**Part 3 Study Guide**

**[Deacon] Symbolic Reference**

* Icon: Establish objects of perceptual experience
  + The smallest unit of information is a difference that makes a difference to an organism.
  + Resemblance, representing one in terms of another
* Index: Establish associations of perceptual experience
  + Association btwn 2 iconic objects of experience
  + Via evolutionary learning or within one’s own lifetime
  + Repeated physical/ temporal co-occurrence e.g. neural LTP, LTD
  + Sign of something other than itself
* Symbol: Establish conventional higher-order system for working with and extending iconic/ indexical relations virtually
  + (emergence) signs to represent iconic and indexical relations
  + Social convention, virtualised and shared
  + Construct knowledge that is stable
  + Could be another door
* Nothing is inherently icon/ index/ symbol, it depends on the interpreter

**[Tomasello] Cumulative Cultural Transmission and Evolution**

* Exploit knowledge and skills of conspecifics + ratchet effect to prevent backward slippage
* Development of many cognitive skills in a short period of time
* (1) Theory of Mind: ability to understand conspecifics as beings, we are all intentional agents with **intentional affordances** (distinguish goal from action)
* (2) Cultural Learning: not from but through the other
* (3) Sociogenesis: pooling of cognitive resources
* Culture is an ontogenetic niche for humans, a cognitive habitus
* Gesture: learnt via ritual and joint attention
* Brentano: intentional in-existence of mental phenomena

**[Lakoff and Johnson] Conceptual Metaphors**

* Embodied metaphors are cross-domain mappings arising from sensory-motor experience
* Primary metaphors are embodied
  + We acquire a large system of primary metaphors automatically and unconsciously
  + Many embodied experiences are universal 🡪 primary metaphors are universal
* The Integrated Theory of Primary Metaphor
  + (1) Johnson’s theory of Conflation 🡪 conflate hugging and physical closeness, later a differentiation stage to form an indexical relation of a metaphor
  + (2) Grady’s theory of Primary Metaphor, neural connections made during conflation (Hebbian network), LTP
  + (3) Narayanan's neural theory of metaphor: sensorimotor source to subjective experience target; reinforcing connections via recurrent firing
  + (4) Fauconnier and Turner's theory of conceptual blending 🡪 coactivation of distinct conceptual domains; either using multiple primary metaphors or using culture
* Abstract thought based on conceptual metaphors, which are based on physical experiences 🡪 mind is embodied

**[Goh] Culture and Eye Movements**

* Culture affects what our eyes focusses on
* Analytic 🡪 ventral what stream (Western), Holistic 🡪 dorsal where stream (East Asian)
* Finding: Westerners focus longer on objects, East Asians have more saccadic eye movements
  + Fixation vs saccades (movements); patterns are dependent on intention of person
* Counter example: Westerners scanned more facial regions, East Asians focussed on central/ eye region
* Issues: could be conflating culture and race

**[Heritage] Maintaining Institutional Realities**

* Social action organised wrt to reflexivity (context-based action) and accountability
* Bottom-up: Individual actions simultaneously redefine institutional realities
  + Vs top-down view of Durkheim that institutional realities affect the individual
* Garfinkel’s breaching experiments: ethnomethodology (how do people make sense of their everyday life)
  + Invisible and internalised underlying rules
  + Agnes: examined and reproduced invisible rules of being female to be accountable
  + Self-perception: wanting to fit in? wanting to veer from identity?
* Institutionalized identities and social order as a ‘seen but unnoticed’, perpetually enacted, moment-to-moment accomplishment
* Alisdair MacIntyre on sharing a culture: the ability to understand and be understood are the same ability
* Conversational interaction and intersubjectivity based on linked action

**[Polanyi] The Tacit Dimension**

* We know more than we can tell (wissen – knowing what vs koennen – knowing how)
* Attend from first term (proximal) to second term (distal)
* Proximal: specific parts of entity, vs distal: outcome of joined specifics (the referent)
* (1) Functional: we know the proximal term only by relying on our awareness of it for attending to the distal
* (2) Phenomenal: become aware of/ anticipate proximal terms based on the understanding they invoke in us
* (3) Semantic: proximal terms take on meaning to signify distal terms. Interpretive efforts transpose meanings
* (4) Ontological: we are aware that proximal + distal join to form our experiences, and we rely on this awareness of proximal to understand distal.
* Visual perception: transpose meaning away from bodily experiences
* Applies to gestalt processing and psychology
* Indwelling: stepping in and experiencing firsthand (“empathy”)
* Interiorisation: make external things function as proximal
  + When we interiorise things, we are indwelling in them
  + Attend from theory to functional relationships
  + Use the interiorisation to interpret experience
  + “relevant next” sequence organisation
* Clever Hans was detecting facial twitches (unknowingly)
* Evolution is always purpose-oriented

