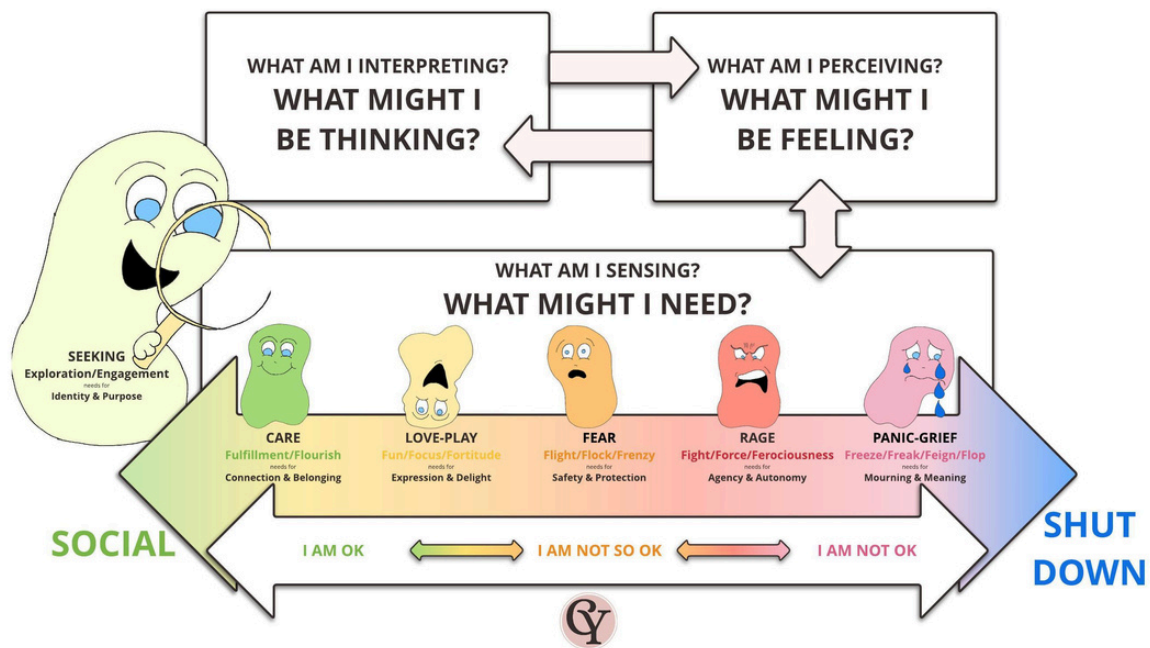


Emotional-Motivational Circuits



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Whilst this information utilizes the below-mentioned evidence-based research this diagram and the information provided henceforth is conceptual and a subjective interpretation of the data.

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Overview

SEEKING Circuit

Curiosity | Creativity | Capacity
Exploration | Engagement

- System of appetitive learning that facilitates identity and purpose
- Mediates a profound sense of exploration and engagement
- Awakened particularly by the desire to satisfy innate core needs including physiological, psychological, and relational needs.
- Is beyond the bounds of the divisible systems of sequential activation (i.e., VCC, SNS, DVC) as it is the circuit by which all other emotional-motivational circuits are energised

CARE Circuit

Connection | Compassion | Coherence
Fulfilment | Flourishing

- System of nourishment that facilitates connection and belonging
- Mediates a profound sense of fulfilment and flourishing
- Awakened particularly in resonance to Other's nurturance needs
- Social engagement and an activation of the ventral vagal complex

LOVE-PLAY Circuit

Connection | Compassion | Coherence
Fun | Focus | Fortitude

- System of social development that facilitates expression and delight
- Mediates a profound sense of fun, focus, and fortitude
- Awakened particularly in response to a curiosity of environment
- Social engagement and an activation of the ventral vagal complex alongside the sympathetic nervous system

FEAR Circuit

Apprehension | Anxiousness | Agitation
Flight | Flock | Frenzy

- First system of defence that facilitates safety and protection
- Mediates an instinctual drive to escape any perceived danger
- Awakened in a reactive response of a threat toward Self or Other
- Social Danger and an activation of the sympathetic nervous system

RAGE Circuit

Agitation | Apprehension | Aggravation
Fight | Force | Ferociousness

- Second system of defence that facilitates agency and autonomy
- Mediates an instinctual drive to dominate via modes of 'attack'
- Awakened in a reactive response to scarce resources or when the capacity to counter predation through escape is inhibited
- Social Danger and an activation of the sympathetic nervous system

