Expectations and Frustrations

The Experience-Dependent Brain and Drug Use

42nd Annual Kentucky School of Alcohol and Other Drug Studies

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What We'll Cover

1. **This Workshop's Etiological Perspective**

2. **Adolescent Well-Being, Needs, and Brain Development**

3. **The Role of Experience in Fostering Well-Being, Need Satisfaction, and Brain Development**

4. **Three Instinctual Drives and Heightened Experiences**

5. **Constructing Experiences That Heighten Cognition: Growth Beyond Drug Use**
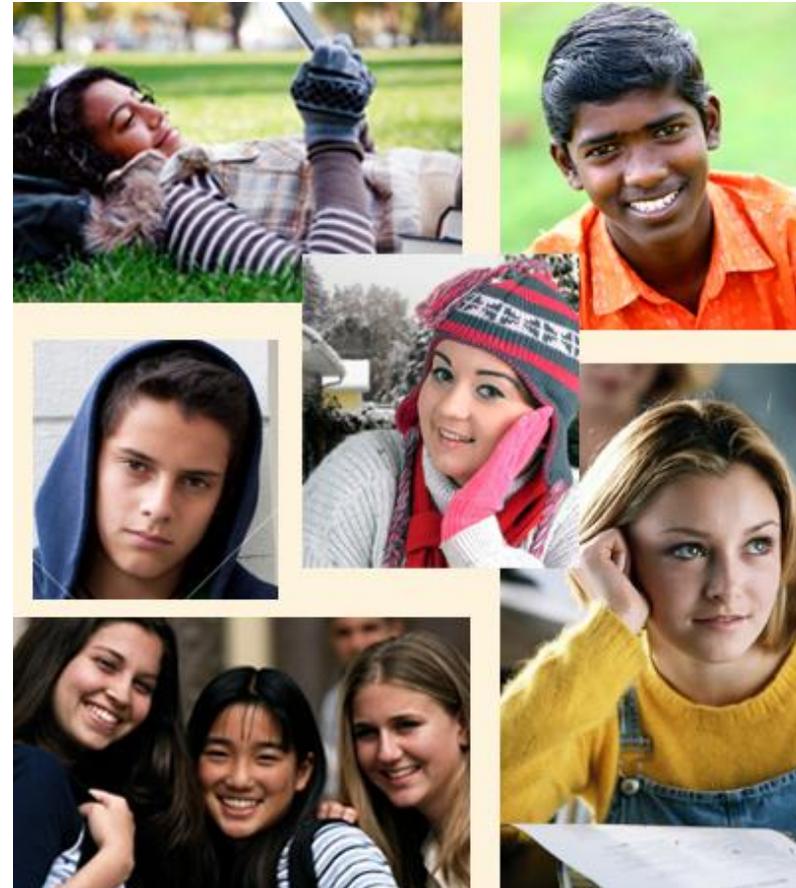
Learning and Performance Objectives

1. Able to explain the basics of adolescent development in relation to three hardwired survival traits and the drive for heightened meaning-giving experiences to which they become related during adolescence.

2. Understand how frustration derived from thwarted efforts to autonomously and competently construct meaning-giving experiences increases vulnerability to drug use.

3. Understand the vulnerability that is inherent in adolescent development and the extent to which drug use can become a maladaptive way of fulfilling expectations for one's growth.

4. Able to name the brain's four major systems and explain how the heightened cognitive functioning of the highest system is able to transcend dependence on drug use.

5. Able to use a research-informed framework for constructing intense experiences as a prevention and intervention strategy.

Instructional Approach

1. Pace according to your engagement and "getting it."
2. I rely on your willingness to be fully engaged.
3. Questions at any time. There are no "bad" questions.
4. Slides designed for ongoing reference- so not all will be talked about and some will be skipped and/or quickly mentioned.
5. Some group sessions/discussions we'll do as a whole group.
6. Some content will be covered at a pretty good pace.
7. Tell me what you don't understand or want more of.
8. We'll have scheduled breaks.
9. Take care of yourself.
10. Take your own break when you need to.

We'll Use a Variety of Learning Approaches
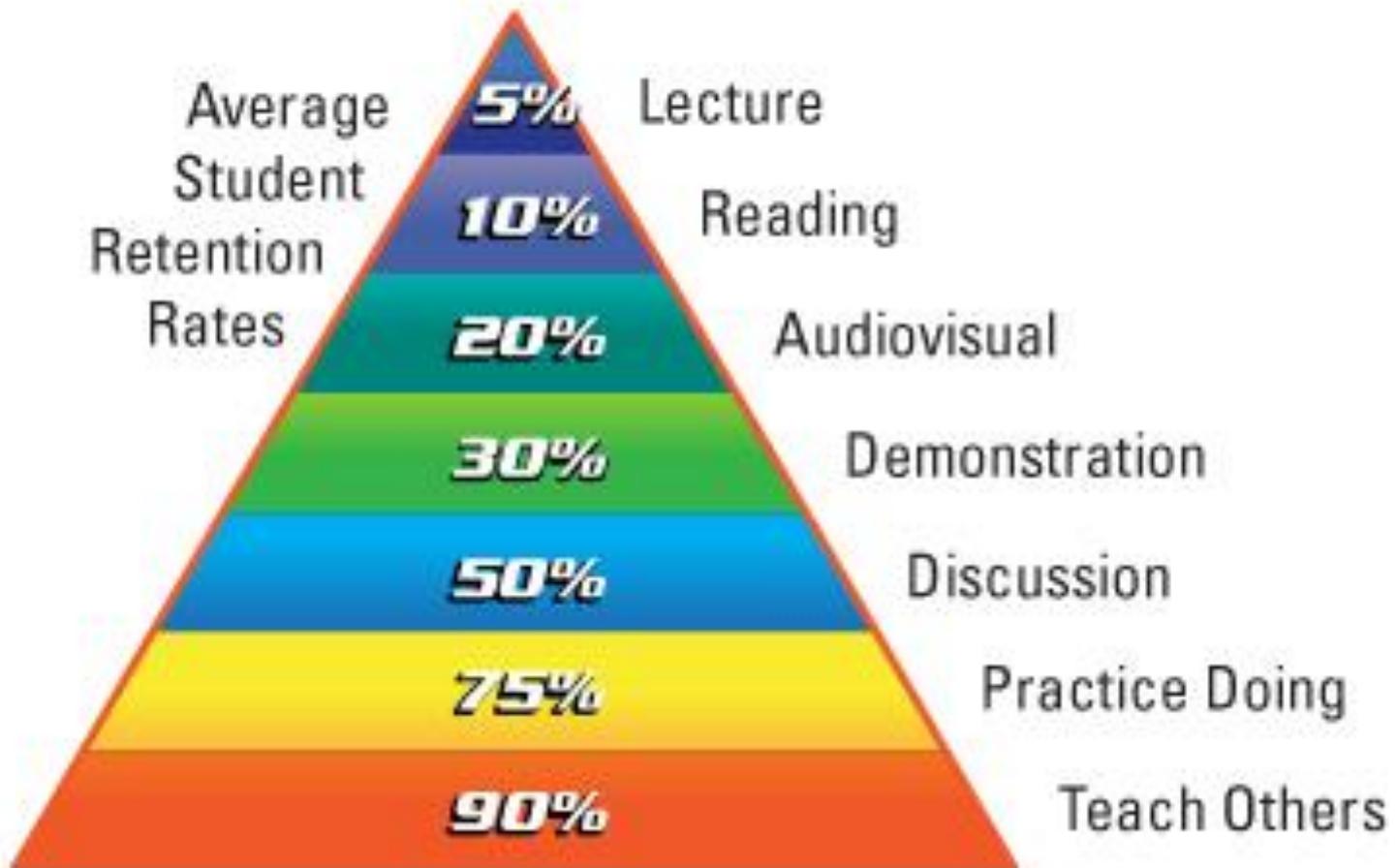
Where We're Headed:
Research-Informed Framework for Constructing Experiences as an Approach to Prevention and Intervention

Youth's Interests and Potentials

- Competencies and potentials (what he/she can do; innate gifts, special abilities, sparks)
- Potentials for character
- Potentials for connecting
- Potentials for confidence
- Potentials for caring

Discover

Youth's Aspirations and Goals

- Help youth see a vivid image of his or her Ideal Self
- Training in goal selection, pursuit and attainment.
- Training in skills and knowledge needed to attain goals.
- Training in working with others on behalf of common goals.

Train

Needed Heightened Experiences

- Contributing to self (purpose)
- Contributing to family
- Contributing to school
- Contributing to community
- Contributing to society
- Contributing to the world and planet

Mentor

Expected Consequences

- Changed and better self
- Changed and better family
- Changed and better school
- Changed and better community
- Changed and better society
- Changed and better world and planet

Validate

This Workshop's Etiological Perspective

Key Concepts

- **Causal Factors**
- **Science of Addiction**
- **Disease Model**
- **Developmental Model**
- **Etiology**
- **Frustration**
- **Compensation**
- **The Authentic Self**
- **Sparks**

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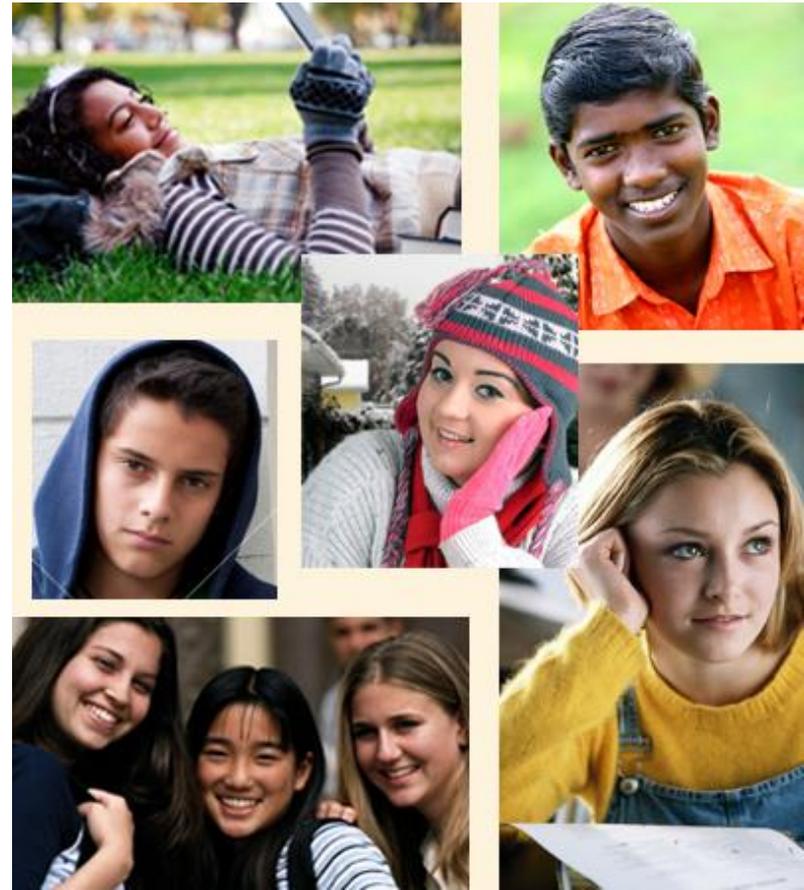
Causes of Adolescent Drug Use
-OR-
Why Some Adolescents Become Drug Users

1. **Form some groups.**
2. **Share views on why some youth might become drug users.**
3. **Try to organize your group's causal factors into categories such as family, peers, media, etc. Any category is allowed.**
4. **Choose someone to do a quick report-out.**

The Science of Addiction
## Well-Established and Most Practitioners are Familiar With It

DRUGS OF ABUSE TARGET THE BRAIN'S PLEASURE CENTER
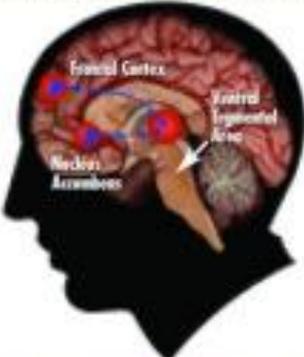
Brain reward (dopamine) pathways

These brain circuits are important for natural rewards such as food, music, and sex.

Drugs of abuse increase dopamine
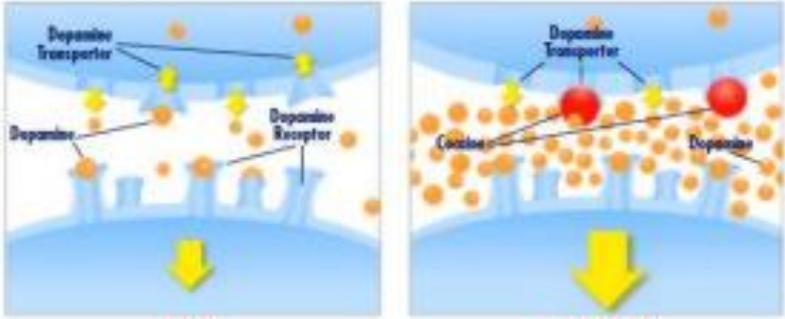
FOOD

COCAINE

Typically, dopamine increases in response to natural rewards such as food. When cocaine is taken, dopamine increases are exaggerated, and communication is altered.

The Disease Model

What is Addiction?
Addiction is A Brain Disease
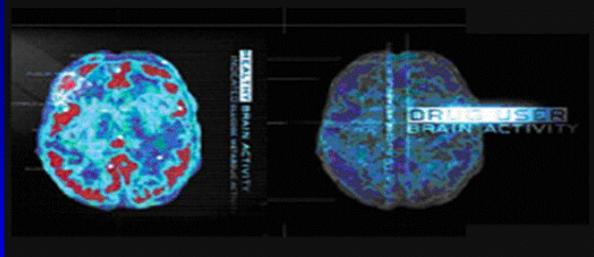
- Characterized by:
  - Compulsive Behavior
  - Continued abuse of drugs despite negative consequences
 - Persistent changes in the brain's structure and function

DRUGS OF ABUSE TARGET THE BRAIN'S PLEASURE CENTER
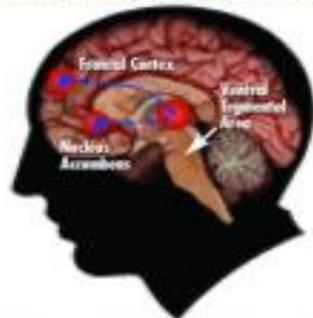
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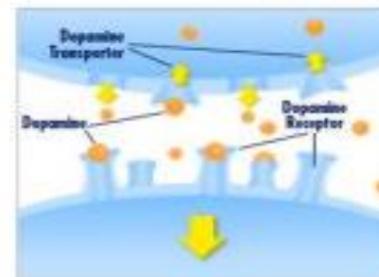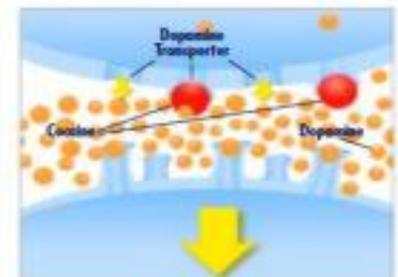
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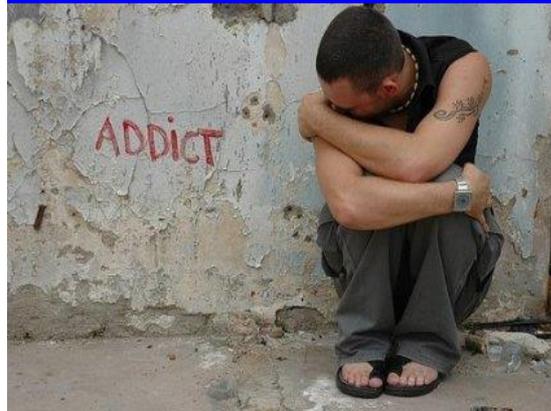
A Developmental Model: Experience-Dependent Brain
(Expands Rather than Negates the Disease Model)

