Neuroscience and Early Buddhism  Rick Maddock, MD  Sati Center, Redwood City  Aug. 31, 2019

Overview:
1. Introduction to the “Aggregates” and functional design of the brain
2. Perception
   - Lunch Break, followed by a short meditation period
3. Feeling tone
4. Intention
5. Emptiness and Self (not)

1. Fear is born from arming oneself. Just see how many people fight!
I’ll tell you about the dreadful fear that caused me to shake all over...
Seeing people locked in conflict, I became completely distraught.
But then I discerned here a thorn — hard to see — lodged deep in the heart.
It’s only when pierced by this thorn that one runs in all directions.
So if that thorn is taken out — one does not run, and settles down. ... –S. Nipata 4.15, transl. A. Olendzki

The Aggregates (Skandhas, or in Pali - Khandhas). These are five general categories of phenomena that characterize experience, and are susceptible to craving & clinging.

Rupa = form. This refers to the body and materiality in general.
Vedanā = feeling tone. This refers primarily to the basic sense of “valence” (pleasantness, unpleasantness or neither pleasant nor unpleasant) that accompanies all experiences.
Sanña = perceiving or recognizing. This refers to the “sense” we make of our experience. It includes perceiving and recognizing objects, actions, memories, facts, concepts, stories, etc.
Saṅkhāra = intention, fabrication, or making volitional responses. This refers to the intentions that give rise to thoughts, speech and actions. Saṅkhāras are that which react or respond to our experiences.
Viññāṇa = consciousness or awareness. This is the essential process underlying awareness of direct experience. Generally, all five aggregates can be accessible to conscious awareness.

Brains enable complex behavior via 3 interacting processes: Perception, Evaluation, and Intention
Intention processes (Saṅkhāra) are a specialization of the frontal cortex (blue area in color handout)
Perception processes (Sanña) are a specialization of the posterior cortex (white area in color handout)
Evaluation processes (Vedanā) arise largely from more primitive midline regions (colored areas), and influence all brain function & experience
These three essential functions are also embodied at a microscopic level throughout the brain

Perception
2. "Now suppose that in the last month of the hot season a mirage were shimmering, and a man with good eyesight were to see it, observe it, & appropriately examine it. To him — seeing it, observing it, & appropriately examining it — it would appear empty, void, without substance: for what substance would there be in a mirage? In the same way, a monk sees, observes, & appropriately examines any perception that is past, future, or present; internal or external; blatant or subtle; common or sublime; far or near. To him — seeing it, observing it, & appropriately examining it — it would appear empty, void, without substance: for what substance would there be in perception?"- from Foam Sutta, SN 22.95 – transl. by Thanissaro Bhikkhu

“'Everything is': this is one dead end. 'Everything is not', this is another dead end. Without veering towards either of these dead ends, the Tathagata [Buddha] teaches the Dhamma by the middle...”
- SN 12.15 from Kaccayana Sutta on Right View, transl. by Stephen Batchelor
Feeling Tone
3. “All phenomena converge on vedana” -AN 10.58 Mula Sutta, transl. by Bhikkhu Analayo

4. “What underlying tendencies underlie each of the three feelings?”
   “The underlying tendency for greed underlies pleasant feeling. The underlying tendency for aversion underlies painful feeling. The underlying tendency for ignorance underlies neutral feeling.”
   “Do these underlying tendencies always underlie these feelings?”
   “No, they do not.” - MN 44, from Shorter List of Questions to Dhammadina, transl. by Bhikkhu Sujato

5. “If, by giving up a lesser happiness, one could experience greater happiness, a wise person would renounce the lesser to behold the greater.” –Dhammapada, verse 290, transl. Gil Fronsdal

Intention
When asked what is the purpose of a life of practice, Zen master Yunmen replied “an appropriate response.”

The Four Brahma Viharas (Divine Abidings)

Wise Intention - choosing the higher happiness (over sense desire), non-ill will and non-harming (benevolence)

6. "Intention carries a mind-state with it: bright or dark, steady or erratic. It can be gentle, or vigorous; and these states and the feelings that accompany them are food for the heart... Hence what to look for is not the feeling that arises from sense-contact, but that which accompanies intention... So the first Dhamma-accomplishment is that of turning the mind around from holding on to what it receives and attending to the roots of how it behaves. That shift allows you to place a simple and direct question into the depths of your mind, heart and nervous system: is the state or view or program that I’m running taking me into suffering and stress or out of it? from Kamma and the End of Kamma, Ajahn Sucitto

Emptiness and Not Self
7. “Sir, they say that ‘the world is empty’. What does the saying ‘the world is empty’ refer to?”
   “Ānanda, they say that ‘the world is empty’ because it’s empty of self or what belongs to self. And what is empty of self or what belongs to self? The eye, sights, eye consciousness, and eye contact are empty of self or what belongs to self.…” (ear..., nose..., taste..., touch...)
   The pleasant, painful, or neutral feeling that arises conditioned by mind contact is also empty of self or what belongs to self. They say that ‘the world is empty’ because it’s empty of self or what belongs to self.”
   -SN 35.85, The Empty Sutta, transl. Bhikkhu Sujato

8. “Mendicants, form is not-self. For if form were self, it wouldn’t lead to affliction. And you could compel form: May my form be like this! May it not be like that!’ But because form is not-self, it leads to affliction. And you can’t compel form: ‘May my form be like this! May it not be like that!’
   Feeling is not-self..., Perception is not-self..., Choices are not self..., Consciousness is not self...”
   -SN 22.59, The Characteristics of Not Self, transl. Bhikkhu Sujato

9. “Clinging to the five aggregates occurs in two principal modes, ... appropriation and identification... one either grasps them with desire and lust (chandarāga) and assumes possession of them, or one identifies with them, taking them as the basis for conceit or for views about one’s real self. In a phrase often met with in the Khandhasamyutta, we are prone to think of the aggregates, “This is mine, this I am, this is my self”... Here, the notion “This is mine” represents the act of appropriation, a function of craving (tanha). The notions “This I am” and “This is my self” represent two types of identification, the former expressive of conceit (maṇa), the latter of views (diṭṭhi).”
   -Commentary in The Connected Discourses, transl. by Bhikkhu Bodhi

The Case Against Reality, Why Evolution Hid the Truth from Our Eyes. Donald Hoffman, W. W. Norton, New York, 2019
The Island. Ajahn Amaro and Ajahn Pasanno, https://www.abhayagiri.org/books/451-the-island
Seeing satisfaction as if it’s in the object

Seeing liking and wanting arising in the mind