PANIC-GRIEF Circuit

Discombobulation | Dissonance | Dissociation
Freeze | Freak | Feign | Flop

- System of distress and immobilisation that facilitates mourning and finding meaning in disconnection or loss
- Mediates an instinctual drive to shrink, blend, or shut down
- Awakened in a reactive response to ongoing thwarted defences or a sense of terror, life-threat, and alarmed aloneness
- Social distress or disengagement and an activation of the Dorsal Vagal Complex

CARE Circuit

Connection | Compassion | Coherence Fulfilment | Flourishing

- System of nourishment that facilitates connection and belonging
- Mediates a profound sense of fulfilment and flourishing
- Awakened particularly in resonance to Other's nurturance needs
- Social engagement and an activation of the ventral vagal complex

Commonly Associated Feelings

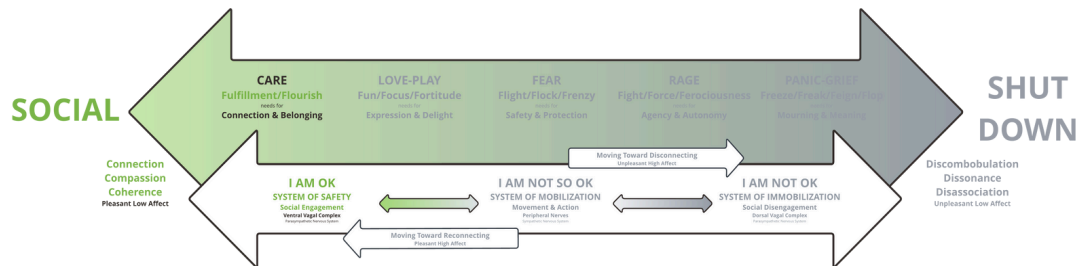
Affectionate	Encouraged	Open Hearted	Serene
Appreciative	Equanimous	Optimistic	Spacious
Calm	Expectant	Peaceful	Still
Centered	Friendly	Quiet	Sympathetic
Centered	Fulfilled	Quiet	Tender
Clear	Grateful	Relaxed	Thankful
Comfortable	Hopeful	Relaxed	Touched
Comfortable	Loving	Relieved	Tranquil
Compassionate	Mellow	Satisfied	Warm
Content	Moved		

Commonly Fulfilled Needs

Acceptance	Cooperation	Knowing	Self-Respect
Acknowledgment	Dependability	Mattering	Sensitivity
Affection	Ease	Mutuality	Shared reality
Appreciation	Empathy	Mutuality	Stability
Authenticity	Equality	Nurturing	Support
Awareness	Fellowship	Openness	Support
Belonging	Friendship	Openness	To be Heard
Belonging	Generosity	Partnership	To be Seen
Care	Harmony	Peace	Transparency
Clarity	Help	Presence	Trust
Closeness	Honesty	Presence	Truth
Communication	Honouring	Receptivity	Understanding
Community	Hospitality	Reciprocity	Valuing
Companionship	Inclusion	Recognition	Warmth
Compassion	Inspiration	Respect	Welcoming
Connection	Integrity	Security	Well-Being
Consideration	Interdependence	Self-Care	
Contribution	Kindness	Self-esteem	

CARE Circuit

Connection | Compassion | Coherence
Fulfilment | Flourishing



Physiology

Low arousal toward moderate arousal.

Easy respiration, resting heart rate, moist mouth, warm extremities, and an engaged social system.

Constriction of pupils, stimulation of saliva and tear glands, constriction of bronchi, slowed heart, stimulation of stomach, pancreas and intestines, stimulation of urination.

Neuroanatomy

Anterior Cingulate
Preoptic Area
Ventral Tegmental Area
Periaqueductal Gray

Neuromodulators

Oxytocin
Endogenous Opioids
Prolactin
Vasopressin
Serotonin
Gamma-aminobutyric acid (GABBA)

LOVE-PLAY Circuit

Connection | Compassion | Coherence
Fun | Focus | Fortitude

- System of social development that facilitates expression and delight
- Mediates a profound sense of fun, focus, and fortitude
- Awakened particularly in response to a curiosity of environment
- Social engagement and an activation of the ventral vagal complex alongside the sympathetic nervous system