The disease theory, and the science sometimes used to support it, fail to take into account the plasticity of the human brain. Of course, "the brain changes with addiction, but the way it changes has to do with learning and development – not disease." All significant and repeated experiences change the brain; adaptability and habit are the brain's secret weapons. . . an addict is someone whose brain has been transformed, but also someone who can be pushed further along the road toward healthy development.
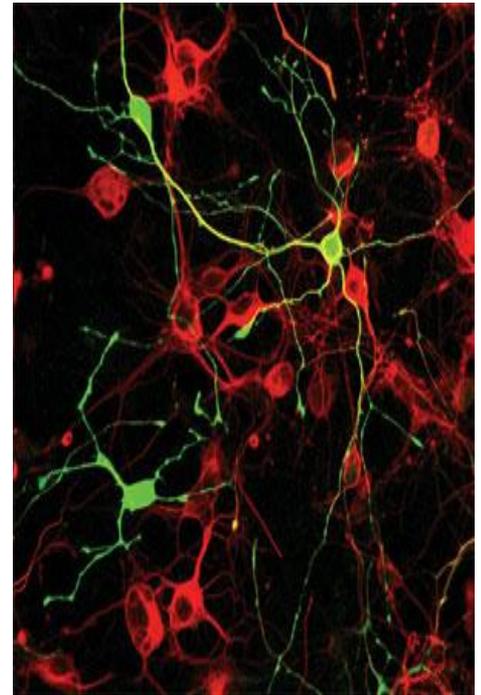
(Laura Miller, "Addiction is not a disease: A neuroscientist argues that it's time to change our minds on the roots of substance abuse," www.salon.com, June 27, 2015, writing about *The Biology of Desire: Why Addiction is Not a Disease,* by Marc Lewis)

Learning Involves Cognition: Significant and Repeated Experiences
There are Four Widely Accepted Levels of Cognition
## We Will Concern Ourselves with a Fifth and Often Overlooked Level

Level of Acquired Knowledge or Cognition (Cognitive Map)
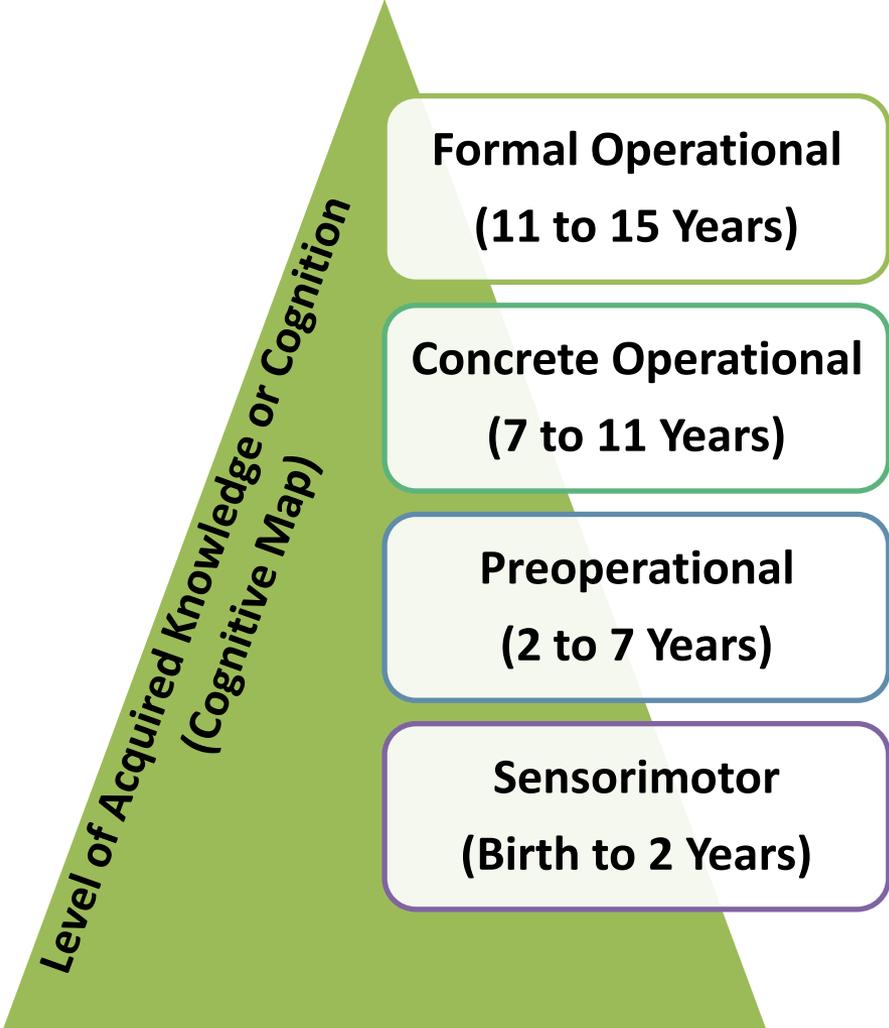
Formal Operational (11 to 15 Years)

Concrete Operational (7 to 11 Years)

Preoperational (2 to 7 Years)

Sensorimotor (Birth to 2 Years)

1. **Formal Operations:** Knowledge formed through abstract ideas, thoughts, possibilities.
2. **Concrete Operational:** Knowledge formed through logical classifications of concrete objects and events.
3. **Preoperational:** Knowledge formed through word and image representations of the world.
4. **Sensorimotor:** Knowledge formed through sensory and motor representations of the world.

A Fifth Level Not Covered by Piaget:
Post-Formal Operational Cognition
(Power to Acquire Knowledge for Discovering and Realizing One's Potentials)

- **The stage of cognitive development designed to open at late adolescence is an order of magnitude vastly beyond that of the previous stage; an intelligence in no way related to anything coming before.**

- **Development of this new stage would be lifelong if that stage were to unfold.**

- **This level of intelligence [or cognition] needs to be activated and established by our early twenties, and under ideal conditions it would be completed around age thirty.**

Prefrontal Cortex

(*The Biology of Transcendence: A Blueprint of the Human Spirit,* Joseph Chilton Pearce, 2002)
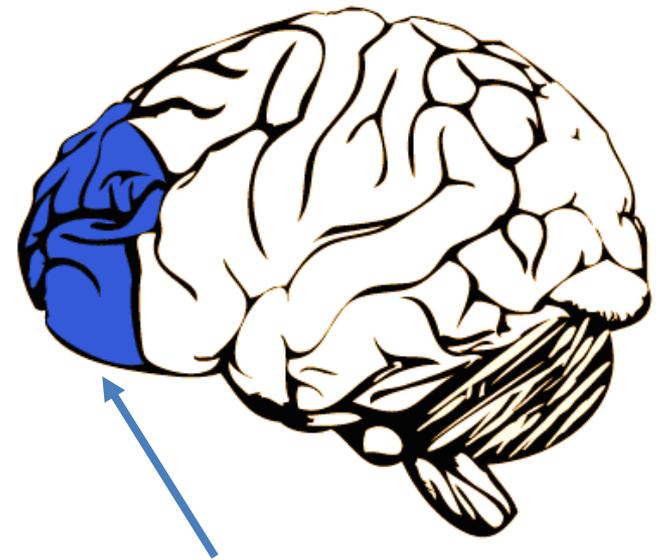
Just an FYI: Has Also Been Called Vision Logic
Point is There are Higher Levels of Cognition and Knowledge
A Corresponding Need for Higher Levels of Experience to Activate It

	GENERAL STAGES	COGNITIVE DEVELOPMENT		MORAL DEVELOPMENT & CAPACITY FOR CARE	
3rd Tier	Violet & Ultraviolet: Transpersonal Values	Overmind	6th + Person Perspective	Transpersonal	
2nd Tier	Teal & Turquoise: Integral Values	Vision Logic	5th Person Perspective	Kosmocentric	Integrative
1st Tier	Green: Postmodern Values	Formal Operational Thinking	4th Person Perspective	Worldcentric	Post-Conventional *Universal Care*
1st Tier	Orange: Rational, Modern Values	Formal Operational Thinking	3rd Person Perspective	Worldcentric	Post-Conventional *Universal Care*
1st Tier	Amber: Traditional Values	Concrete (Literal) Thinking	2nd Person Perspective	Ethnocentric	Conventional *Care*
1st Tier	Magenta & Red: Magic Values	Pre-operational Thinking	1st Person Perspective Only	Egocentric	Pre-Conventional *Selfish*
1st Tier	Infrared: Archaic Values	Sensorimotor Awareness	1st Person Perspective Only	Egocentric	Pre-Conventional *Selfish*

Prefrontal Cortex Comes Online During Adolescence

(Needed Higher Level Experiences are Expected)

1. **"When a higher neural form in our brain completes its growth and begins its full function, a new form of reality and a larger world unfold to us and distinctly new behaviors and abilities fill our repertoire." (****This "new reality and larger world" is the richer cognitive map for which the adolescent is waiting****.)**

2. **"Evolution's latest neural addition [prefrontal cortex] seems to lie largely dormant within us despite the fact that it seems it should offer a discontinuously new potential, a new reality – a whole new mind." (****A whole new cognitive map and way to be****.)**

3. **"If a child's environment does not furnish the appropriate stimuli needed to activate prefrontal neurons, the prefrontals can't develop as designed."**

The Biology of Transcendence: A Blueprint of the Human Spirit Joseph Chilton Pearce

Two Ancient Greek Axioms Reflect the High Level of Knowledge That the Prefrontal Cortex Makes Our Brains Capable of Acquiring

Know Yourself.

Become What Your Are.

Our Etiological Perspective
(Causal or Contributing Factors for Adolescent Drug Use and Abuse We Need to Consider)

When an adolescent is thwarted in his or her strivings to form identity and develop purpose, drug use can compensate or be a substitute for the heightened experience that is being missed.

On an unconscious level, adolescents expect this heightened experience, which involves discovery and realization of potentials. It is the foundation of adulthood, limitless growth, and a meaningful life.

J. Cloud

Unconscious Needs and Expectations
Must Be Considered

"**The archetypal need to transcend one's present state at any cost, even when it entails the use of physically harmful substances, is especially strong in those who find themselves in a state of meaninglessness, lacking both a sense of identity and a precise societal role. . . It is almost impossible for many young people to feel in any way useful in today's society. Why should we be so amazed that so many take drugs . . ."**

(Source: Luigi Zoja, *Drugs, Addiction, and Initiation: The Modern Search for Ritual*, Sigo Press, Boston, 1989)

Archetypal Need: A drive to rise above present state or self is in our DNA; it is why we no longer live in caves or get around in horse-drawn carriages. We unconsciously possess a vague pattern of what we can become. Higher levels of knowledge increases its clarity or cognizance.

J. Cloud

This Unconscious Process Has Behavioral Manifestations

A consuming life task of the adolescent is to discover or construct <u>ideal possible selves</u> that reflect one's potentials (Cantor & Kihlstrom, 1987; Greene, 1986).

For many youth this task is beset with <u>frustration</u> and failure (Blos, 1967; Erikson, 1968; Flavell, 1963; Harter, 1983).

Through rebellious and delinquent activity, youth can <u>define themselves</u> as adventurous, independent, powerful, tough, or in control and bring one <u>prestige</u> among one's peers (Hirshi, 1969; Sutherland & Cressey, 1978).

Potentials Reside in the Authentic Self
(Adolescent's Possibilities, Abilities, Capabilities)

The Selves Model

the haven

SIGNS
Numbing
Illness
Depression
Addiction
Isolation

IDEAL SELF

TOOLS
Breath
Awareness
Acknowledgment
Acceptance
Action
Appreciation

SELF HATE *(Reaction)*

SELF COMPASSION *(Response)*

ACTUAL SELF

Doing Striving

Being Curiosity, Humour

Acknowledge and honour each aspect of yourself
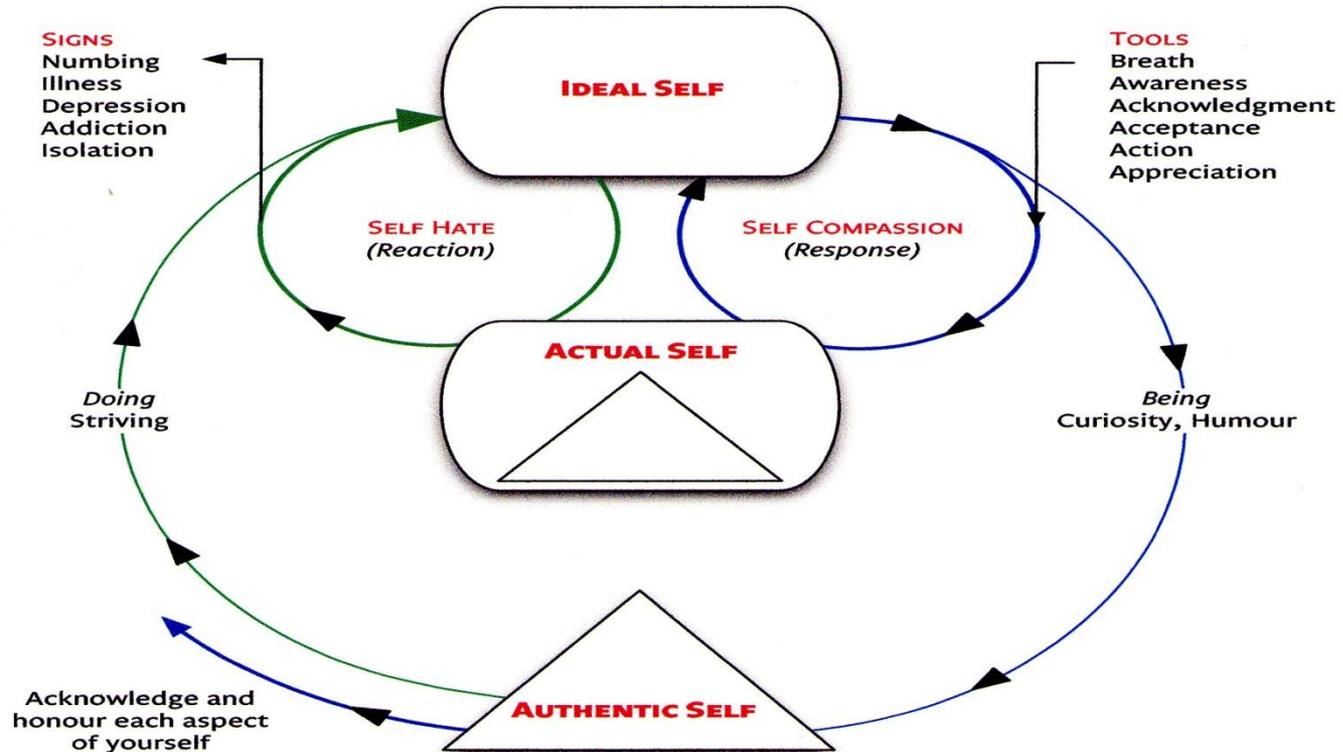
AUTHENTIC SELF

Development unfolds from an original Authentic Self towards an Ideal Self.

Three Selves Defined

1. Authentic: basic nature that is unique to each individual; contains the entire potential of what the person might in time become (e.g., innate abilities, gifts, passions, interests, talents, innate strengths, "sparks"), "core personality."

2. Ideal: mental image of what one desires/intends to become; initially based on external expectations (i.e., parents, church, etc.); subsequently based on autonomous choice and self-knowledge; supports self-actualization when informed by cognizance of one's Authentic Self.

3. Actual: daily, real-time behavior; can reflect extent to which Authentic Self is surrendered, suppressed, or denied; or extent to which discovering and actualizing Authentic Self is blocked or thwarted. Thwarted leads to self-hate or self-alienation manifested by ill-being (e.g., numbing, illness, depression, addiction, isolation).

Authentic Self and the Ego
(How Can Prevention and Intervention Strategies Account for the Authentic Self?)

