s turned abruptly he has a dramatic response and begins to wail. You explain that this a is a reflex and she asks you what other inborn reflexes there are, and how long they will last, and whether new one will crop up.
Developmental Milestones
Physical (average age attained)

- 1 month
- 6 months
- 7 months
- 10 months
- 12-15 months
- 18 months
- 24 months
- 36 months
- 48 months

- Lift head
- Sit unassisted
- Roll over
- Crawl
- Walk
- Walk up steps
- Jump in place
- Ride tricycle
- Hop on one foot
Developmental Milestones
Fine Motor (average age attained)

- 4 months
- 9 months
- 14 months
- 18 months
- 24 months
- 36 months
- 48 months

- Grasp objects
- Pincer grasp
- Scribbles
- Tower of 4 blocks
- Imitates a vertical line
- Copies an O
- Copies a +
Developmental Milestones
Social/ personal (average age attained)

- 1-2 months
- 7-9 months
- 7-18 months
- 12 months
- 18 months
- 24 months
- 36 months
- 48 months

- Social smile
- Stranger anxiety
- Separation anxiety
- Drinks from a cup
- Uses a spoon,
- Puts on clothing, w & D
- Dresses with supervision
- Dresses without supervision
Developmental Milestones
Language (average age attained)

- 4-6 months
- 12 months
- 18 months
- 24 months
- 36 months
- Babbles
- Speaks real first word
- Names common objects
- Two-word sentences
- Says first and last names, colors
The Nature of Stages

• **Epigenetic principle of development:**
  – stages are sequential
  – mastery of stage required for successful development
  – failure to master $\Rightarrow$ maladjustment
  – based on Erikson

• **Actual development may follow a variable sequence from one stage to other**
  – ie some babies walk before they crawl
Stages of Development

- Infancy (first ~18 months) - birth until able to speak words
- Toddler (~1 to 3 years)
- Preschool (~3 to 6 years)
- School Age (~6 to 12 years)
- Adolescence (~12 to ?? years)
Theoretical Perspectives

- Neurologic
- Cognitive (Piaget)
- Psychosexual (Freud)
- Psychosocial (Erikson)
- Separation/Individuation (Mahler)
- Attachment (Bowlby)
- Temperament (Chess)
- Transactional
Neurological Development

• Rapid maturation and growth
  – Inborn reflexes: Moro, rooting, Babinski, endogenous smiling, orients to voice
  – 8 weeks: see shapes and colors
  – 16 weeks: stereoscopic vision, holds head up
  – 40 weeks: sits alone, pulls up to stand
  – 52 weeks: walks with hand held
  – 15 months: walks alone, crawls stairs

• Forms foundation for psychological development
Cognitive Development

• Pioneered by Jean Piaget (1896-1980)
• Studied his own children in formulating his theories
Piaget’s Theory of Cognitive Development

• Provides a framework for understanding the cognitive capabilities of children, informing effective communication and treatment

• Four stage theory
  – Sensorimotor (0-2)
  – Preoperational (2-6)
  – Concrete Operational (6-11)
  – Formal Operational (11-adult)
Sensorimotor Phase

- Birth to 24 months
- Sensory input and motor activity organized first
- Non-symbolic cognition: the world is what is perceived, with little or no internal representation of it
- Object permanence obtained late: objects exist even when out of sight (peek a boo)
Sensorimotor Thinking Structure

- **Schema (Schemata):** primitive operations
  - cognitive patterns assoc. w/ behavior pattern

- **Assimilation**
  - putting new stimulus events into existing schema

- **Accommodation**
  - modifying schema in response to stress or pressure
  - key for successful adaptation
Example

Schema: oral exploration (taste and texture) to explore new objects
Assimilation: new firm yellow object (lemon peel) is put into mouth
Accommodation: Schema modified so in future firm yellow objects are not put into the mouth
Sensorimotor milestones

~0 to 2 mos  suck, look, grasp (reflexes)
~2 to 5 mos  primary circular rxns (internal)
- intentional thumb sucking
~5 to 9 mos  secondary circular rxns (external)
- shaking rattle
~9 to 12 mos peek-a-boo
~12 to 18 mos tertiary circular rxns (variance)
- varying rattle shakes
~18 to 24 mos attains object permanence
Object Permanence