Commonly Associated Feelings

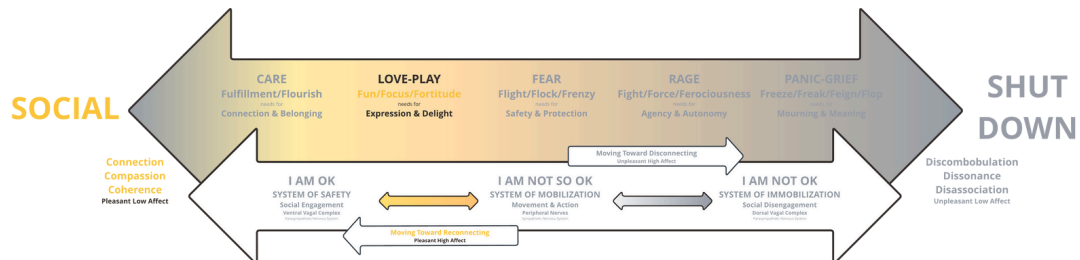
Absorbed	Eager	Fascinated	Pleased
Alert	Ecstatic	Giddy	Proud
Amazed	Elated	Glad	Radiant
Amused	Empowered	Happy	Rapturous
Animated	Enchanted	Inspired	Safe
Ardent	Energetic	Interested	Secure
Aroused	Engaged	Intrigued	Spellbound
Astonished	Engrossed	Invigorated	Stimulated
Awed	Enthralled	Involved	Surprised
Blissful	Enthusiastic	Joyful	Thrilled
Confident	Entranced	Jubilant	Tickled
Curious	Excited	Lively	Vibrant
Dazzled	Exhilarated	Open	Wonder
Delighted	Exuberant	Passionate	

Commonly Fulfilled Needs

Abundance	Ease	Innovation	Rest
Adventure	Energy	Inspiration	Simplicity
Adventure	Equanimity	Intimacy	Solidarity
Aliveness	Excellence	Joy	Space
Awareness	Excitement	Learning	Spontaneity
Awe	Exercise	Mastery	Stimulation
Balance	Feedback	Movement	Structure
Beauty	Flow	Mystery	Thriving
Challenge	Fun	Order	Tranquility
Clarity	Gratitude	Passion	Understanding
Communion	Harmony	Peace-of-mind	Vitality
Confidence	Humour	Play	Wholeness
Discovery	Information	Productivity	Wonder
	Initiative	Rejuvenation	

LOVE-PLAY Circuit

Connection | Compassion | Coherence
Fun | Focus | Fortitude



Physiology

Moderate arousal.

Increasing respiration, quick heart rate, less moist mouth, cool extremities, an engaged social system and sympathetic nervous system.

Dilation of pupils, inhibition of saliva glands, dilation of bronchi, acceleration of heart, stimulation of epinephrine and norepinephrine release, glucose release, inhibition of pancreas and intestines, inhibition of urination.

Neuroanatomy

Dorsomedial Diencephalon
Para-fascicular Area
Periaqueductal Gray

Neuromodulators

Endogenous Opioids
Endogenous Cannabinoids
Acetylcholine
Glutamate
Vasopressin

FEAR Circuit

Apprehension | Anxiousness | Agitation
Flight | Flock | Frenzy

- First system of defence that facilitates safety and protection
- Mediates an instinctual drive to escape any perceived danger
- Awakened in a reactive response of a threat toward Self or Other
- Social Danger and an activation of the sympathetic nervous system

Commonly Associated Feelings

Dread	Perturbed	Insecure	Turbulent
Afraid	Rattled	Leery	Uncomfortable
Alarmed	Restless	Overwhelm	Uneasy
Anguished	Shocked	Reluctance	Unsettled
Anxious	Startled	Reserved	Aversion
Apprehensive	Pressured	Restlessness	Appalled
Distress	Surprised	Sensitive	Cautious
Fearful	Troubled	Shaky	Contempt
Foreboding	Turbulent	Surly	Dejected
Frightened	Uncomfortable	Suspicion	Despondent
Hesitant	Uneasy	Tender	Disappointed
Mistrustful	Unsettled	Worry	Discouraged
Nervous	Vulnerability	Discomfort	Disgusted
Panicked	Ambivalence	Alarmed	Disinterested
Scared	Anxiousness	Disturbed	Dislike
Tense	Apprehension	Perturbed	Dismayed
Terrified	Confusion	Rattled	Dread
Wary	Credulous	Restless	Envy
Worried	Envy	Shocked	Gloom
Discomfort	Fragile	Startled	Hesitant
Alarmed	Guarded	Pressured	Jealousy
Disturbed	Helpless	Surprised	Repugnance
	Hesitation	Troubled	Repulsed

Commonly Associated Unmet Needs

Acknowledgment	Consideration	Empowerment	Order	Stability
Authenticity	Consistency	Familiarity	Predictability	Structure
Boundaries	Continuity	Freedom	Protection	Support
Clarity	Differentiation	Honesty	Reliability	Trust
Comfort	Dignity	Information	Safety	Understanding

FEAR Circuit

Apprehension | Anxiousness | Agitation
Flight | Flock | Frenzy

Physiology

High arousal that may move toward hypervigilance.

