(Required) Archeological Data

Bones

Big Toe
Arched foot
Knee
Pelvis
Foramen Magnum
Canines
Other Teeth
Hands
Skull (brain per endocast)
Body size
Bone density
Hyoid bone
Basicranial flexure
Thorasic spinal column

Rift Valley, Africa
Eurasia

See Lecture 2 Timeline & Museum of Man notes

Stones

(Perishable Tools)
Oldowan tools...
  Tool to make a tool
Acheulian Tools...
  Bifacial handaxe
  Discoid (& Aimed throw)
Levallois (Prep Core)
Mousterian
Hafted tools
Late Stone Age (Upper Paleo)
Unchanging technologies
Flexibility, idiosyncracy
Control of Fire
Burial
Red Ocre
Jewelry
Musical Instruments
Cave paintings
Religious icons

Plus Evol Theory

See Lec 1

Phenotype & geneotype
Evol by Natural Selection...
  Variance in heritables
  Selective environment
  Differential reproduction
Teleological Error
Tinkering
Convergence...
  Homologue, Analogue
Indiv v Group Selection
Sexual Selection
Kin Selection
Reciprocal Altruism
Co-Evolution
Arms race ("ratchet")
Niche Construction
Genes & Memes

Plus Readings (Including listed - and other - issues)

Suddendorf & Corballis
Mental time travel, episodic memory, autonoetics, planning "WWWW" (esp When), recursion

Dunbar
Social functions of language, Gossip, Group & brain size, Abuse of data

Arbib
Mirror Cell System, F5 & Broca's, Hand to Mouth, Gesture to Proto-Speech, Syntax & composition historic

Donald
Memesis (imitative learning, pantomime, song), Language (lexicon, myth), External rep (symbolic artifacts, cumulative cult)

Falk
Motherese, Lullabye, Co-regulation, "Put the baby down", Furlessness, Alloparenting, The Sling

Laland et al
Niche construction, generating selection, bio-cultural co-evolution (In group/out group, maladaptives, support weak, etc.)

Indirect Data & Issues

Primates

Large-brained for mammals
Forward-facing eyes for depth
High visual acuity & color
Face perception
Gaze detection
Sit upright, can walk bipedal
Overhead reach
Opposeable thumbs
High tactile acuity hands, face
Fine motor control hands, face
Hand-eye-mouth coordination
Mirror Cell System
More omnivorous, larger brain
Extractive foraging
Rare tool use
Very rare collaborative forage
VERY rare teach

Gesture & facial expression
Duets, food calls
Pred&Resp-specific alarm calls

"Human Language" studies
  Symbol use
  Small lexicon
  Imperatives vs. Declaratives
  Human enculturation…
    Teach, Show, some ToM

Harlow: Social dependence
Grooming
Prolonged immaturity
Invest in few offspring
Paternal help in monogamy

Social Complexity
  Power not = Rank
  Coaltional behavior
  Social Tool Use (Mach Intel)
  Fairness

Brains

Isometric/Allometric scaling
Mosaic Evolution
Endocasts
Brain size
Regulator genes
White matter
Planum temporale
Left asymmetry
Wernicke's area
F5, premotor hand & mouth
Broca's area
Arcuate fasiculus
Lateralization
Basal Forebrain to Broca's
Limbic+Prefrontal System
OrbitoFrontal Cortex
Lateral Amygdala
Medio-Dorsal Thalamus
Anterior Principal Thalamus
Superior Temporal Sulcus
Mirror System
CIP, AIP
Canonical Neurons
Mirror Neurons
Frontal Pole (Area 10)...
  Cytoarchi: more space
Basal Ganglia
Ventral Dentate of Cerebellum
  "Non-motor" activity
Von Economo Neurons
Radiator Theory
- exapting thermoregulation

See **Guidelines for CHRONOLOGY & PAPER** on class website

Gesture & Speech

(See also **Brain** & **Bones**)
Hand & mouth
Lateralization of handedness
Iconic Gesture
Indexical Gesture
Onomatopoeia
Lang as attention direction
Vocal imitation
Prosody
Articulation
Cost of trachea dropping
Subassembly/Hier org
Combinatorics...
  Phonemes, Morphemes
  Syntactical embedding
  Colorless green ideas…
    sleep furiously
Narrative
  Who did what to who when
Pantomime
Reference
  Iconic vs. Symbolic
Mimetic to arbitrary
The Lexicon
Material symbols
Nicehe Construction
Naming in Apprenticeship
  - Professional vision labels
Human-scale re-presentation

Development

Recapitulation
Hand & mouth
Neonatal imitation
Pointing
Whole hand to finger control
Bimanual coord
Tertiary object use
Pair, pot & subassemble
Vocal lags hand control
Babbling
Babbling & hand rhythms
Attribute help/hinder

Vocal imitation
Motoric altriciality
Social precociality
Gaze games
Joint attention
Point & show
You-Me-It
Scaffolding
Teaching
Motherese
Grandmothers (Menopause)

Social Attention

Rank not = Power
Track relations of others
Base-camp, hunter/gather
Increased inter-dependence
Fission/Fusion
Differential access to info
Exploit / Inform
Theory of Mind
False Belief Task
Recursion
Hierarchical embedding
Machiavellian Intelligence
Deception
Act as if, Pretend
Poss & Imposs worlds
Controlled attention
Monitored attention
Counter deception
Self deception
Unpigmented sclera
Inform to redress diff access
Point, Show, Tell
Declaratives
Fundamental attribution error
Grice's Maxims of Coop
Rational Speech Act Theory
Epistemic engine
Hearsay
Info as commodity
Self Control

Cooperation

Accomplish together
Division of labor
Base-camp
Hunter/Gatherer
Niche Construction
Caching
Carry tools
  Bag? Knot? Suppress use?
Clothing - ecol & cult
Food sharing…
  Coop hunt, Give
Helping
Empathy
Reputation
Blame
Ethics, Fairness
In group-Out group
Self Control
  Stalk,plan,deceive,motherese
Reciprocal Altruism
Checking for Cheaters
Wason Selection task
Fundamental Attribution Error
  Attributing motives
Entrain to...
  Breathing, walking
  Rhythm, Melody
Vocal/haptic work sync
Imitation
  Pantomime, Iconic gesture
  Absent model
  Vocal imitation
Mimesis
Imitation as demonstration
Imitation as attention direction
Conformity
Innovation
Cultural norms
Narrative
  Act as if
  Plot as syntactical org
Explanation, asking WHY?
Persuasian