- **"The Self is born, but the ego is made; and in the beginning all is Self" (Edinger, *Ego and Archetype,* 1992, p.7).**

- **Thwarting actualization of the Self (or the adolescent's potentials) threatens the very worth and meaning of his or her existence.**

- **Frustration associated with this experience is no small type of frustration.**

SPARKS:
Discovering and Actualizing the Authentic Self

A young person's passionate interests – those things that give meaning, focus, energy, and joy.

The power of sparks comes when:

- You **know** your spark or sparks.
- Your spark is important to you.
- You take initiative to develop your spark.

(*Teen Voice 2010,* Best Buy Children's Foundation and Search Institute)

Quick Discussion Question

We are pretty good at identifying symptoms or indicators of ill-being. What about well-being? What are some ways we can identify an adolescent's sparks? Informally in 15 minutes to an hour? Formally as part of an assessment protocol?

J. Cloud

Youth Scoring High on Sparks Index Out-Performed Those Who Scored Low

Percentage of Youth Having Outcomes, By Levels of Sparks Index

Performance Areas	High	Low
Goals to master what they study at school.	69%	41%
Very often work up to their ability at school.	45%	30%
Have a GPA of 3.5 (B+) or higher.	70%	51%
A sense of purpose and hope for their future.	48%	17%
Believe it is important to help others.	57%	36%
Believe it is important to engage in community.	42%	32%

(*Teen Voice 2010,* Best Buy Children's Foundation and Search Institute)

The Ideal Self Sets the Thriving or Growth Trajectory

(Lerner, et.al., 2008)

The higher the level of well-being, the more forceful the thriving toward one's Ideal Self.

Well-being

THRIVING

Individual

Regulation of continuous, dynamic, person–context interactions

Context

"Idealized personhood" — Positive adulthood

Growth of functionally valued behaviors across development
1. Competence
2. Character
3. Connection
4. Confidence
5. Caring/compassion

Attainment of structurally valued behaviors across development
1. Contribution to self
2. Contribution to family
3. Contribution to community
4. Contribution to civil society

Time

Thriving Thwarted:
Expectations and Frustrations
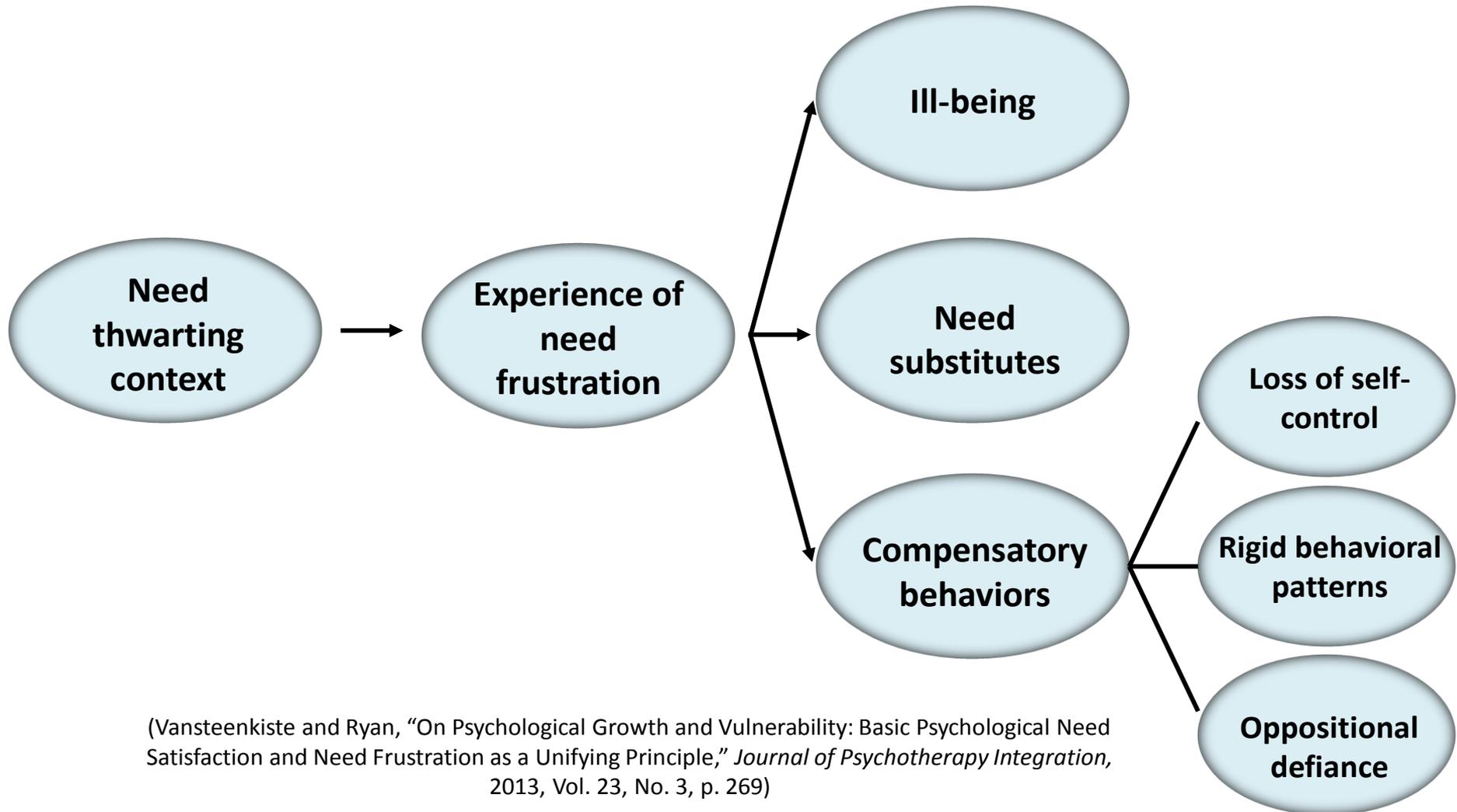
Need thwarting context → Experience of need frustration → Ill-being / Need substitutes / Compensatory behaviors → Loss of self-control / Rigid behavioral patterns / Oppositional defiance

(Vansteenkiste and Ryan, "On Psychological Growth and Vulnerability: Basic Psychological Need Satisfaction and Need Frustration as a Unifying Principle," *Journal of Psychotherapy Integration*, 2013, Vol. 23, No. 3, p. 269)

Adolescent Well-Being, Needs, and Brain Development

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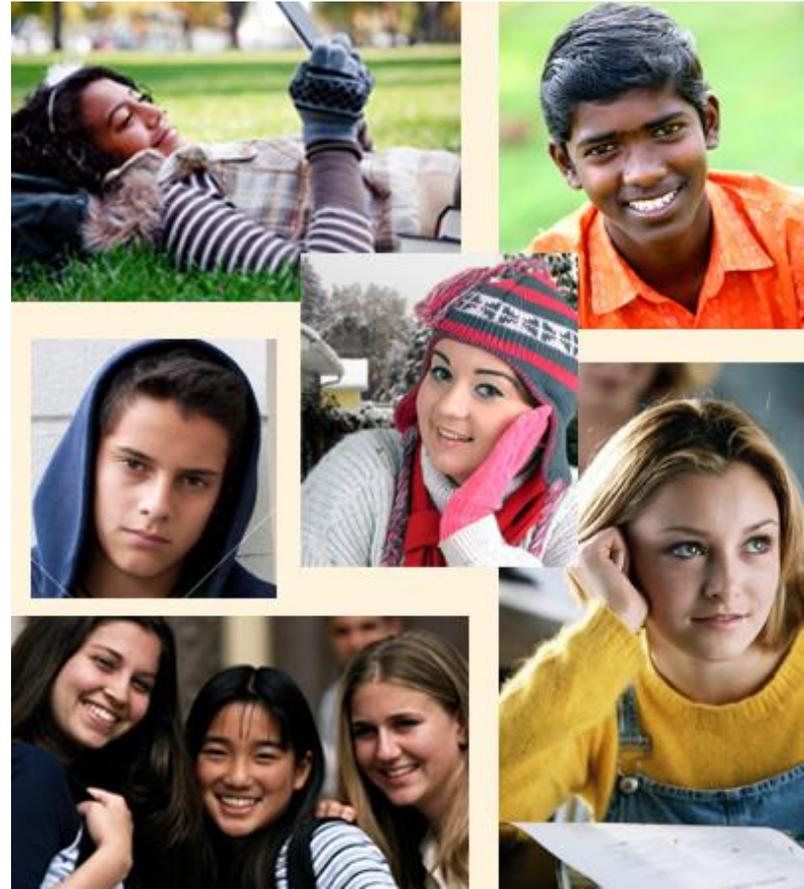
We are Born to Thrive in the Experience of Happiness (Or Well-Being)
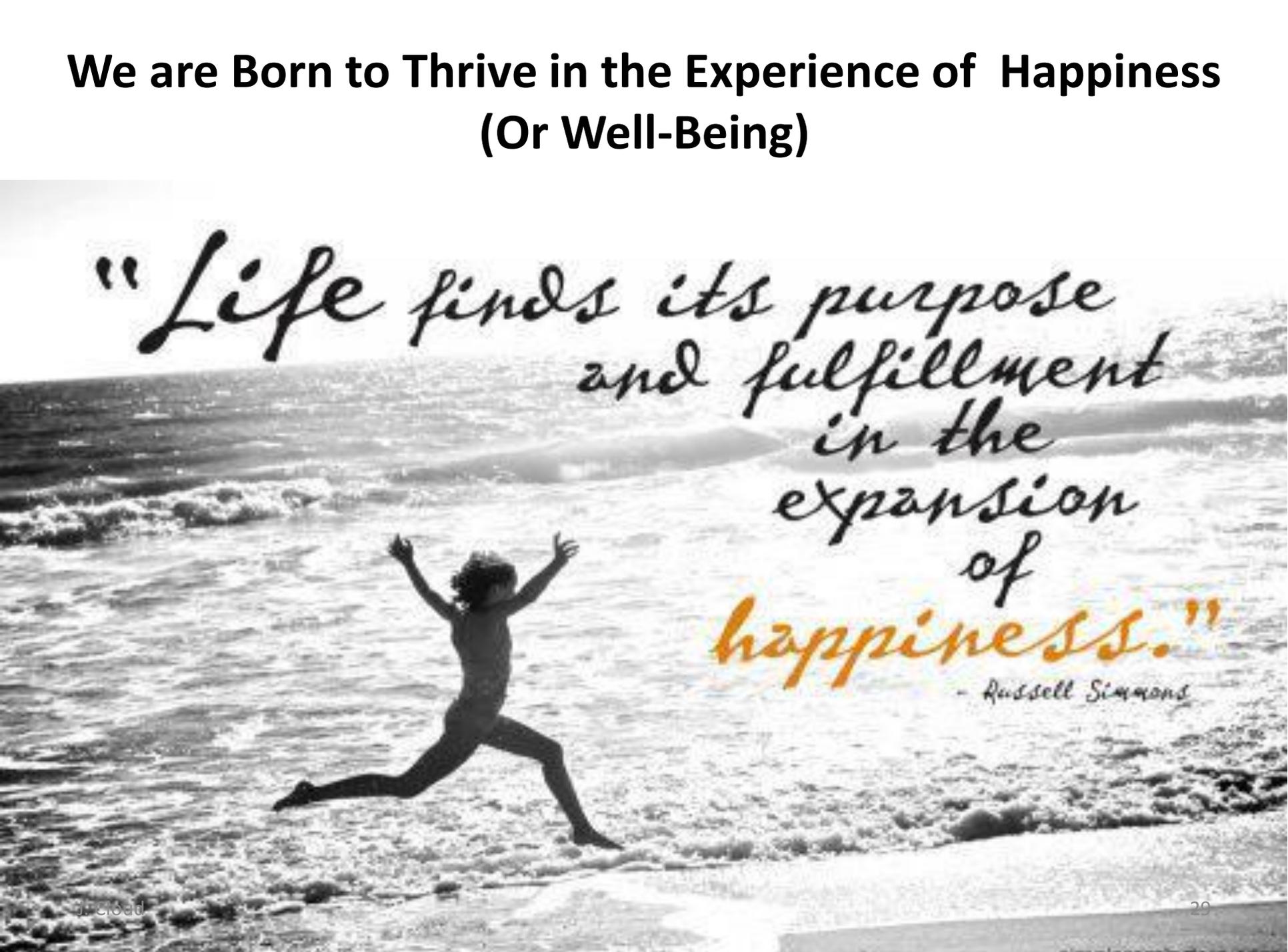
"Life finds its purpose and fulfillment in the expansion of happiness."

— Russell Simmons

Three Modes of Experiencing Subjective Well-Being

- **Hedonic Well-Being: How a person experiences and feels about her/his daily life; how content one is in the moment.**

- **Evaluative Well-Being: How satisfied a person is with his/her life as a whole, rather than just in the moment.**

- **Eudaimonic Well-Being: A person's ability to lead a purposeful and meaningful life; realizing one's human potentials.**

(Carol Graham, Brookings Institution, January 2015; Carol Graham and Milena Nikolova, *World Development*, Vol. 68, 2015)

Quick Discussion Question

Going back to the causal factors you came up with in your groups, which mode of well-being does your group think is usually being pursued through drug use? Why?

Theoretical Frameworks on Eudaimonic Well-Being

(Ryff and Burton, *Journal of Happiness Studies,* 2008, 9:13-39)
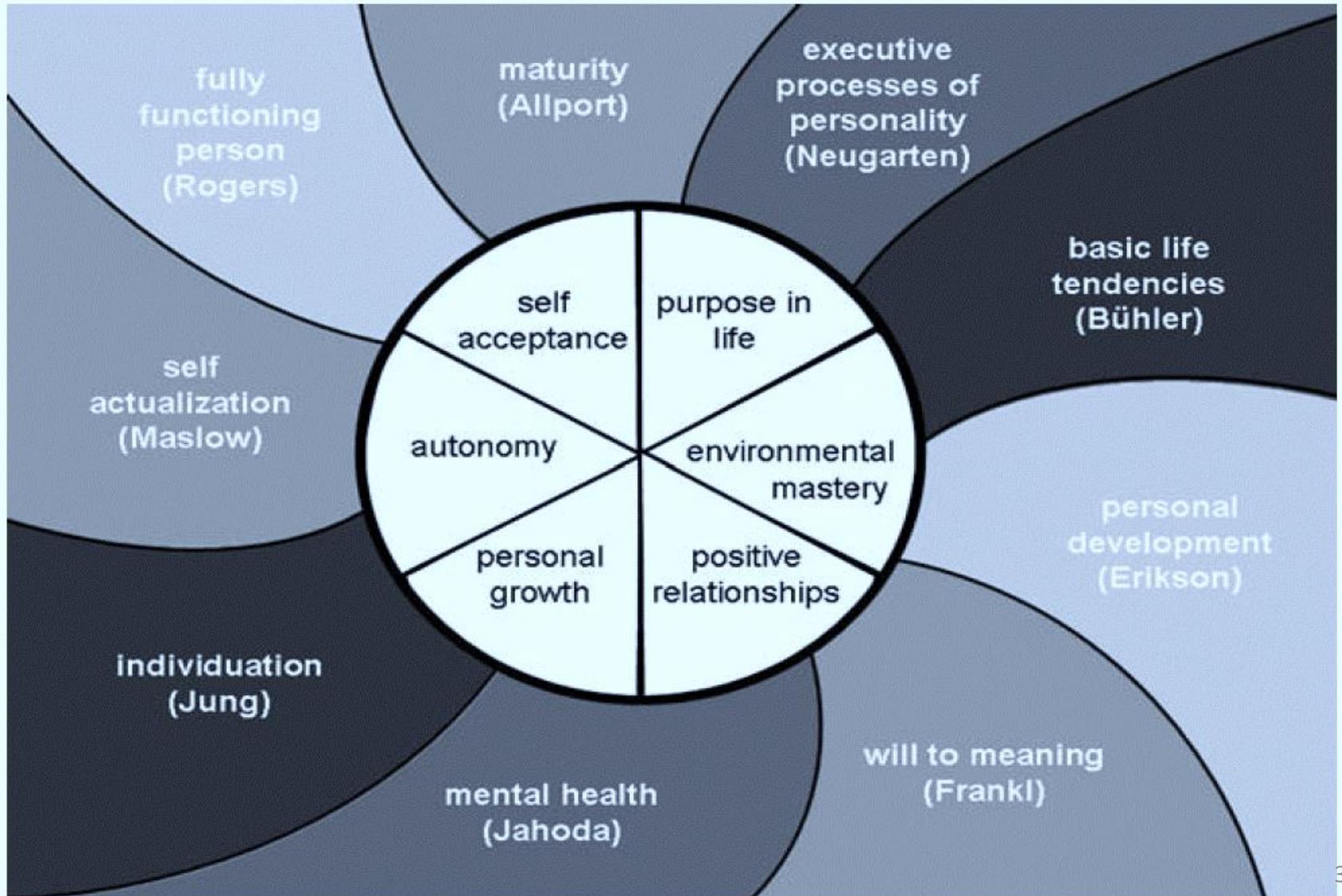
Disease Model May Cause Us to Miss the Instinctual Drive Toward Eudaimonic Well-Being

In line with Kandinsky, one might postulate a need to aspire that is a compelling component of our humanity. "Veiled in obscurity are the causes of this need to move ever upwards and forward . . ." (p. 12). Motivational theories originally posited all motives as being in the service of <u>drive reduction</u> (Hebb, 1958; Ruch & Zimbardo, 1971). <u>Drive enhancement</u> was then introduced . . . Maslow (1970) and Rogers (1961), in particular, emphasized self-actualizing **experiences predicated on growth in an upward spiral**.