Fast respiration, forceful heart rate, dry mouth, cold extremities, and an engaged sympathetic nervous system.

Dilation of pupils, inhibition of saliva glands, dilation of bronchi, acceleration of heart, stimulation of epinephrine and norepinephrine release, glucose release, inhibition of pancreas and intestines, inhibition of urination.

Neuroanatomy

Sympathetic-adrenomedullary system
Hypothalamic-pituitary-adrenalcortical system
which includes the areas of the:
Amygdala
Hypothalamus
Periaqueductal Gray

Neuromodulators

Glutamate
Epinephrine
Norepinephrine

RAGE Circuit

Agitation | Apprehension | Aggravation
Fight | Force | Ferociousness

- Second system of defence that facilitates agency and autonomy
- Mediates an instinctual drive to dominate via modes of 'attack'
- Awakened in a reactive response to scarce resources or when the capacity to counter predation through escape is inhibited
- Social Danger and an activation of the sympathetic nervous system

Commonly Associated Feelings

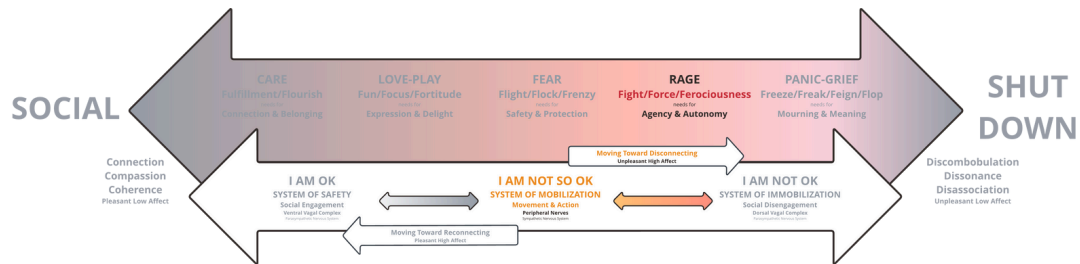
Aggravation	Disturbed	Irate	Sour
Aggressive	Edgy	Irked	Startled
Agitated	Embittered	Irritated	Surprised
Annoyed	Enraged	Jittery	Tension
Antsy	Exasperated	Livid	Troubled
Appalled	Frustrated	Miffed	Turbulent
Bitter	Furious	Mortified	Uncomfortable
Cranky	Fury	Outraged	Uneasy
Cross	Grouchy	Overwhelmed	Unfriendly
Discombobulated	Grumpy	Peeved	Unnerved
Disconcerted	Hostility	Perturbed	Unsettled
Disgruntled	Impatient	Rattled	Vengeful
Dismayed	Incensed	Repulsed	Vexed
Displeased	Indignant	Resentful	

Commonly Associated Unmet Needs

Acceptance	Equality	Participation	Space
Agency	Equity	Power	Spontaneity
Autonomy	Expression	Preservation	Structure
Choice	Freedom	Protection	Support Rest
Clarity	Honesty	Respect	Tranquillity
Congruence	Hope	Responsibility	Understanding
Consideration	Independence	Self-determination	
Consistency	Individuality	Self-governance	
Control	Individuation	Self-responsibility	
Differentiation	Integrity	Simplicity	
Dignity	Justice	Solidarity	
Empowerment	Liberty	Sovereignty	

RAGE Circuit

Agitation | Apprehension | Aggravation
Fight | Force | Ferociousness



Physiology

High arousal that may move to to over arousal or shutdown.

Fast respiration or hyperventilation, speedy forceful heart rate, dry mouth, cold or hot extremities, an engaged sympathetic nervous system that may disengage.

Dilation of pupils, inhibition of saliva glands, dilation of bronchi, acceleration of heart, stimulation of epinephrine and nor epinephrine release, glucose release, inhibition of pancreas and intestines, inhibition of urination.

