

Radical Openness Handout 2.1

The RO DBT Neuroregulatory Model of Emotions

Neuroception ^a of Evocative Cues ^b					
	Safety Cue	Novelty Cue	Rewarding Cue	Threatening Cue	Overwhelming Cue
<i>Primary neural substrate response</i>	PNS ^c -VVC ^d engaged	PNS-VVC withdrawn without SNS ^e activation	SNS-E ^f (excitatory) engaged	SNS-D ^g (defensive) engaged	PNS-DVC ^h engaged
<i>ANS system triggered</i>	Social safety engagement system (<i>adaptive function</i> : enhances intraspecies communication, facilitates social connectedness)	Orienting and primary appraisal system (<i>adaptive function</i> : provides a quick means to identify and appropriately respond to environmental threats or rewards)	Excitatory approach system (<i>adaptive function</i> : promotes goal-pursuit behaviors that maximize goal attainment)	Defensive avoidance system (<i>adaptive function</i> : promotes defensive fight and flight behaviors that maximize harm avoidance)	Emergency shutdown systems (<i>adaptive function</i> : conserve vital energy reserves needed for survival when SNS fight/flight/approach responses are ineffective)
<i>Primary action urge</i>	Socialize	Stand still	Approach or pursue	Flee or attack	Give up
<i>Autonomic responses</i>	Body is relaxed Breathing is slow and deep Heart rate is reduced	Body is frozen Breath is suspended Orientation is toward cue	Body is animated and vivacious Breathing is faster Heart rate is fast	Body is tense and agitated Breathing is fast, shallow Heart rate is fast Sweating	Body is immobile Heart rate and breathing is slowed Increased pain threshold
<i>Emotion words associated with interoceptive experienceⁱ</i>	Relaxed, sociable, contented, open, playful	Alert but not aroused; curious, focused, evaluative	Excited, elated, passionate, goal-driven	Anxious or irritated, defensively aroused	Numb, unresponsive, trancelike, nonreactive, apathetic, insensitive to pain

	Safety Cue	Novelty Cue	Rewarding Cue	Threatening Cue	Overwhelming Cue
<i>Impact on social signaling</i>	Social signaling enhanced	Social signaling capacities momentarily suspended	Empathic perception impaired; individual still expressive	Empathic perception capacities and prosocial signaling capacities both impaired	SNS fight/flight/approach responses withdrawn; social signaling irrelevant
<i>Action or expression (overt behavior or social signal)</i>	Effortless eye contact and facial expressions Listening to and touching others Appearing approachable, sociable, receptive, open to exploration	Orienting response (“What is it?”) Stopping, looking, listening	Excitatory approach Goal-driven behavior Expansive gestures Insensitivity to others’ facial expressions and subtle social cues	Constrained facial expressions, tight gestures Monotonic voice Averted gaze or hostile stare Fight-or-flight response	Flat, unexpressive face Monotonic voice Slow speech Dissociation, swooning, fainting

^aThe term *neuroception* denotes how a person appraises or assesses evocative stimuli. Primary appraisals are quick evaluations, elicited without conscious awareness and originating at the sensory receptor level. Secondary appraisals are slower, top-down reappraisals of primary evaluations; they involve evolutionarily newer central cognitive and conscious levels of emotional processing.

^b A *cue* is an emotionally evocative stimulus that occurs inside the body (a happy memory, for example), outside the body (an unexpected loud noise), or as a function of context (the time of day).

^cPNS = parasympathetic nervous system.

^d PNS-VVC = ventral vagal complex (“new” vagus) of the parasympathetic nervous system; social safety system.

^e SNS = sympathetic nervous system; activating system.

^f SNS-E = SNS excitatory approach system.

^gSNS-D = SNS defensive avoidance system.

^h PNS-DVC = dorsal vagal complex (“old” vagus) of the parasympathetic nervous system; shutdown system.

ⁱ The term *interoceptive* refers to emotion-based phenomena and sensations occurring inside the body.

Radical Openness Handout 2.2

Main Points for Lesson 2: Understanding Emotions

1. Our neurosensory system is constantly scanning the world and ourselves for the presence of cues or stimuli relevant to our well-being.
2. Our brains are hardwired to detect and react to five broad classes of emotionally relevant stimuli or cues.
3. Safety cues are stimuli associated with feeling protected, secure, loved, fulfilled, cared for, and part of a community or tribe.
4. Novel cues are discrepant or unexpected stimuli that trigger an automatic evaluative process designed to determine whether the cue is important for our well-being.
5. Rewarding cues are cues appraised as potentially gratifying or pleasurable.
6. Threatening cues are cues appraised as potentially dangerous or damaging.
7. Overwhelming cues trigger our emergency shutdown system.
8. We are never unemotional, because we are always in one of the five emotional-mood states.
9. Broadly speaking, when one emotional system is on, the other four are off or inhibited.
10. Finally, when an emotional response tendency is ineffective, we move to another neuroregulatory response.

Radical Openness Worksheet 2.A

Identifying the Different Neural Substrates

Instructions: During the coming week, be on the lookout for experiences and events linked to changes in body sensations and mood states (for example, felt suddenly very hot, unexpectedly felt keyed up, without warning was suddenly very tired, a headache rapidly came on, all of a sudden began to sweat). Use the following skills to identify which of the five emotional response systems may have been involved and to pinpoint the name of the emotion you may have been experiencing.

Step 1. Describe the cue that triggered your emotional response.

Use the following questions to facilitate your description.

- *Did the cue occur inside your body—for example, a memory about an ex-partner?*
- *Did the cue occur outside your body—for example, a loud bang, a beautiful sunset?*
- *To what extent did contextual factors matter—for example, time of day, season of the year?*

Describe other features of the emotion-eliciting cue.

Step 2. Use your body to identify the emotional system triggered by your cue.

Place a checkmark in the box next to the statement that best describes how your body felt.

- ☐ My body felt relaxed and calm (social safety cue).
- ☐ My body felt alert and focused (novelty cue).
- ☐ My body felt energized and powerful (rewarding cue).
- ☐ My body felt tense, agitated, and hot (threatening cue).
- ☐ My body felt numb and detached from reality (overwhelming cue).

Describe other body sensations.

Step 3. Observe how you socially signaled.

Place a checkmark in the box next to the questions that best address your experience.

- ☐ Was it easy to make eye contact or express your emotions? Was your voice tone easygoing? Did you touch or reach out to someone? (likely the parasympathetic social safety system)
- ☐ Did you suddenly find yourself standing still and gazing intently? Or listening carefully? (likely novelty-evaluative system)
- ☐ Were you highly expressive, talkative, or using expansive gestures? Did it require effort to listen to others? Did it seem like you had missed something important that another person had said or done during an interaction but you were unable to identify it? (likely SNS excitatory arousal system)
- ☐ Did you find it difficult to smile without feeling phony? Was your facial expression flat or stony? Did you avert your eyes or stare intensely? Did your voice tone sound flat or strident? Were your gestures tight and constrained? (likely SNS defensive arousal system)
- ☐ Were your face and body expressionless? Were your body movements slow? Was your speech rate slow and your voice tone flat? Did you stare vacantly? (likely parasympathetic shutdown system)

Describe other social signals you observed.

Step 4. Describe if there was someone with you who experienced the same external cue or trigger but signaled a different response to you.

Record other emotional response tendencies or reactions.