The patient was able to move out of a predominant preoccupation with the past by aspiring toward a creative ideal that proved to be transformational and redemptive.

This Perspective Has Now Converged Into Positive Psychology

- **Founded in 1997.**

- **Described as a "science of satisfaction."**

- **Encompasses the study of positive emotions, full engagement in activities, virtuous personal characteristics, and paths to fulfillment and meaning in life.**

- **Has roots in ancient thought. Aristotle believed that happiness, which he called *eudaimonia*, is achieved through knowing your true self and acting in accordance with your virtues.**

(Positive Psychology: Harnessing the Power of Happiness, Personal Strength, and Mindfulness, A Harvard Medical School Special Health Report, 2009)

Hierarchies of Well-Being, Needs/Goals/Expectations, and Brain Development

Well-Being
- Subjective
- Psychological
- Emotional and Social
- Physical

Needs/Goals/Expectations
- Self-Actualization
- Esteem or Worth
- Safety and Belonging
- Physiological

Brain Systems
- Executive Brain
- Thinking Brain
- Emotional Brain
- Primitive Brain

Adolescent Well-Being

PURPOSE & WELL-BEING

J. Cloud

Basic Dimensions of Well-Being:
Definitions for this Workshop

1. <u>Physical Well-Being</u>: Condition of physical health, encompassing physiological activities essential for physical growth (e.g., nourishment, digestion, rest/sleep, excretion).

2. <u>Emotional/Social Well-Being</u>: Condition of emotional/interpersonal health, encompassing affective activities essential for emotional and relational growth (e.g., securing one's body, health, resources; enduring bonds with family and friends, sexual intimacy).

3. <u>Psychological Well-Being</u>: Condition of mental health (i.e., the mind), encompassing cognitive activities essential for cognitive growth (e.g., learning to behave, perform, achieve, be confident, esteem oneself, earn respect).

4. <u>Subjective Well-Being</u>: Condition of spiritual health (i.e., awareness of life and one's place in it), encompassing volitional activities essential for spiritual growth (e.g., meaning-seeking, action arising from within self or one's passions, gifts, authentic/true self).

Adolescent Needs/Goals/ Expectations
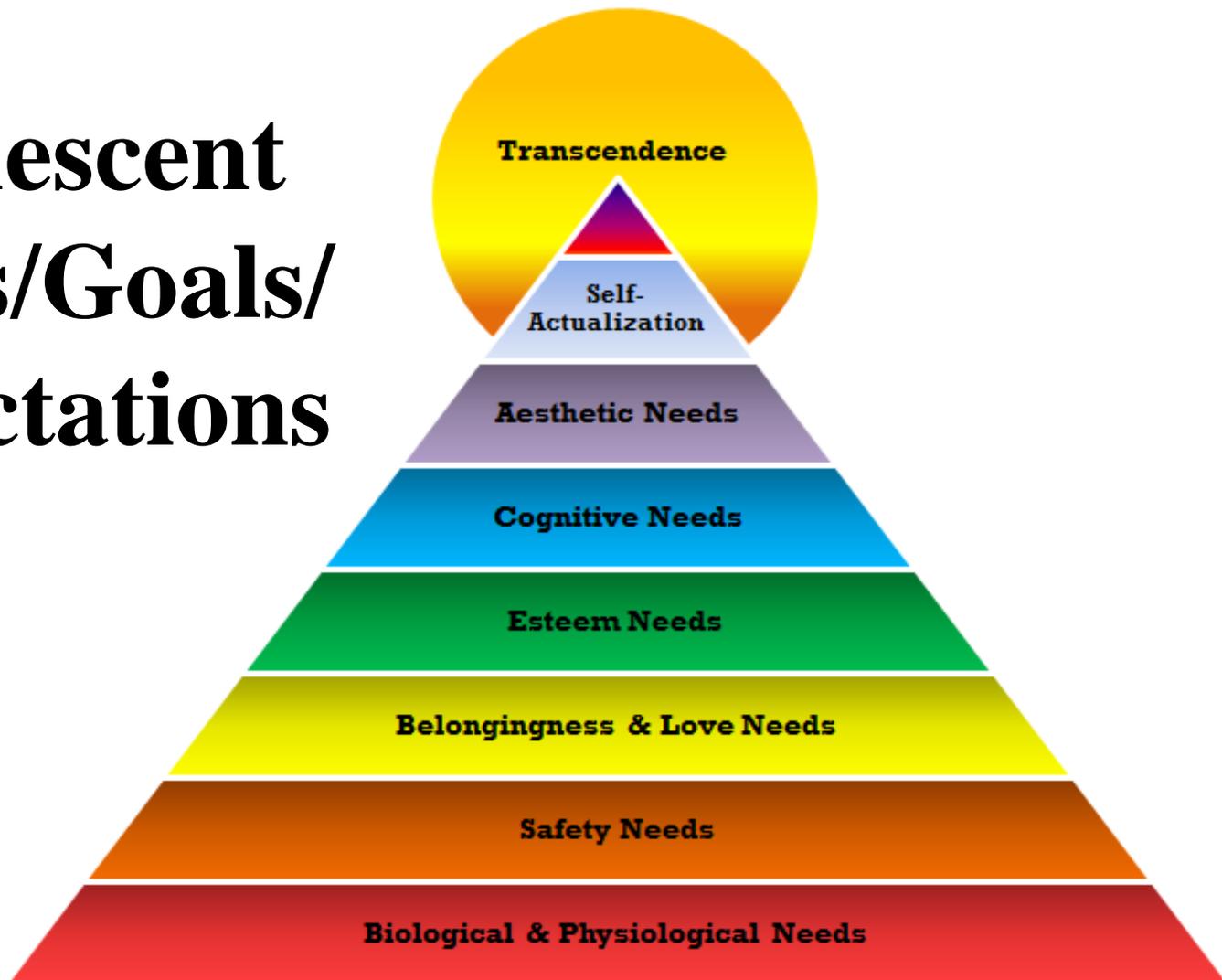
Maslow's Hierarchy Of Needs Pyramid

- Transcendence
- Self-Actualization
- Aesthetic Needs
- Cognitive Needs
- Esteem Needs
- Belongingness & Love Needs
- Safety Needs
- Biological & Physiological Needs

Individual and Group Discussion Exercise:
Your Goal or Expectations System

1. Make three columns.

2. In first column, list Maslow's five needs or motivations (physiological, safety, belonging, esteem, self-actualization).

3. In second column, in relation to each need or motivations, write one key thing you do or try to do each week.

4. In third column, in relation to each thing you do or try to do, write a goal that you are either striving to achieve or regularly achieve. (They need not be goals that you have consciously set for yourself. Often they aren't.)

Brain's Big Job:
## Adapting to Opportunities, Demands, Threats in Order to Attain Goals

Opportunities: Persons, situations, or conditions favorable for attainment of one or more of one's goals or expectations.

Demands: Pressing or urgent requirements both related and unrelated to attainment of one's goals or expectations.

Threats: Persons, situations, or conditions that pose a probability of thwarting attainment of one or more of one's goals or expectations.

Opportunities

Threats

Demands

40

Goals/Expectations and Brain Systems
(Increasing Complexity of Brain Operations Equals Increased Complexity of Goals/Expectations)

Brain System	Goal Type	Description
Executive Brain	**Aspirational Goals**	Personal desire for something above one; reaching beyond the givens; hope or ambition to become more than one is.
Thinking Brain / Emotional Brain	**Enculturated Goals**	Instilled by others (i.e., parents, society) through instruction/conditioning; may be enforced through use of fear, guilt, shame.
Primitive Brain	**Instinctual Goals**	Biologically innate impulses, inclinations, tendencies, or drives; inborn patterns of reacting or acting.

Adolescent Brain Development
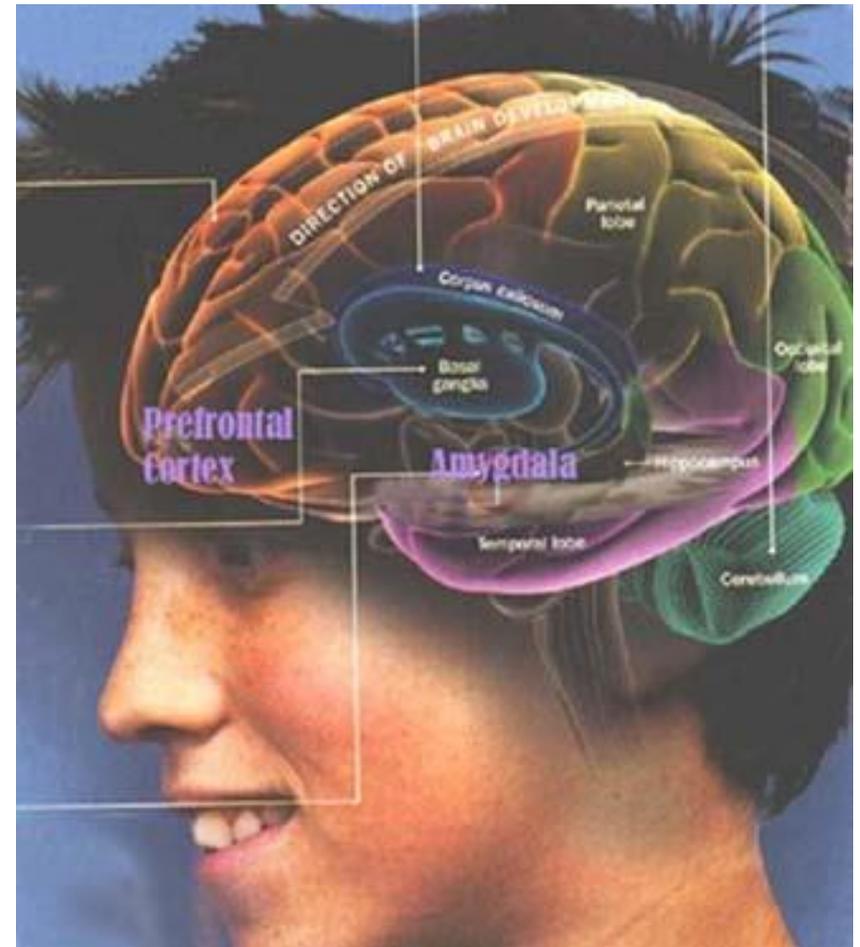
This Basic Plan is Supported by the Hierarchical Organization of Cognition and Seven Major Sensitive Periods

Sensorimotor Cognition	Preoperational Cognition		Concrete Operational Cognition	Formal Operational Cognition	Post-Formal Operational Cognition
Age 1	Age 4	Age 7	Age 11	Age 15	Age 21+

Higher Instincts

Executive Brain: (subjective well-being)

Executive Brain: (spiritual intelligence; subjective well-being)

Cerebellum (coordinates systems; regulates motor behavior; attention and balance)

Thinking Brain: Left Hemisphere (logical intellectual intelligence; psychological well-being)

Thinking Brain: Right Hemisphere (creative intellectual intelligence; psychological well-being)

Emotional Brain (emotional intelligence; emotional and social well-being)

Primitive (body intelligence; physiological well-being)

Lower Instincts

(**Source**: *The Biology of Transcendence: A Blueprint of the Human Spirit*, **Joseph Pearce, 2002, modified**)

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Hierarchy of Brain Systems and Needs/Expectations

Executive Brain/Willing
(Self-Actualization)
intention, self-determination,
self-regulation, purpose;
subjective well-being

Thinking Brain/Thinking
(Esteem)
**reason, creativity, logic,**
planning; psychological
well-being
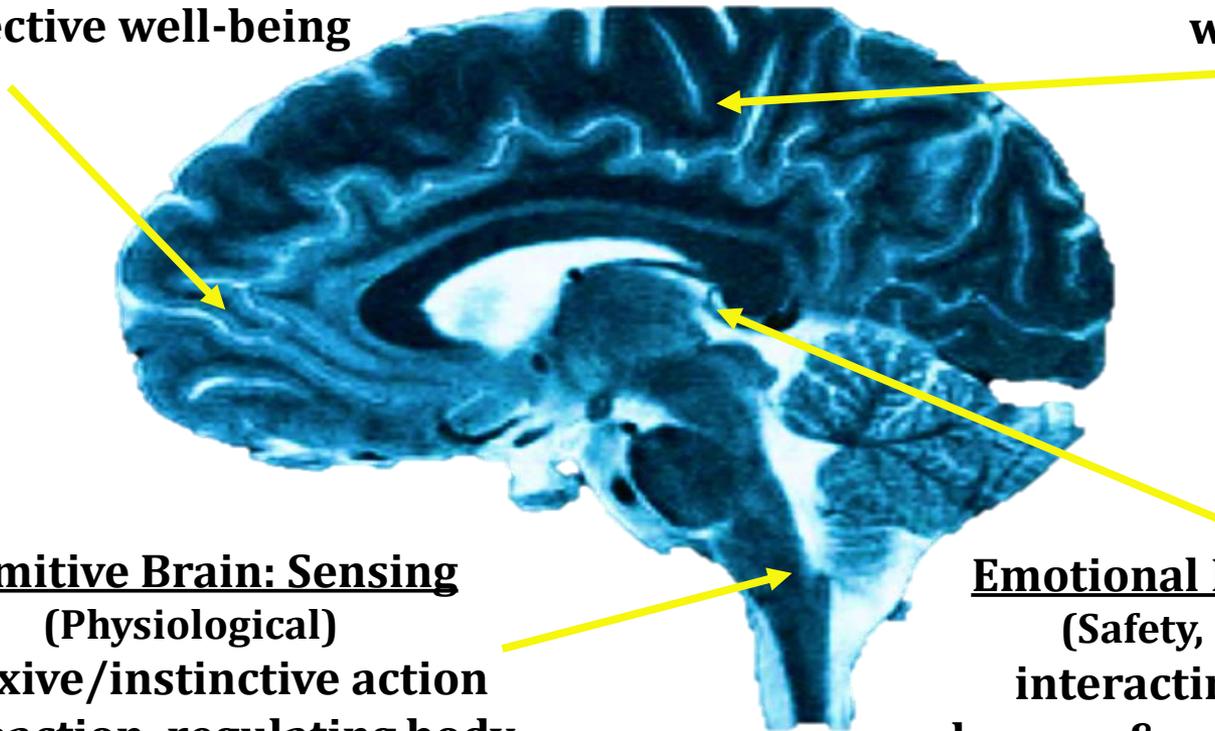
Primitive Brain: Sensing
(Physiological)
reflexive/instinctive action
and reaction, regulating body
functions; physical well-being