Neuroanatomy

Sympathetic-adrenomedullary system
Hypothalamic-pituitary-adrenalcortical system
which includes the areas of the:
Amygdala
Hypothalamus
Periaqueductal Gray

Neuromodulators

Glutamate
Epinephrine
Norepinephrine
Substance P
Acetylcholine

PANIC-GRIEF Circuit

Discombobulation | Dissonance | Dissociation

Freeze | Freak | Feign | Flop

- System of distress and immobilisation that facilitates mourning and finding meaning in disconnection or loss
- Mediates an instinctual drive to shrink, blend, or shut down
- Awakened in a reactive response to ongoing thwarted defences or a sense of terror, life-threat, and alarmed aloneness
- Social distress or disengagement and an activation of the Dorsal Vagal Complex

Commonly Associated Feelings

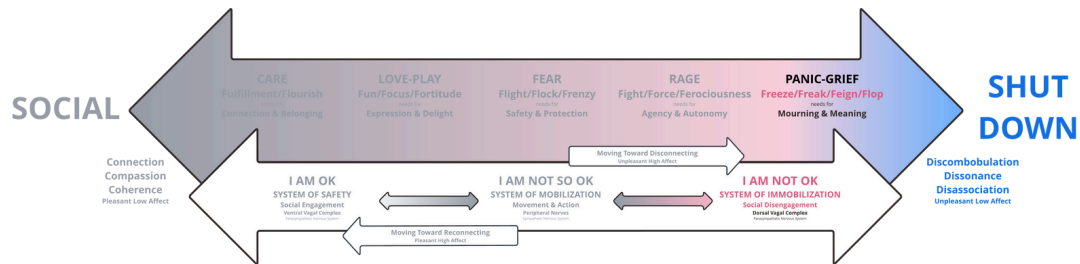
Agony	Disappointed	Indifferent	Remorseful
Alienated	Discouraged	Insecure	Removed
Aloof	Disheartened	Listless	Self-conscious
Anguish	Dismayed	Lonely	Shame
Apathetic	Distant	Longing	Sleepy
Ashamed	Distracted	Lost	Sullen
Baffled	Exhausted	Melancholy	Terrified
Bewildered	Fatigued	Miserable	Torn
Bored	Flustered	Mortified	Troubled
Burnt out	Forlorn	Mystified	Turmoil
Chagrined	Gloomy	Numb	Unhappy
Dazed	Grief	Overwhelmed	Uninterested
Depleted	Guilt	Paralyzed	Weary
Depressed	Heartbroken	Perplexed	Withdrawn
Despair	Heavy hearted	Petrified	Worn out
Despondent	Helpless	Pining	Wretched
Detached	Hopeless	Puzzled	Yearning
Devastated	Hurt	Regretful	

Commonly Associated Unmet Needs

Acceptance	Contribution	Hope	Mourning	Stimulation
Acknowledgment	Discovery of Self	Inclusion	Participation	To know the Self
Appreciation	Effectiveness	Individuality	Presence	To matter
Celebration	Efficacy	Inspiration	Purpose	Tranquillity
Clarity	Faith	Integrity	Self-Acceptance	Understanding
Consciousness	Growth	Meaning	Self-esteem	Value
Connection	Harmony	Morality	Serenity	Wholeness
Consideration	Healing	Motivation	Skill	

PANIC-GRIEF Circuit

Discombobulation | Dissonance | Dissociation
Freeze | Freak | Feign | Flop



Physiology

Low arousal to no arousal or shutdown.

Slow respiration or hypo-ventilation, very slow heart rate, dry mouth, cold extremities, and a disengaged social system.

Constriction of pupils, stimulation of saliva and tear glands, constriction of bronchi, slowed heart, stimulation of stomach, pancreas and intestines, stimulation of urination.

Neuroanatomy

Anterior Cingulate
Preoptic Area
Thalamus
Periaqueductal Gray

Neuromodulators

Endogenous Opioids
Endogenous Cannabinoids
Oxytocin
Prolactin
Glutamate
Corticotropin releasing factor (CRF)

SEEKING Circuit

Curiosity | Creativity | Capacity
Exploration | Engagement

- System of appetitive learning that facilitates identity and purpose
- Mediates a profound sense of exploration and engagement
- Awakened particularly by the desire to satisfy innate core needs including physiological, psychological, and relational needs.
- Is beyond the bounds of the divisible systems of sequential activation (i.e., VCC, SNS, DVC) as it is the circuit by which all other emotional-motivational circuits are energised

Physiological Survival Needs

Air, Shelter, Food, Water

Sensory receptive homeostasis of:

Proprioception (position), Nociception (pain),

Thermoreception (temperature), Mechanoreception (motion),

Chronoception (time), Equilibrioception (vestibular), Interoception (internal), Exteroception (external)

Psychological Survival Needs

Development and forward movement

Aspiration and anticipation

Accomplishment and achievement

Sense of flow and reciprocating hope in meaningfully valanced pursuits

Relational Survival Needs

Connection, protection, autonomy, and belonging with communicative meaning making.

Neuroanatomy

Nucleus Accumbens

Hypothalamus

Ventral Tegmental Area

Periaqueductal Gray

Neuromodulators

Endogenous Opioids

Dopamine

Glutamate

Neurotensin

Orexin