- “Object” refers to things (toys, faces)
- critical task that when mastered signifies the end of the sensorimotor stage
- understanding that objects exist independently of current perceptual information
- indicates the development of symbolic thought
Sigmund Freud
Freud (Psychosexual)

- **Oral Stage**: 0 to ~1 1/2 years
- **Anal**: ~1 1/2 to 3 years
- **Phallic/Oedipal**: ~3 to 5-6 years
- **Latency**: ~5-6 to 11-12 years
Oral Stage

• Centered on oral sensations and gratification (mainly feeding)
• Objective: trusting dependence on others, express needs without conflict
• Successful resolution: trust in others, self-reliance
• Unsuccessful: overly dependent, needy, demanding regarding others
Erikson: Psychosocial Theory

- **Trust v Mistrust** (0 to ~1 year)
- Autonomy v Shame/Doubt (~1 to 3 years)
- Initiative v Guilt (~3 to 5 years)
- Industry v Inferiority (~6 to 11 years)
- Identity v Role Diffusion (~11 to 21 years)
- Intimacy v Isolation (~21 to 40 years)
- Generativity v Stagnation (~40 to 65 years)
- Integrity v Despair (~65 years and up)
Trust v Mistrust

• Erikson felt that the essential psychosocial task of infancy was the establishment of trust (like Freud, but ↓ oral emphasis)

• Success: differentiation from the caregiver, object permanence, and a secure attachment with the caregiver, generating a sense of trust or early confidence

• Failure → depressive or schizoid personality
Trust vs. mistrust

Infants learn to trust that their caregivers will meet their basic needs, if these needs are not consistently met. Mistrust, suspicion, and anxiety may develop during feeding.
Autonomy vs. shame and doubt, children are focused on developing a greater sense of self control. Begin to assert independence, by walking away from their mother, picking which toy to play, and making choices about what they like to eat, to wear etc… toilet training
Initiative vs. guilt 3-5 years

Children develop an idea of who they are through play, interaction, and self-expression.

Too much criticism can lead to guilt.

Exploration
At Erikson’s psychosocial stage four, children mature and their level of self-awareness increases. They understand logical reasoning, scientific facts, and other matters that are typically taught in school. Children also become more competitive during this Erikson stage of development. They want to do things that other children of the same age can do. When they make the effort to perform a task and succeed, they develop self-confidence. However, if they fail, they tend to feel that they are inferior to others.
Identity vs Role Confusion
12-18 years

During adolescence, young people are expected to develop their sexual identity. This is gained through the discovery of oneself and in the course of finding meaning to their personhood. They may also experience identity crisis as a result of the transition from childhood to adulthood (gender identity disorder).

Some adolescents may feel confused and are unsure whether an activity is age-appropriate for them. Crisis at this stage may also be brought about by expectations from themselves and from people around them, e.g. their parents.
Intimacy vs Isolation
19-40 years
Stage six of the Erikson stages is very apparent for young adults who are in their 30s. People at this stage become worried about finding the right partner and fear that if they fail to do so, they may have to spend the rest of their lives alone. Young adults are most vulnerable to feel intimacy and loneliness because they interact with a lot of people in this phase of their lives. It’s not always a success story for every young adult to find someone with whom they can share a lifelong commitment. Some may choose to spend the rest of their lives as singles.
Adults who are in their 40s and 50s tend to find meaning in their work. They feel like at this point in their lives, they should be able to contribute something meaningful to the society and leave a legacy. If they fail to achieve this, they feel like they have been an unproductive member of the society.
Ego Integrity vs Despair
At the last stage of the Erikson stages, people are in their 60s or older who are typically retirees. It is important for them to feel a sense of fulfillment knowing that they have done something significant during their younger years. When they look back in their life, they feel content, as they believe that they have lived their life to the fullest. If they feel that they haven’t done much during their life, it’s likely that they will experience a sense of despair.
Mahler
(Separation/Individuation)

- Autistic (first month)
- Symbiosis (2-5 months)
- Differentiation (5-10 months)
- Practicing (10-16 months)
- Rapprochement (16-24 months)
- Object constancy ("object" as a psychological other, 24-36 months)
  - note different from object permanence of Piaget
Mahler: Autistic