Emotional Brain: Feeling
(Safety, Belonging)
interacting, bonding,
pleasure & pain; happiness &
sadness; emotional and
social well-being

The Role of Experience in Fostering Well-Being, Need Satisfaction, and Brain Development

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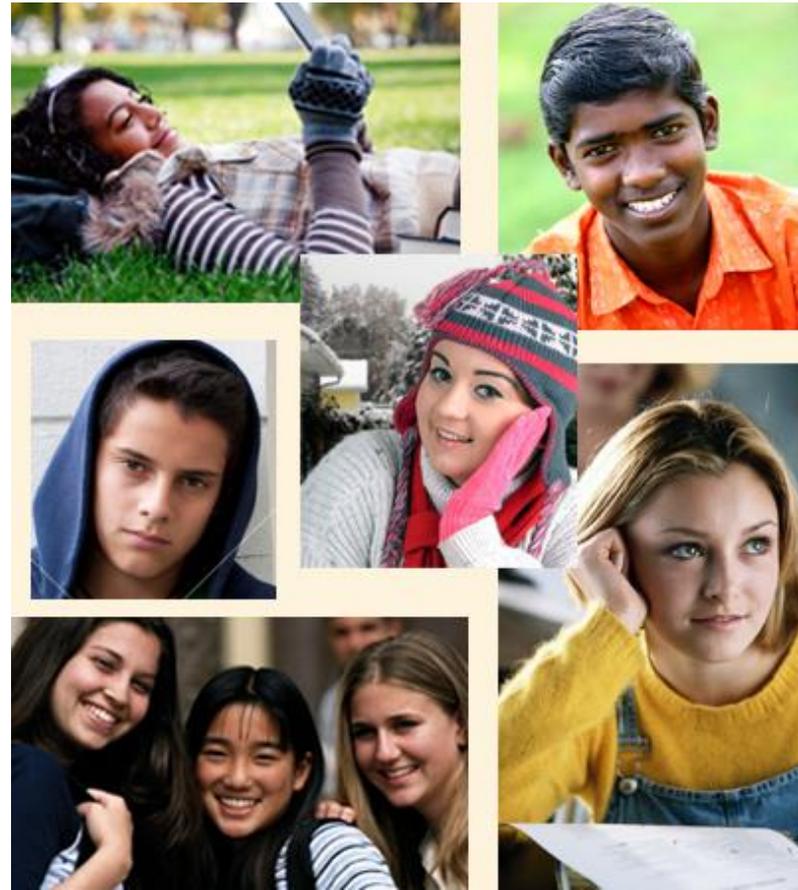
Seven Principles on Experience, Well-Being, Need Satisfaction, and Brain Development

1. Nature Provides a Basic Plan or Scheme for Human Development and Growth

2. Genes Contain Basic Instructions for the Proper Unfolding of this Plan or Scheme

3. Our Gene's Instructions Must be Authorized to be Delivered or Carried Out

4. Experiences Provide Authorization for Genetic Instructions to be Delivered and Carried

5. The Brain Unconsciously Prepare Us to Expect Certain Types of Heightened Experiences

6. Brain Wires Itself in Response to Heightened and Repeated Experiences

7. When Expectations are Persistently Unfulfilled, Frustration Signals the Brain to Wire Itself for Defense Not Growth

Principle 1:
Nature Provides a Basic Plan or Scheme for Human Development and Growth

Well-Being

- Subjective
- Psychological
- Emotional and Social
- Physical

Needs/Goals/Expectations

- Self-Actualization
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Brain Systems

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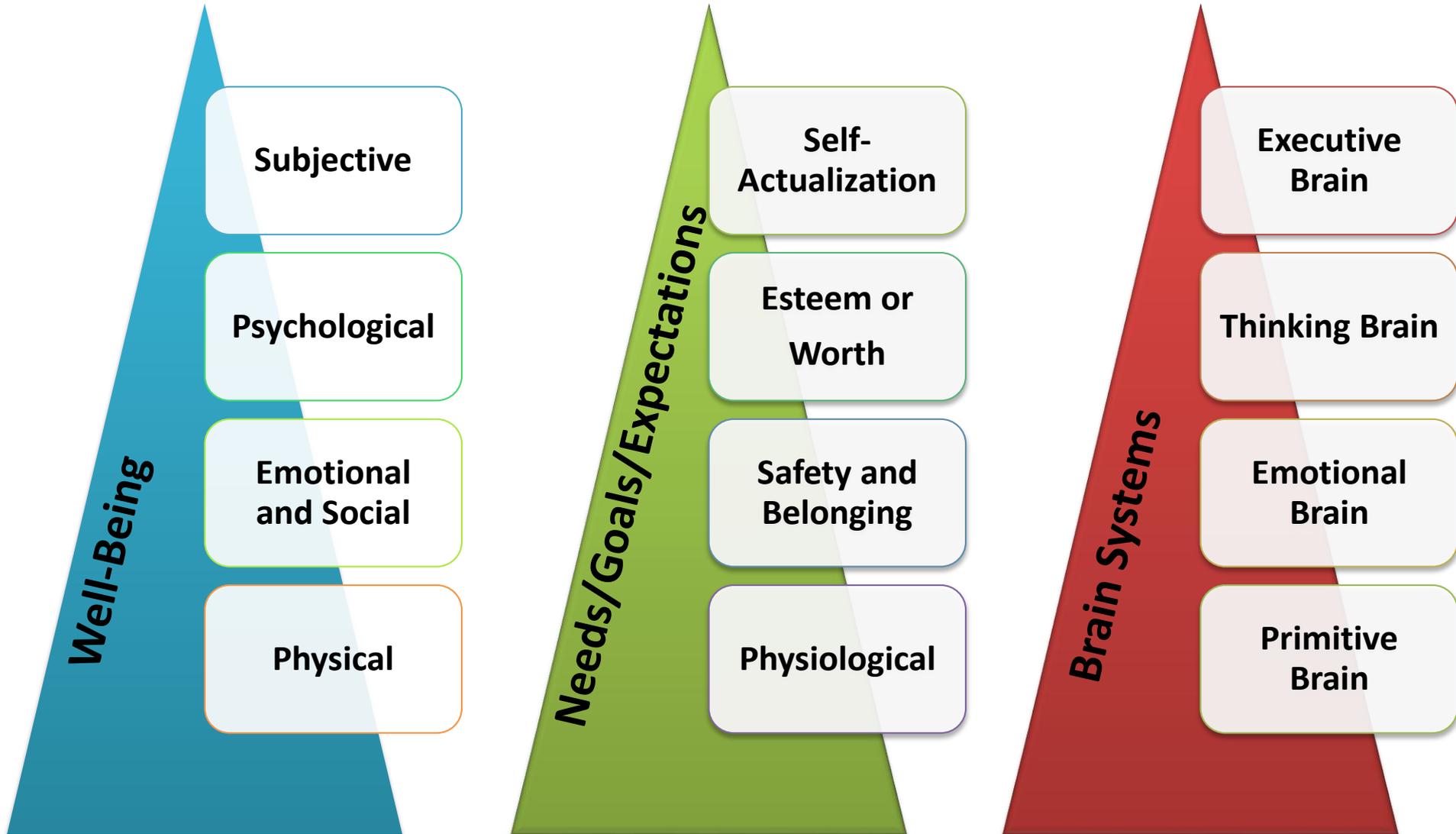
Principle 2:
Genes Contain Basic Instructions for the Proper Unfolding of This Plan of Scheme

1. Being a process of nature, development knows what to do; has a basic agenda for preparing potentials to be activated.

2. The key, therefore, is understanding the plan/scheme and cooperating with it.

3. Central to this cooperation is maximizing need-supporting experiences and a minimizing need-thwarting experiences.

4. Regardless of cooperation or non-cooperation, however, the agenda will be followed . . . regardless of the instructions.

5. With instructions to do so proactively and on the offensive (or moving toward authentic self). This is growth.

6. With instructions to do so reactively and on the defensive (or moving away from authentic self). This is decline.

Principle 3:
These Millions of Instructions Must Be Authorized to be Delivered and Carried

Genetic instructions aren't delivered automatically. Their delivery must be authorized. This is nature's way of inviting us to cooperate with and participate in the adventure of life.

GENE EXPRESSION

Principle 4:
Experiences Provide Authorization for Genetic Instructions to be Delivered and Carried Out

1. We cooperate with development by constructing experiences.

2. The child possesses three instinctive drives that predisposes him or her for an infinite range of experiences: exploring, discovering, and engaging.

3. Proper type of experiences at the proper time and of the needed quality (e.g., intensity).

4. Quality of those experiences influence "gene expression," or how the instructions are delivered.

5. We also possess genetic instructions for our highest level of well-being (e.g., eudaimonia or self-actualization), thus high forms of experience needed to authorize their delivery.

The VMAT2 Gene: The Eudaimonia Gene!
Prepares Us to Expect Self-Actualization
(Which is Why Teens Expect to do Big Things)

- **Associated with a sense of wholeness or wellness, and unity with others and the universe.**

- **Associated with intuitiveness and creativity, or higher states of mind and perception.**

- **Associated with an innate sense of optimism. Supports will to live and, physiologically, better health and faster recovery from disease.**

(Dean Hamer, *The God Gene,* Anchor Books, 2004)

Two Aspects of Drug Experience: Initiation and Heightened Perception

1. **The way drugs are acquired and taken have not only a practical function but also a ritual one. Such behavior unconsciously recalls ancient *rites of entrance and passage*.**

2. **Initiation involves separation from one's previous status or identity, or lack of an identity.**

3. **Involves an "initiatory rebirth" through a powerful, esoteric experience.**

4. **Drugs activate certain archetypal (i.e., unconsciously or genetically inherited) expectations which do not diminish as physical addiction sets in.**

(Source: Luigi Zoja, *Drugs, Addiction, and Initiation: The Modern Search for Ritual*, Sigo Press, Boston, 1989)

Drug Experience Can Simulate a Critical Heightened Experience That Has Been Deconstructed in Modern Society

(*Drugs, Addiction And Initiation: The Modern Search For Ritual,* Luigi Zoja, 1989)

1. The disappearance of initiation is a principal difference between the ancient world and the modern.

2. Fundamental structure of initiation stresses a "passage."

3. Involves a search for fellowship and seeking out "masters" (or mentors to learn from).

4. The way drug-using cliques acquire and use their drugs has a ritual function similar to ancient rites of entrance.

5. Entrance into drug world is not regression, but a choice to remedy a lack of identity by assuming a defined <u>negative identity</u> and role.

6. The person making this choice is actually seeking a few moments of <u>heroic identity</u>; a desperate way to occupy a place in society.

Some Descriptions of the Drug Experience: Artificial Heightening of Well-Being

- Heroin: opiate; mimics the action of endorphins, creating a sense of well-being, the euphoria has been described as an orgasm centered in the gut.

- Cocaine: crystalline tropane alkaloid; creates a euphoric sense of happiness and increased energy.

- Methamphetamine: psychostimulant; triggers cascading release of norepinephrine, dopamine, and serotonin causing euphoria and excitement.

- Ecstasy: semisynthetic psychedelic entactogen; increased awareness of the senses, feelings of openness, euphoria, empathy, happiness, heightened self-awareness.

- Marijuana: psychoactive; alters mental and physical facilities.

Heightened or Euphoric Pleasurable Experience is Actually Essential for Optimal Learning, Development, and Well-Being

Joy and pleasure are the bricks and mortar of physical, psychological, social, and spiritual development, and the developing brain must experience joy and pleasure if the complex integration of sensations is to take place. When they are lacking, the brain becomes "neuro-dissociative," one that fragments rather than integrates experience. As a result, the adolescent regresses or dissociates into self-defensiveness.

Joseph Chilton Pearce, 2007

How We Learn and Thus Grow:
Three Key Piaget Concepts

1. **Schemas**
2. **Assimilation**
3. **Accommodation**

This learning or cognitive development is about acquiring levels of knowledge that serve as one's cognitive map.
Cognitive map is the internal working model of how one's world and one's place in it are expected to behave or operate.
Allows for reliable predictions for how and whether goals will be attained.
Therefore, this cognitive map sets constraints for and determines the level and quality of one's actions and development.

Schemas

1. Basic building blocks of the cognitive map. An idea or concept or conceptual framework; naming, categories of things; classifications by which we perceive the world and predict how it will act or operate (e.g., buildings, cars, friends, love, bosses, respect, etc.).

2. As one gains experience, the brain continuously adds to the system of schemas (or schemata), and this generates growth and development.

3. Brain stores all schemata with the positive result being a rich, multi-layered, integrated map due to all schemata "fitting together." If not, experiences aren't cognitively unified, they are fragmented (i.e., brain becomes neuro-dissociative). Result is dissociative behavior marked by withdrawal and defensiveness.

Persistent Frustration Can Cause a Fragmented Cognitive Map
(Schemata That Won't Integrate)

- **Think of it as puzzle pieces that won't fit together.**

- **Several fragments of "map section" that don't relate, instead of a single unified map.**

- **Thus, experience is scattered and unable to produce joy and pleasure; stable knowledge isn't possible (disequilibrium).**

- **Physical health, affect, mood, thinking, and behavior are adversely affected.**
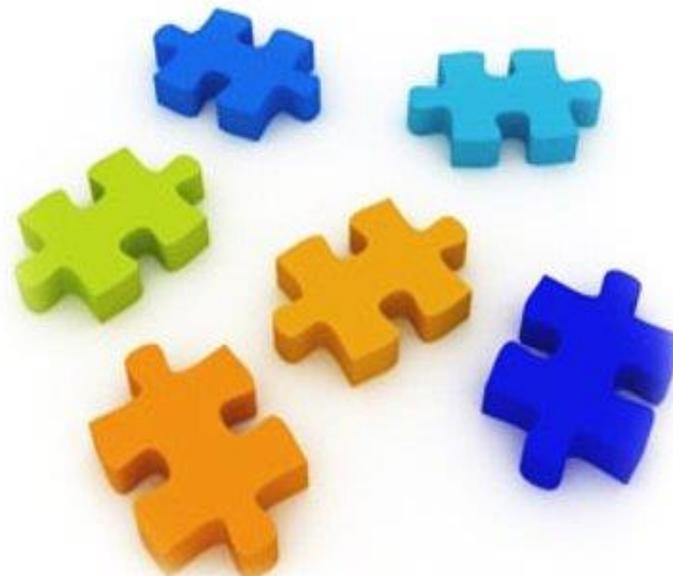
Assimilation:
First Way Integration is Achieved and Knowledge Acquired

1. Fitting new experiences or information into an existing schema (i.e., becomes a new part of the cognitive map).

2. Drawing on what you already know to make sense of new events, experiences, information.

3. Organizing new information into patterns and categories you already know (e.g., making sense of what just happened, did happen, or is happening).