**[Lotz] ‘Seeing’ is a culturally and historically situated practice**

* Historical: how the images were even produced
* Cultural: intersubjectivity of seeing; exchanging thoughts and feelings, in seeing we interact with another subject (which could be the env, our experiences/ umwelt, another person)
* We do not see then interpret (layered model), interpretation can occur before seeing
* Noticing: organising what we see (Lotz: no difference in seeing and noticing)

**[Mumford] Technology can shape perception and understanding**

* Technological Evolution occurs at a quick scale; it is a door for perception and shapes the way humans must behave to thrive
* Machine (specialisation) vs tool (flexibility): differs in degree of automation
* Measuring time: synchronising actions of men 🡪 time-rationing
* Mechanical Universe: physical science into a measurable and observable phenomenon
* Mechanistic worldview: Made us focus on quantising over qualitative aspects, a means to interact with the external, subdivision and specialisation of learning

**[Postman] The effect of the media**

* The medium is the metaphor (effect of using smoke signals vs words)
* Telegraphy/ press
  + (1) Irrelevance: “news from nowhere” decontextualised information that is not directly relevant to us
  + (2) Impotence: increase in information-action ratio
  + (3) Incoherence: fragmented and discontinuous language to be quick
  + Intelligence meant knowing of lots of things, not knowing about them
* Television/ photography
  + no syntax or context 🡪 graphic revolution (photos are icons, words are symbols)
  + Gave isolated headlines the illusion of context (“pseudocontext”)
* TV (meta medium that affects how we interact with other media)
  + Peekaboo: self-contained world, should not discuss “serious” issues in entertainment manner
* Orwellian – culture is a prison vs Huxleyan – culture is a burlesque (treated as joke)
* New media; two-way interaction
* Relation to Clark: now, we do not have to really remember anything

**[Clark] Extended Cognition**

* Action-Oriented Representations of the world (umwelt: action gives meaning)
* Software, wetware, wideware
* Extra-neural memory and a means for symbol manipulation
  + Consequences of just-in-time cognition since we do not have to remember anything
* The mind is an essentially situated brain
* Kauffman: Evolution via the adjacent possible (makes things more likely to happen, but does not dictate they happen) vs Relevant Next
* Human mindedness is embodied, embedded, extended, enacted
* It is for the purposes of such back-and-forth interacting with the world on a moment-to-moment basis that perception has evolved

**[Sullivan] Tech-based assistive sensory and action substitution**

* Assistive technologies: improve functional capabilities of PWDs
* Sensory substitution: augment or replace senses vs Action substitution (e.g. via IoT)
* ATs increasingly becoming more multimodal and more accessible

**[Lewis] Attention**

* Attention is a resource that is limited
* Variable rewards training: unpredictability and possibility of disappointment is addictive
  + Exploits dopaminergic pathways
* Rewards of the tribe (social affirmation e.g. like button) vs hunt (something practical) vs self (accomplishment)
* Tailored algorithms
* Operant conditioning: association btwn checking notification and dopamine release
  + LTD due to loss of sensitivity to dopamine
* Pull-to-refresh mechanism gives illusion of control
* Internalising the medium of social media
  + How much control do we really have?
  + Regulation of psychologically-manipulative (subliminal) advertising?
* [link to Postman] Social media enables immediate action, beyond illusory context of TV

**[Tufecki] Networked microcelebrity activism**

* Making things ‘visible’ from outside the major institutional structures (power imbalance of the media)
* Who should be gatekeepers of this visibility?

**[McCombs et el] Agenda-Setting Influence of the Media**

* Correlation between media agenda and public agenda
* 1st Level: focus public attention on small number of issues due to the pervasive distribution of news; the most important problem
* 2nd Level: choosing which attributes of the issues to focus on
* 3rd Level: salience transfer of a more integrated image like the relations between objects and attributes
* Need for orientation: psychologically uncomfortable in new setting, need for orientation via media

**[Stjernfelt] Censorship**

* Censorship and surveillance: tech giants romanticise the idea of an online community
  + Digital umwelt
* Micro-targeting of content
* Sentiment analysis and back-end (hidden) digital identity

**[Petit] Sensory-enabling technologies**

* Visual-enabling (3d) and haptic-enabling (vibration)
* Multisensory integration and sensory congruency
* SETs create new environment for physical and virtual products to interact
* Human-computer interaction, mixed reality

**[Britton] Biohacking and cyborgs**

* Grinders: citizen scientists, but use their own body as the site of design
  + Reject current institutions, natural body and binary constructions 🡪 partial identities
* Extending the definition of human
* Proprioception; perception or awareness of the position and movement of the body
* Creating new functional cycles and alternative umwelten
* Open future of perceptual evolution