• Autistic phase
  – 1st month of life
  – behavior is instinctive and serves only to satisfy biological needs
  – infant is unaware of “outside”
  – infant and mother are “one”
Mahler: Symbiotic

• **Symbiotic Phase**
  – 2nd through 5th month
  – infant develops dim awareness that needs are met outside of self
  – *social smile* develops
  – John Bowlby observed this in greater detail in his study of attachment
    • *social smile* for all comers
Mahler: Differentiation

• Differentiation
  – 5th through 10th month
  – compares what is, and what is not mother
  – infant separates from caregiver by pushing away
  – infant develops stranger anxiety
    • more common in babies with one caretaker
    • fear at the approach of a stranger
Mahler: Practicing

• Practicing subphase
  – 10 through ~16 months
  – the infant explores the environment (now able to independently crawl/walk)
  – caregiver serves as “home base”
  – separation anxiety occurs during this time (but requires object permanence)
    • anxiety at physical separation from mother, especially if mother no longer visible
Mahler: Rapprochement

- **Rapprochement crisis**
  - 16-24 months
  - child torn between wanting mother’s soothing support (dependence) and not wanting help (omnipotence)
  - “terrible two’s” where sometimes the child has temper tantrums of frustration
ATTACHMENT
Theory Begins:

Harry Harlow
Ethologist
1905-1981
Harry Harlow and the Rhesus Monkeys

• Studied infant monkey behavior: what are the most important features of a mother?
  – Two “mothering” options for infants:
    • terry cloth covered wire surrogate without food
    • wire only surrogate with food
  – Infants instinctively prefer the “comfort contact” of terry cloth over food

• Monkeys raised without mothers and peers are socially incompetent
Used ethology to inform human development

John Bowlby
1907-1990
What is Attachment?

• An enduring emotional bond uniting one creature with another, manifested through efforts to seek proximity and contact with the ‘attachment figure’, especially when under stress

• Reciprocal relationship gradually built over time

• Not the same as bonding, which is the mother’s feeling for her child
Bowlby’s Attachment Theory

- Attachment behavior (proximity seeking, eye contact, smiling) gives an evolutionary advantage by motivating caregiving
- Attached children may have stayed closer to their mother, and therefore were less susceptible to predators or getting lost
- Attachment behavior continues to maturity
  - tendency to seek family/friends in anxious situations
Attachment Timeline

• 0-7 months: generalized social behavior, somewhat specific to parents
• 8-24 months: Attachment to parents with stranger anxiety and protest at separation
  – depression if separation prolonged
• 2-12 years: Parents remain primary attachment figures, but network broadens
• 12-adult: Peers, romantic interests, and eventually children may become primary
Psychosocial Implications of Attachment Theory

• Attachment relationships become the template for social relations throughout the life span

• Therefore, the emotions and expectations arising from the infant-parent relationship are the basis for conceptualization of self and others in later years
  – anticipating soothing from others leads to ability to self soothe (security)
Dangers of Disrupted Attachment

- Increased separation anxiety, avoidant personality disorder, depressive disorders, delinquency, failure to thrive, learning disorders
René Spitz: Attachment Applied

- Studied infant behavior/health
- Observed 123 infants living in a nursery/shelter with mother as primary caretaker
- Babies lived there for 2 years
- 45 developed depressive type symptoms
  - developed over a 3 month period, beginning age 6-8 months (no earlier)
Spitz’s Depressive Syndrome

• 5 Stage process
  1. Sadness, crying, anxiety
  2. Withdrawn, rejecting of attention
  3. Motor retardation, decreased responsiveness
  4. Loss of appetite and weight (FTT?)
  5. Insomnia, facial rigidity (marasmus)
Why did they get sick?