4. Important: relies on existing schemata and connects "new stuff" to them.

Accommodation:
Second Way Integration is Achieved and Knowledge Acquired
(Can Involve an Enormous Amount of Cognitive Work)

- **Changing or modifying existing schema in order to understand and make sense of new experience (e.g., "My friends won't accept me if I don't do drugs with them" is a new schema or category that may require a modification of the "my friends" schema for an upset/distressed youngster.)**

- **Or, creating a new schema altogether; may or may not "fit" well with existing schemata (e.g., new schema may be "A real friend will respect me making choices that are good for me.")**

- **Models and mentoring can be very helpful in creating a new schema (i.e., showing how to honor and know one's self).**

Learning is Difficult for Youth with Adverse Life Experiences

(Source: "Persistent Fear and Anxiety Can Affect Young Children's Learning and Development", Working Paper 9, National Scientific Council on the Developing Child, Harvard University, 2010)

1. **Experiences like abuse and exposure to violence can cause fear and chronic anxiety in children; these states trigger extreme, prolonged activation of the brain's/body's stress response system.**

2. **This in turn disrupts the efficiency of brain circuitry for higher level cognitive functioning.**

3. **Stress-system overload can significantly diminish a child's ability to learn and engage in typical social interactions.**

Principle 5:
Our Brains Unconsciously Prepare Us to Expect Various Heightened Types of Experiences

Our brains prepare us to expect certain experiences by forming the pathways needed to respond to those experiences. If the appropriate exposure [or experience] does not happen, the pathways developed in anticipation may be discarded. There are sensitive periods for development of certain capabilities; periods when parts of the brain may be most susceptible to particular experiences.

Child Welfare Information Gateway
U.S. Department of Health and Human Services
November 2009

# 'Sensitive periods' in early brain development
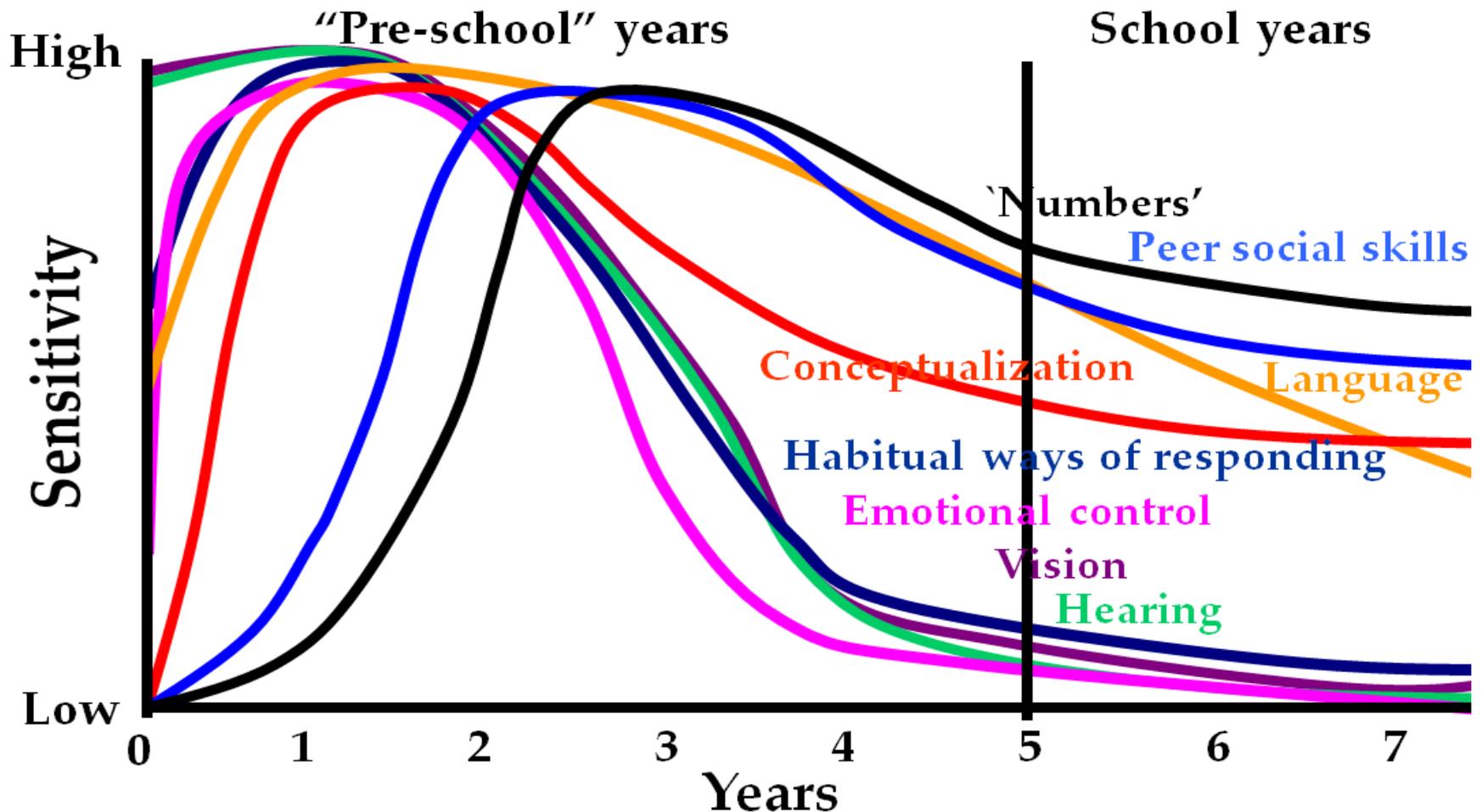
Graph developed by **Council for Early Child Development** (ref: Nash, 1997; *Early Years Study*, 1999; Shonkoff, 2000.)

Principle 6:
Brain Adaptively Wires Itself in Response to Heightened and Repeated Experience:
It Remembers Whether Expectations Are Were Fulfilled

J. Cloud
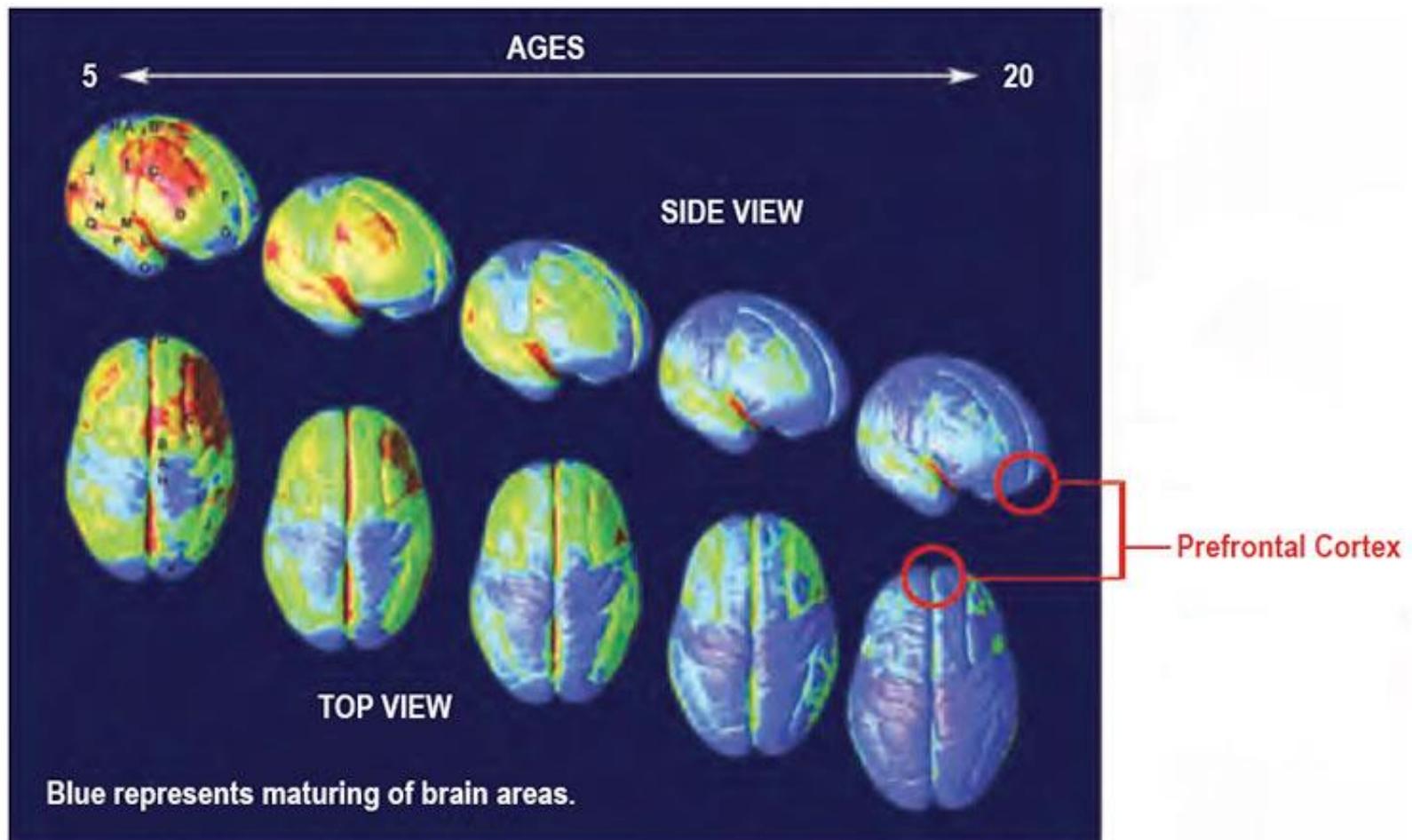
Principle 7:
When Expectations are Persistently Unfulfilled, Frustration Signals the Brain to Wire Itself for Defense

Three Instinctual Drives and Heightened Experiences
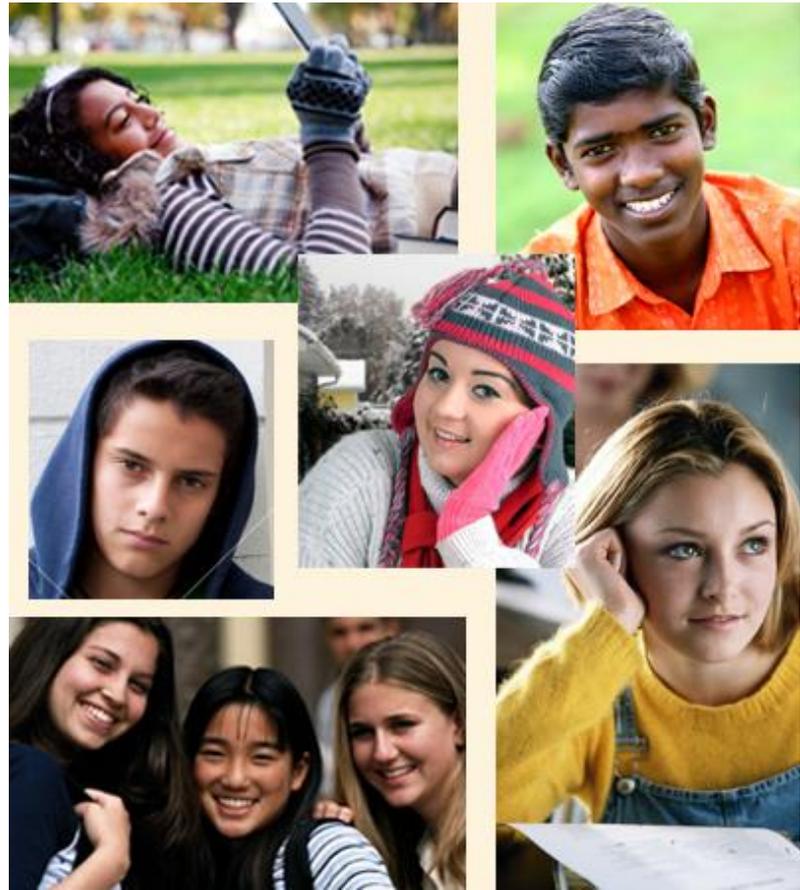
Drives and Associated Experiences

Instinctual Drives	Associated Experiences
Seeking	Exploring
Vigilance	Discovering
Playing	Engaging

During adolescence, the focus of each shifts intensively to self.
Self-Exploration
Self-Discovery
Self-Engagement or Actualization

Exploring – Discovering – Engaging:
Each Associated with a Primitive Brain Neural Pathway
(Approach Behaviors)

Exploring (seeking neural pathway)

Discovering (vigilance neural pathway*)*

Engaging: (play neural pathway)

(Source: Jaak Panksepp, 1998)
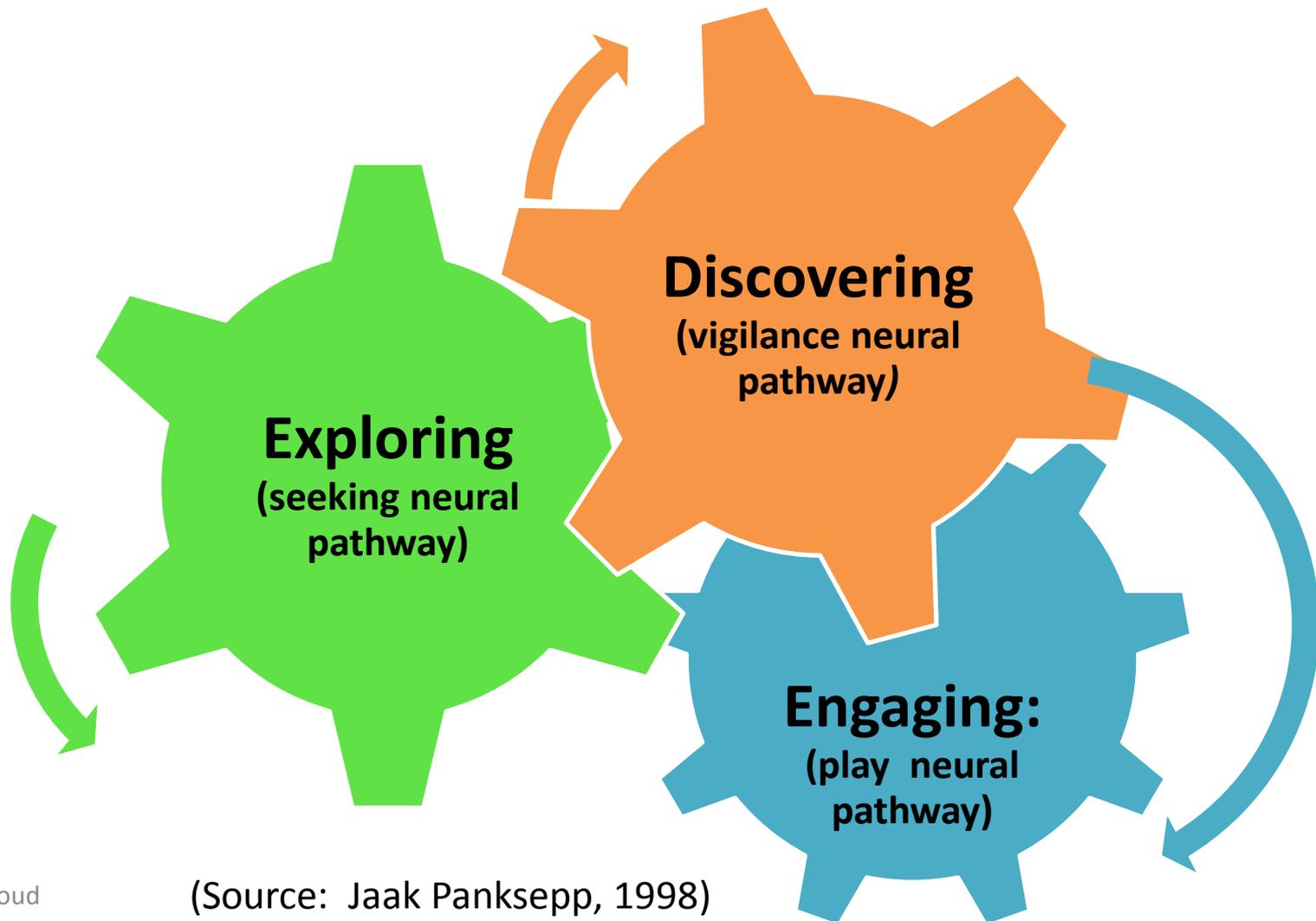
Instinctual Positive Adaptive Responses to Supportive and Nonthreatening Environments

- **Seeking**: exploration, risk-taking, questing; anticipation, desire, trusting and autonomous ways of approaching one's environment.

- **Vigilance**: attention, learning, memory; identifies dangers or minimal threats; restrains in approach in order to avoid/lessen pain or harm.

- **Playing**: connecting, joy, pleasure; comfort zone secured; highly engaged interaction, developing and using abilities.

(Source: Sarah-Neena Kock, mybrainnotes.com, based largely on *Affective Neuroscience: The Foundations of Human and Animal Emotions, by* Jaak Pankseep, 1998)

Quick Group Discussion

What might be some actions or behaviors associated with a youth trying to explore, discover, and engage with him- or herself? Chat for five minutes and be ready to share. There are no wrong answers.

Need-Thwarting Contexts Suppress Approach Behaviors:
Fleeing – Freezing – Fighting
(Avoidant Behaviors)

Flight
(fear neural pathway)

Freeze
(panic/loss neural pathway)

Fight:
(aggression/rage neural pathway)

(Source: Jaak Panksepp, 1998)
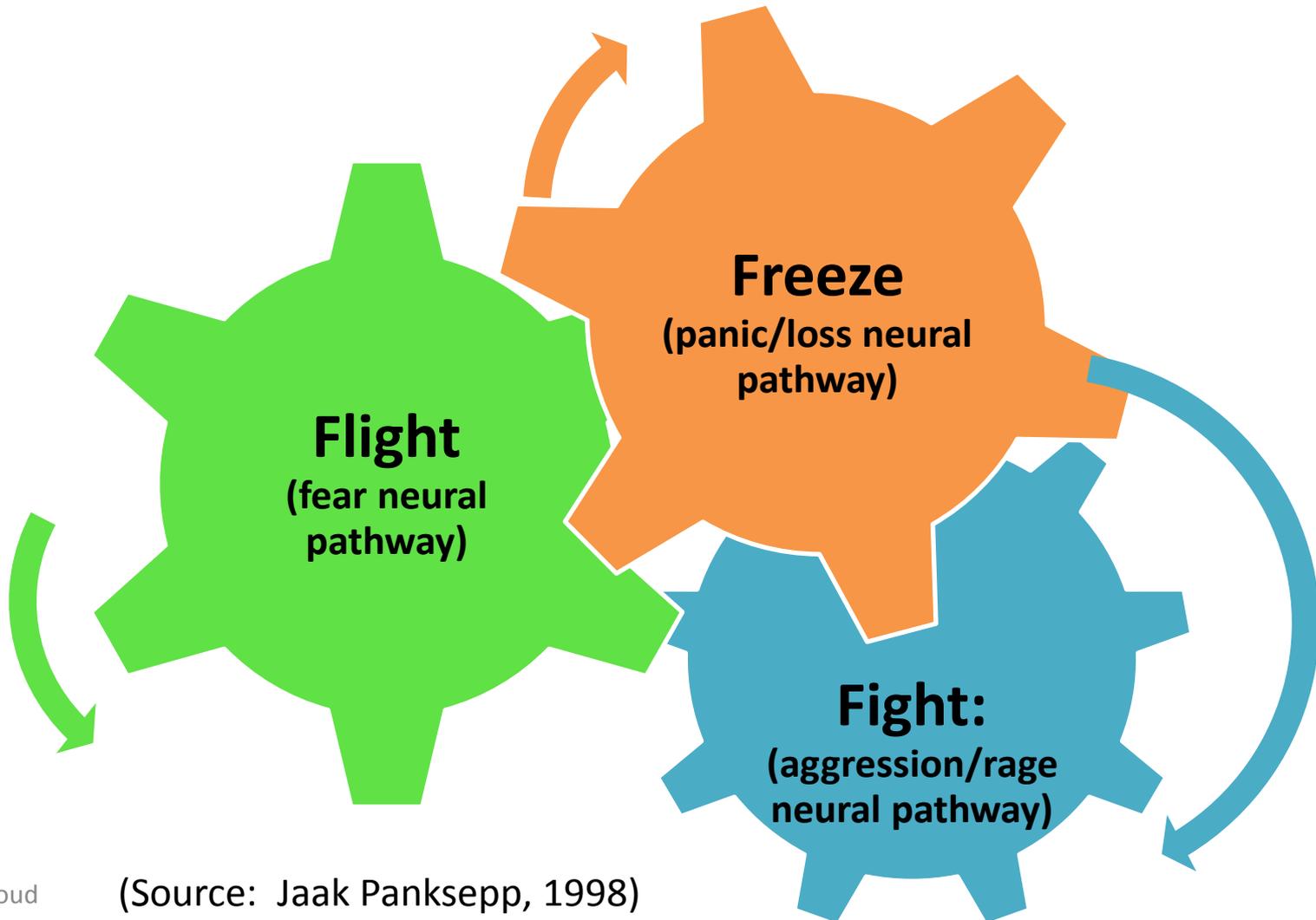
Hardwired Adaptive Responses to Need-Denying Frustration-Inducing Environments

- **Panic/Loss**: separation distress, social loss, grief, left alone, helpless; associated with innate need for emotional warmth; "cry for help" responses.

- **Fear**: foreboding; apprehension, intense disquiet; responses involving hiding or deception if perceived danger is distant; fleeing or fighting if perceived danger is near.

- **Rage/Anger**: frustration, indignation; promoted by pain and fear; three aggressive responses: 1) ferocity; 2) dominance; 3) predatory (i.e., seeking to harm). Can be directed at self (i.e., self-harm).
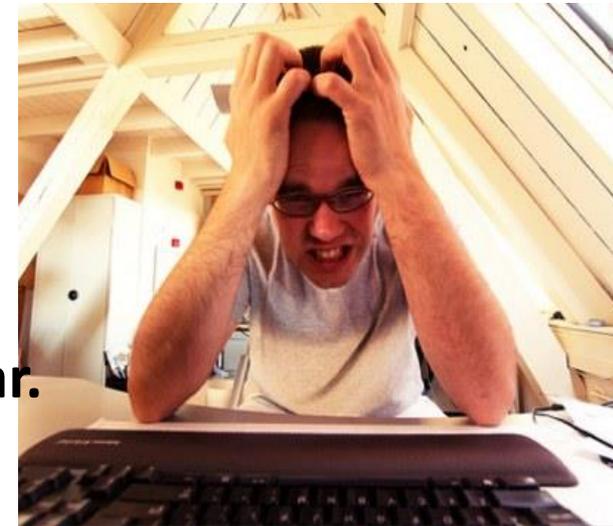
Quick Group Discussion

How might experiencing persistent or frequent states of panic, fear, or anger make drug use an adaptive behavior.

Flight, Freeze, Fight Associated with Compensatory Behaviors

Need thwarting context → **Experience of need frustration**

Ill-being

Need substitutes

Compensatory behaviors

Loss of self-control

Rigid behavioral patterns

Oppositional defiance
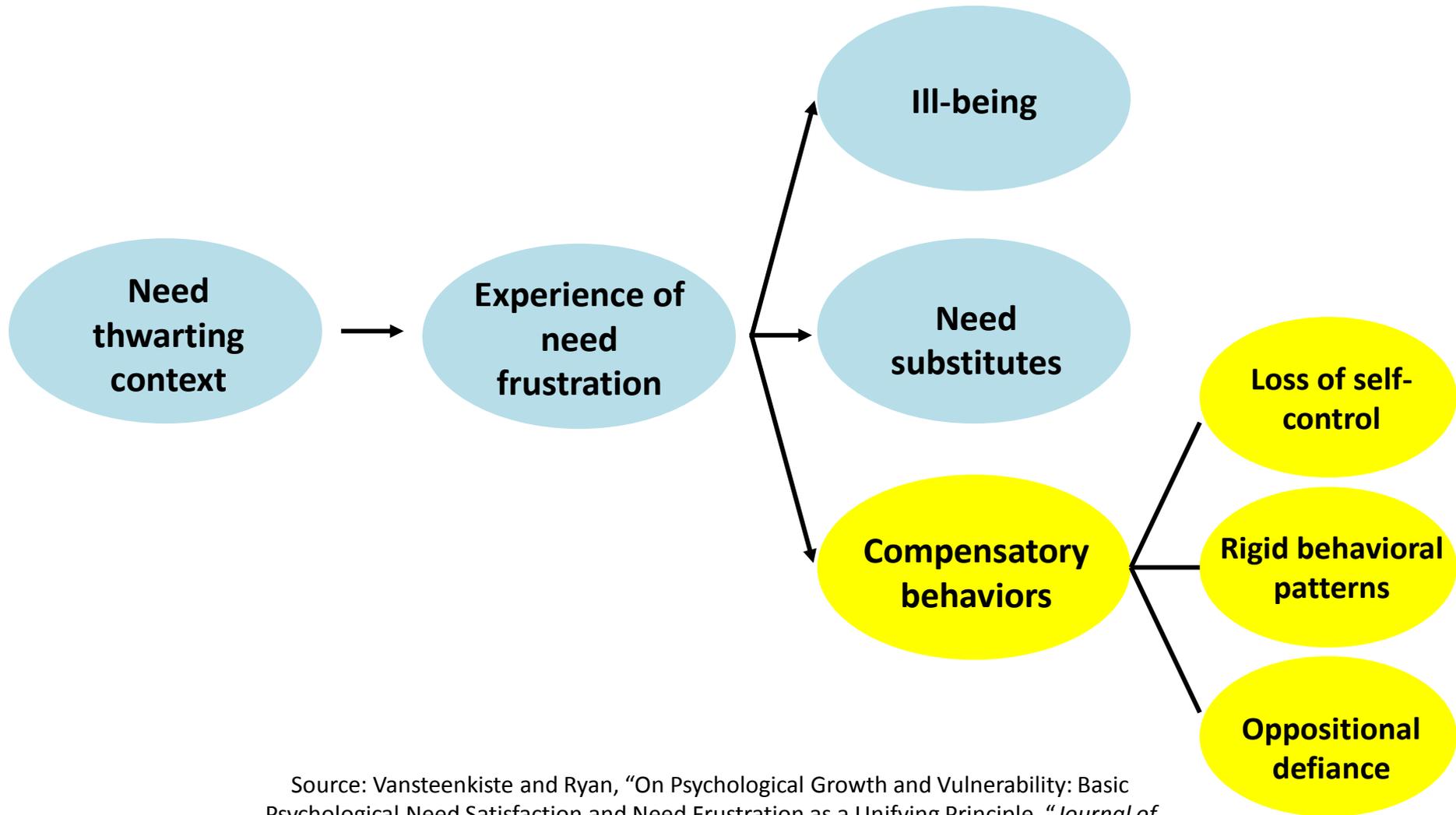
Source: Vansteenkiste and Ryan, "On Psychological Growth and Vulnerability: Basic Psychological Need Satisfaction and Need Frustration as a Unifying Principle, "*Journal of Psychotherapy Integration*, 2013, Vol. 23, No. 3

Constructing Experiences That Heighten Cognition: Growth Beyond Drug Use

J. Cloud
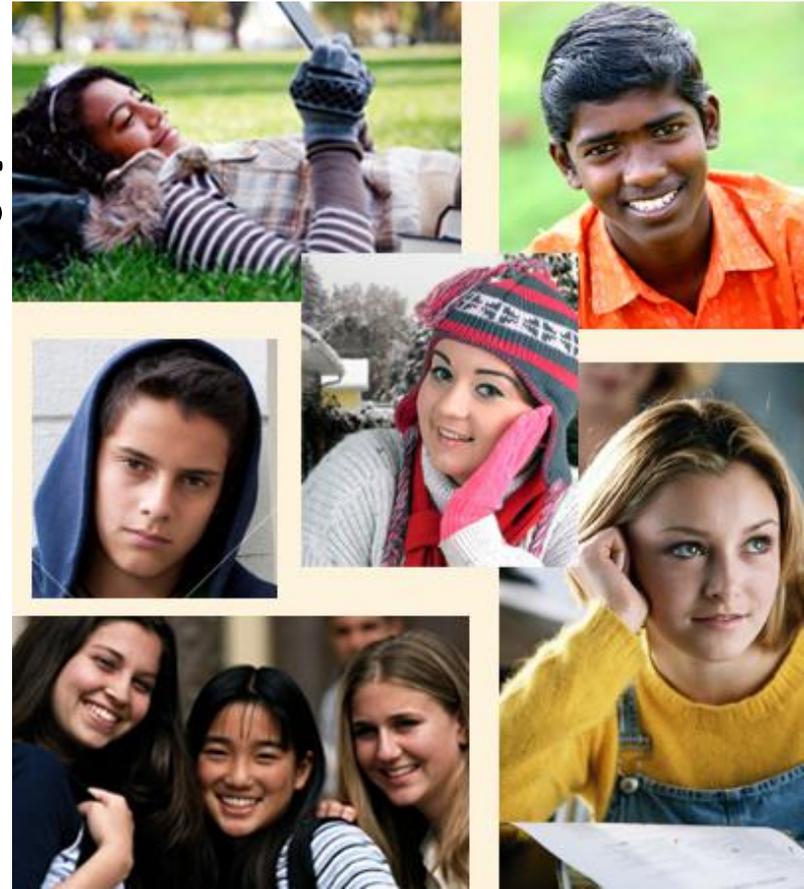
Adolescence is Stage for Beginning the Search and Discovery of Eudaimonic Well-Being

First, starting around age eleven, an idealistic image of life grows in intensity throughout the middle teens.

Second, somewhere around age fourteen or fifteen a great expectation arises that "something tremendous is supposed to happen."

Third, adolescents sense a secret, unique greatness in themselves that seeks expression.

Joseph Chilton Pearce
Evolution's End: Claiming the Potential of Our Intelligence
1992, p. 190

The youth is now operating with post-formal operational cognition: tapping into an "inner knowing," an image of the ideal self not connected to concrete, actual events. Often put down by others as unrealistic or impractical.

Post-Formal Operational Cognition at Work

"I want us to envision that what children go through has to do with finding a place in the world for their specific calling. They are trying to live two lives at once, the one they were born with and the one of the place and among the people there were born into."

"All of a sudden and out of nowhere a child shows who she is, what he must do. These impulsions of destiny frequently are stifled . . . so that calling appears in the myriad symptoms of difficult, self-destructive, accident-prone, 'hyper' children – all words invented by adults in defense of their misunderstanding."

James Hillman
The Soul's Code: In Search of Character and Calling

Research-Informed Framework for Constructing Experiences as an Approach to Prevention and Intervention

Youth's Interests and Potentials

- Competencies and potentials (what he/she can do; innate gifts, special abilities, sparks)
- Potentials for character
- Potentials for connecting
- Potentials for confidence
- Potentials for caring

Discover

Youth's Aspirations and Goals

- Help youth see a vivid image of his or her Ideal Self
- Training in goal selection, pursuit and attainment.
- Training in skills and knowledge needed to attain goals.
- Training in working with others on behalf of common goals.

Train

Needed Heightened Experiences

- Contributing to self (purpose)
- Contributing to family
- Contributing to school
- Contributing to community
- Contributing to society
- Contributing to the world and planet

Mentor

Expected Consequences

- Changed and better self
- Changed and better family
- Changed and better school
- Changed and better community
- Changed and better society
- Changed and better world and planet

Validate

Working With the Goal-Expectation System
## (To Enhance Not Control Instinctual Drives)

1. **Primary way of navigating environments is adapting. The brain is exquisitely designed for this task.**

2. **Adapting is adjusting or fittingly modifying oneself to the conditions in one's environments in order to ensure well-being or the attainment of goals.**

3. **Key to this adaptive process are three hardwired survival traits: exploring environments with aim of discovering opportunities and then engaging the opportunities for rewarding experiences (i.e., that meet needs, ensure well-being).**

4. **Our search for rewards is innate. We are goal-oriented or reward-seekers by nature. Every person has a reward system, or a set of attainments for which he/she strives and that gives his/her life meaning, purpose, value.**

Tapping Into the Youth's Reward-Seeking Instinct
(Or Why "Just Tellin' 'em to Stop it" Doesn't Work)

Avoidance Goals	Approach Goals
Framed in terms of a negative possibility that the youth must move away from or stay away from.	Framed in terms of a positive possibility that the youth must move toward or maintain.
Leads to stress generation and avoidance coping.	Leads to stress reduction and approach coping.