- Departure of mother from nursery between age 6-8 months in each case
- No children with mothers present developed depression
- Condition resolved with return of mother
- Conclusion: syndrome is result of loss of primary caretaker (mother)
  - “anaclitic depression” (Harlow observed this in monkeys as well)
  - thus a disorder of attachment
Mary Ainsworth: Laboratory Assessment of Attachment

• Colleague of John Bowlby
• 1913-1999
• Studied attachment behavior in Africa, Toronto, England, and Baltimore
  – believed attachment behavior universal
• Developed “Strange Situation” test to assess attachment behavior
Mary Ainsworth’s “Strange Situation”

• 21 minute test with 8 steps:
  1. Introduction
  2. M + C
  3. M + C + S
  4. C + S
  5. C + M
  6. C
  7. C + S
  8. C + M

• Primary outcome measure is child’s reaction on reunion with Mother (Steps 5 + 8)
Attachment Classification

- Secure: Proximity seeking, pleasurable reunion; “I’m glad to see you”

- Insecure type
  - Avoidant/Anxious: Turn away, ignore, or offer mixed signals; “I don’t need you”
  - Resistant/Ambivalent: Anger, hostile, passive; “I hate you”
  - Disorganized: Incoherent, confused, or inconsistent behavior “I don’t know you”
Secure Attachment

• Known as Type B
• 60-70% of low risk sample
• Characteristics
  – share positive affect with caregivers
  – seek proximity on reunion
  – return to independent play easily
  – theorized to expect comforting from parents when they show distress
Insecure Avoidant Attachment

- Avoidant/anxious, or Type A
- 15-25% of low risk sample
- Characteristics
  - share little positive affect with caregivers
  - tend to ignore on reunion, make only brief contact
  - theorized to anticipate rejection from caregiver, thus they inhibit displays to avoid negative outcomes, instead distract themselves
Insecure Resistant Attachment

- Ambivalent/resistant, or Type C
- 10-15% of low risk sample
- Characteristics
  - preoccupied with caregiver’s presence, play little
  - extended distress on reunion, showing anger and proximity seeking along with resistance
  - theorized to anticipate inadequacy from caregiver, thus they are chronically activated, expressing at a low threshold at high intensity
Insecure Disorganized Attachment

• **Disorganized, or Type D**
  – added to classification scheme late
• **10-30% of low risk, up to 80% high risk**
• **Characteristics**
  – **demonstrate contradictory behavior:** in fearful situation (caregiver gone) -
    • **typical:** ↓ exploration, ↑ attachment behavior (distress at separation, proximity seeking)
    • **abnormal:** ↑ exploration with parent absent, with little distress
Type D, continued

- Other characteristics
  - stereotypies, mistimed movements, freezing, stilling, or slowed movements
  - theorized to fear the caregiver, and lack an overall strategy of behavior
Freud Recognized Attachment:

“Psychoanalysis has taught us that the individual’s emotional attitudes to other people, which are of such extreme importance to his later behavior, are already established at an unexpectedly young age. The nature and quality of the human child’s relations to people of his own and the opposite sex have already been laid down in the first six years of life. He may afterwards develop and transform them in certain directions but he can no longer get rid of them… All of his later choices of friendship and love follow upon the basis of the memory-traces left behind by these first prototypes”.

Some Reflections on Schoolboy Psychology, 1914
Temperament

• Innate behavior style
  – primarily genetically mediated

• New York Longitudinal Study (Chess and Thomas) of upper/middle class families
Describing temperament

• 9 Dimensions measured include
  – baseline activity
  – rhythmicity
  – approach or withdrawal
  – adaptability
  – threshold of responsiveness
  – reaction intensity
  – baseline mood
  – distractibility
  – attention span or persistence
Temperamental Clusters

• Easy: 40% of sample, predominantly happy and easy to care for
• Slow to warm up: 15%, have a “shy” personality
• Difficult: 10%, tough on caretakers
• Undifferentiated: 25%
Temperamental Clusters

Mood
Rhythmicity
Intensity
Adaptability
Approach

Easy
 Difficult
 Slow to warm up
Conclusions from Temperament

- The temperament of the child affects the behavior of the caretaker
  - difficult temperament may generate frustration, anger, guilt, and more negative parenting styles
  - easy temperament may be rewarding, generating positive feelings in parent, positive parenting
  - exemplifies genes affecting the environment

- “Goodness of fit”: the match between the child’s temperament and the parent’s personality and parenting skills
Transactional Model of Development

• “Nature v Nurture” too restrictive
• Focuses on interaction between genes and environment
  – light exposure required for sight to develop
  – relevance in conduct disorder
• Keep interaction in mind as other theories considered
"I've decided that I'd like to be the only child of sensitive, kindly patients with an indulgent grandmother and several rich and influential uncles."
Developmental Milestones
Physical (average age attained)

- 1 month
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