Why Avoidance Goals Aren't Best for Supporting Growth

Negative possibility generates worry, pressure, low cognitive flexibility

Impairs ability to function effectively

Produces negative life events
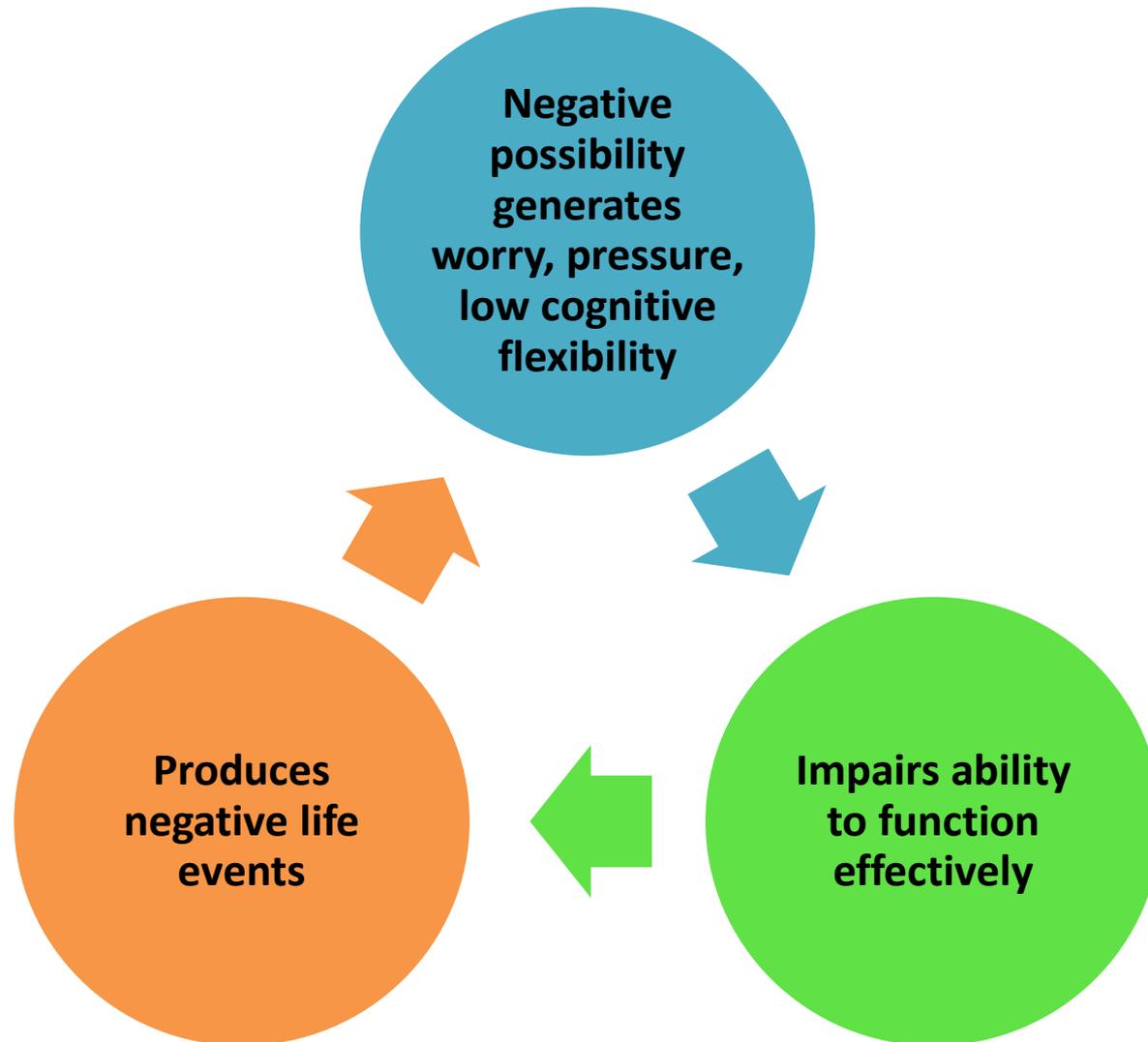
Goal Self-Concordance Facilitates Well-Being: Self-Integrated Action

Extrinsic: goals dictated by others

Intrinsic: goals are self-generated

NONINTEGRATED ACTION

Avoidance Goals

Approach Goals

SELF-INTEGRATED ACTION

Internalized "shoulds" and "oughts"

Self-identified interests and passions

J. Cloud

(Sheldon and Elliot, 1999, modified)

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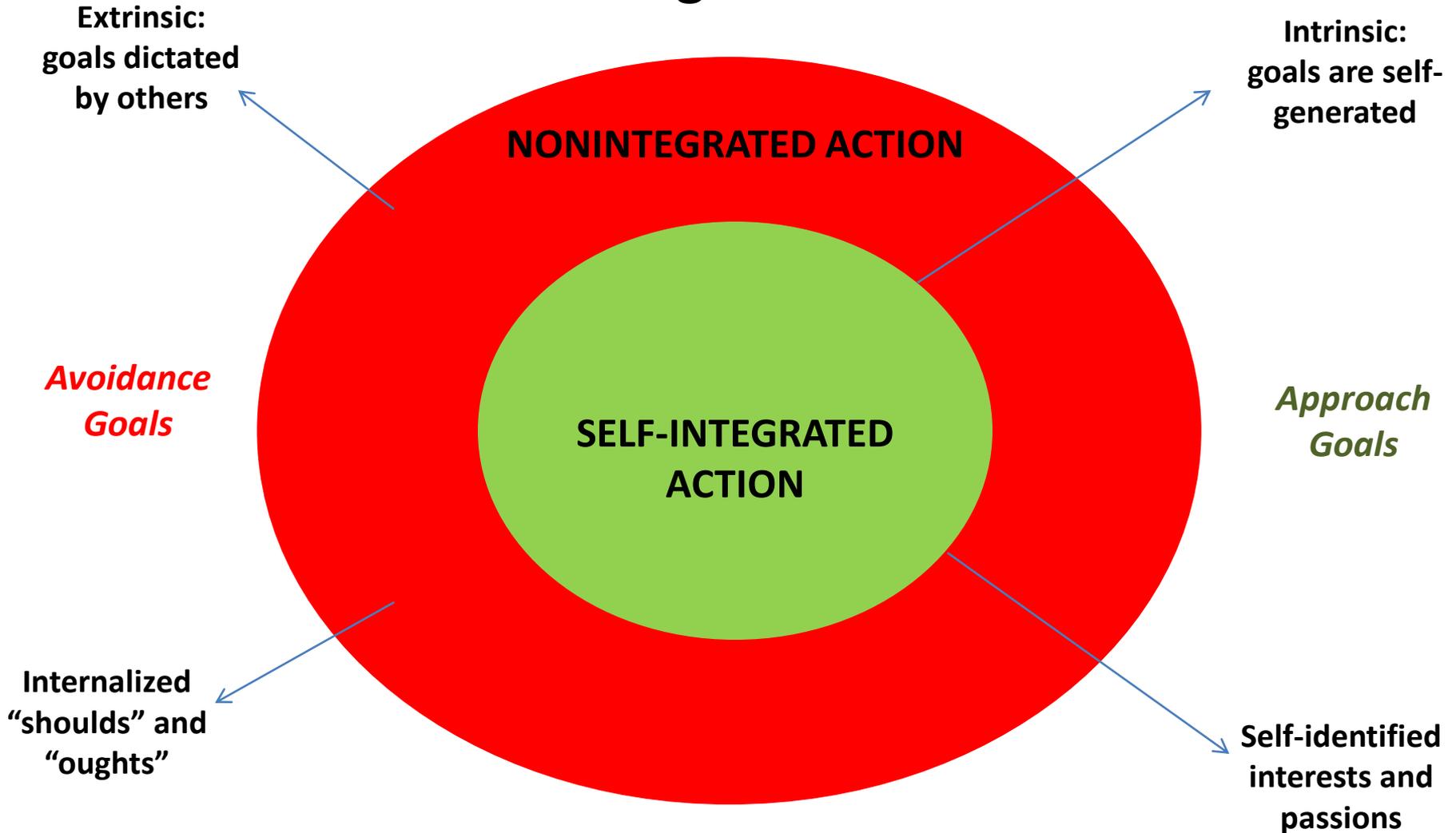
Elements of High Quality of Exploring, Discovering, and Experiences

1. **<u>Competence</u>**: goal-directed/related involvements, tasks and activities in which the youth can feel effective and able rather than ineffectual and inept (White, 1959).

2. **<u>Autonomy</u>**: goal-directed/related involvements, tasks and activities that feel self-chosen and meaningful, as opposed to "required," coerced, and pressured (deCharms, 1968).

3. **<u>Relatedness</u>**: goal-directed/related involvement, tasks and activities that feel connected to or in harmony with important others, rather than alienated or marginalized (Baumeister & Leary, 1995).

Intense Approach Experiences Generate Deep and Often Lasting Satisfaction and Well-Being

(Sheldon and Elliot, Journal of Personality and Social Psychology, 1999, Vol. 67, No. 3)

Goal Self-Concordance	→	Sustained Effort	→	Goal Attainment	→	Need Satisfying Experiences	→	Changes in Well-Being

**Self-Concordance of the individual's goal system is the degree to which goals express enduring interests, values, passions.
Motivation to pursue them is intrinsic, not externally prompted or coerced.**

Need Satisfying Experiences: Qualities of experience required by human beings in order to thrive; these qualities include competence, autonomy, and relatedness.

How Have Intense Approaches Experiences Been Constructed For or With You?

1. Write the name of one person who had a positive impact on your life when you were a teenager.

2. Write a phrase that captures: a) what that person did for you; b) how that person made you feel.

3. Write a simple sentence that summarizes how what that person did helped shape who you are today.
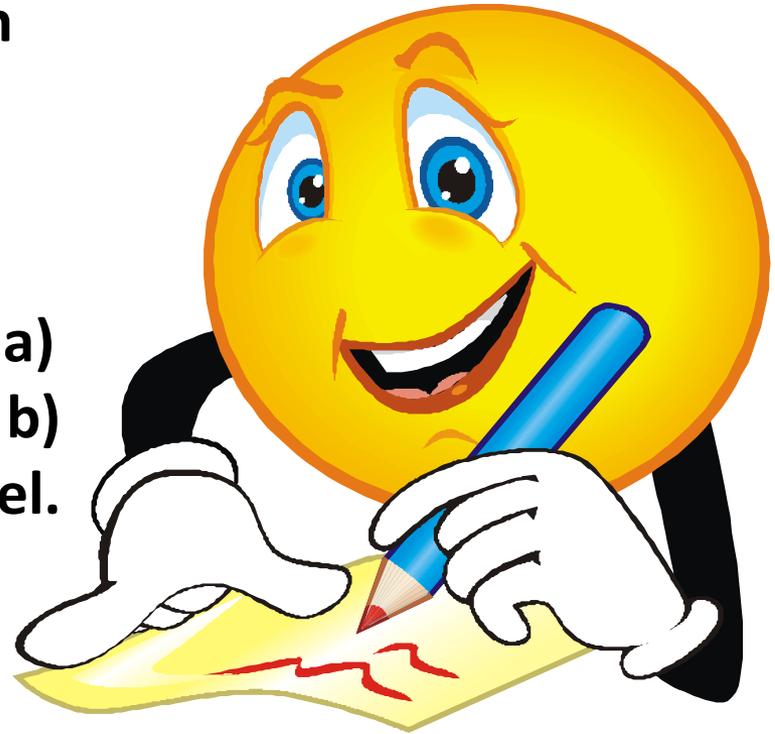
Pointers on Constructing or Facilitating Experiences

Experience	Intensity of Experience	Frequency of Experience	Duration of Experience
Specific types of experiences needed based on interests, abilities or sparks, and goals related to Ideal Self (person youth aspires to become)	How powerful or forceful or potent does it need to be, considering what the youth enjoys, competencies used/learned, and connecting with others.	How often does the experience need to happen for the youth to feel deeply engaged and competencies used enough to become part of youth's identity.	How long does the youth want to do it; and how long might be necessary to be able to do it independently and to use new knowledge in other involvements.

Experiences in Relation to Physical Well-Being

Sparks/ Strengths	Needs and Goals and Expectations	Physical Disturbances	Primitive Brain's Response to Frustration
Strength Flexibility Balance Coordination Reflexes Sensory acuity (sight, hearing, etc.) High pain tolerance Above average nervous system operations	Physiological Goals associated with eating, resting, care of body, shelter, sex, and other basic physiological areas	Physical injury, ailment, illness, or disease; serious physical disability or handicap resulting from injury, ailment, illness, disease	Increased heart rate and blood pressure, adrenaline, cortisol, narrowing attention, physical preparation to flee, freeze, fight, shuts down thinking and heightens reflex reactions (i.e., jump out of the way really fast, hit quickly, etc.)

Related to Socio-Emotional Well-Being

Sparks/ Strengths	Need and Goals and Expectations	Emotional Disturbances	Emotional Brain's Response to Frustration
Negotiating demands Flexibility Perceptiveness Goal-directedness Self regulation Optimism Empathy, sympathy Tact, diplomacy Leadership Charisma Conflict resolution	Safety and Belonging Goals associated with security of body, health, family, resources; and goals associated with family, friends, co-workers, sexual intimacy	Prolonged pessimism, depression, mood disorders, affective issues (i.e., flat affect); post-traumatic stress disorder.	Receives messages from Primitive Brain via body and nervous system; amygdala acts as "alarm system," generates fear, coordinates flight, freeze, and fight responses

Related to Psychological Well-Being

Sparks/ Strengths	Need and Goals and Expectations	Psychological Disturbances	Thinking Brain's Response to Frustration
Imaginative Critical thinking Analytic thinking Memory or recall Observant Discernment Use of language Concentration Problem-solving Originality Inventiveness	Esteem/Worth Goals associated with achievement, self-esteem, confidence, respect of others and by others; attaining status, respect; being honorable	Learning problems, obsessive-compulsive disorders, personality disorders, psychotic disorders, anxiety disorders, post-traumatic stress disorders	Mostly after the frustration event: processes memories (often intrusive) and seeks to find equilibrium by "making sense" of it; analyzes or ponders to plan avoidance behaviors. Can over-take or change previous goals.

Related to Subjective Well-Being

Sparks/ Strengths	Need and Goals and Expectations	Subjective Disturbances	Executive Brain's Response to Frustration
Vision of possibilities for self, others, one's community/world. Mission-oriented (life guided by set of high values). Purposefulness Conviction Self-knowledge Sense of personal power. Awareness of connectedness of all living things.	Self-Actualization Goals associated with living authentically, in tune with one's true or authentic self; creativity and not only following a set role or path.	Meaninglessness, despair, identity confusion, despair, cynicism, utter selfishness, feeling totally determined, loss of feeling of self or individuality, hopelessness, loss of ability to enjoy	Always after the threat or trauma event: finds or creates meaning; integrates pain and suffering and uses it for growth; regulates emotions/thoughts to "rise above" the immediate and live in response to something abstract and/or in the future (i.e., a purpose).

Empowering Adolescent Growth

1. **Human growth is intended to be continuous, unlimited; thus change is always possible.**

2. **Experience is the means by which sufficient stimulation is received to support growth and change.**

3. **Aim is to empower the working of the built-in plan for healthy development or thriving (not just figuring out how to stop behaviors and/or change circumstances).**

4. **Since all behavior is in some way goal-directed (i.e., reward-seeking), working with the youth's goal-system is essential.**