- In most of the human population, the brain's lymphatic system (the glymphatic system) cleans most efficiently when the head is laying on its side (with one ear facing the ground and the other the sky). When the head is inappropriately positioned for lymph cycling, then a pressure arises to turn over, then dull ache will be felt, to "pressure" the consciousness to turn the head to position it better for waste clean-out (a.k.a., the roll-over effect).
- 6. **Brain energy** the brain needs a source of energy/ fuel to shift into sleep mode. Note here that the brain has a modality it has two modes: an awake mode where consciousness has willed control over a body, and an asleep mode where consciousness is not observed to be present. One of the sleep techniques below (the carbohydrate technique) includes a source of nutrient energy to facilitate the brain's falling asleep.

The following may be done to optimize sleep at night (note that some of these sleep optimization techniques include daytime activities):

1. Body-mind control:

- A. While in bed at night, gaze upward toward the cranial region with closed eyelids, which may induce the generation of alpha brainwaves. Alpha brainwave patterns have the potential to enhance sleep pressure and promote the onset of sleep.
- B. While in bed at night, relax the various parts of the body to facilitate sleep pressure and onset. In other words, deliberate meditation and mental relaxation of each part of the body while in bed at night can contribute to the facilitation of sleep pressure and the initiation of sleep.

2. Atmospheric control:

- A. Do not have fans blowing directly on the sleeper. Fans blowing directly on a sleeper are likely to negatively impact sleep quality.
- B. Set a good environmental temperature (cool) and appropriate humidity. A cooler ambient temperature sleeping environment may help with sleep-onset and sleep efficiency.

3. Temperature control:

- A. Hands and feet are thermal regulators, so "you" can keep them out of the blankets. If "your" feet or hands are too cold, of course, that can inhibit sleep.
- B. Cooling the head with an ice pack after lying down on a bed can facilitate sleep. In other words, lay down and place a paper towel covered ice-pack on the forehead. Then, remove it when sleep pressure is felt, or when it is no longer cold.

- C. Taking a warm shower before bed can support sleep. After the warm shower, the body will cool and the cooling may facilitate sleep onset.
- D. Conversely, take a cold shower at night in hot environments to cool the body when the environment isn't cold/cool enough to facilitate cooling of the body.
- E. Take a hot sauna in the evening to facilitate sleep at night.
- F. Take a short ice bath during the day to facilitate sleep at night.

4. Bedding control:

- A. A mattress that remains sufficiently cool and comfortably supportive throughout the night will facilitate sleep on-set and efficiency. Use a mattress that maintains a good temperature over sleep-time. Some mattresses will store body warmth and then radiate it back to the sleeper, which is undesirable.
- B. Poor bedding that aggravates pressure/pain points is likely to cause "tossing and turning", which is likely to fragment sleep.

5. Light control:

- A. Exposure of the eyes and skin to sunlight first thing in the morning will help set someone's circadian rhythm, along with a host of other benefits, that will facilitate sleep at night. The human body is intimately tied to light and dark cycles (of the sun).
- B. Exposure of the skin and eyes to sunlight throughout the day can facilitate sleep at night. Note that long durations of time spent in low lux (i.e., dark) indoor environments can harm optimal eye functioning.
- C. Red (orange and amber) lights and red glasses at night (to protect the eyes from other frequencies of light) can help the body fall asleep. Blue light, and other higher frequencies of light, including very bright light (even bright red light) are light frequencies likely to suppresses the body's production of melatonin, the hormone associated with the regulation of circadian rhythm and sleep on-set. Effectively, blue (and other) light can affect sleepiness in negative ways.
- D. A very dark (blacked-out) sleeping environment, where the sleeper cannot see their hand in front of their face, can facilitate sleep optimization (i.e., a pitch black sleeping bedroom may facilitate sleep optimization).

6. Food control:

A. Having appropriate healthy blood sugar regulation throughout the day will facilitate optimal nightly sleeping.

- B. Consuming the last meal of the day three or more hours before bed can facilitate the optimization of sleep. Lying down to sleep after eating can cause indigestion.
- C. Taking a relaxed 10-20 minute walk after each meal of the day can aid digestion and healthy blood sugar regulation, and thereby aid sleep at night.
- D. Raw honey before bed may facilitate sleep onset, sleep efficiency, and shorten sleep duration (over the course of one night). If the honey helps chronic insomnia, then part of the source of insomnia may be blood sugar related. Wearing a continuous blood glucose monitor is essential for determining whether someone's blood sugar regulation is disordered, and why (in the context of food inputs). As noted earlier, the brain requires an addition of energy to enter sleep mode. Carbohydrates before bed in the form of raw honey may also shorten the sleep duration. It may be possible for some people to shorten their sleep duration by having something like 1-2tbs honey after dinner (if they have reasonable blood sugar regulation to start with). Raw honey before bed, like melatonin, is something of a chemical "crutch". The honey should be raw. And, melatonin is often not appropriate for children.
- E. Some people find they fall asleep most easily after eating a high carbohydrate meal right before bed. Again, this is because the carbohydrates provide energy for the brain to fall asleep. A high carbohydrate meal before bed may be considered a chemical "crutch".

7. Supplements control:

- A. Supplemental melatonin is a hormone that significantly facilitates the onset of sleep. Taking melatonin before bed, like honey, could be considered a chemical "crutch".
- B. Take some electrolytes mixed in a glass of water before bed, primarily in the form of 200mg to 1000mg of sodium with some potassium and some magnesium (or, fulvic and humic minerals). Electrolytes are probably not considerable as a chemical "crutch". Be careful with electrolytes; if you wake up in the morning with bags under your eyes, the salt/electrolytes consumed the day before may be causing kidney stress.
- C. Sufficient consumption of electrolytes during the day can facilitate sleep.
- D. There are specific peptides that can facilitate sleep. The most well known peptide for sleep is "deep sleep inducing peptide" (DISP).

8. External weight control:

- A. A weighted blanket that puts outside pressure on one's body can sometime help in falling asleep more quickly.
- 9. **Breath control** (Important: nasal breathing always, as normal breathing):
 - A. Special breathing techniques to help sleep onset include, but are not limited to:
 - Reduced volume breathing (a.k.a., Butenko breathing method) - breath in a slightly reduced volume of air while slowing the breath, so that "you" feel a light amount of "air hunger" (i.e., feel like you would like just a little more air, but don't give it to "yourself"). The purpose is to apply a gentle reduction to breathing.
 - 2. Relaxed slow breathing, with breath exhales slowly extending to some elongated and fixed exhale time. In other words, longer exhales than inhales.
 - B. There are also breathing to remove fatigue and motion sickness:
 - 1. To reduce fatigue: one or two rapid inhales in, and then, slow exhale, repeat. (note: this is not a sleep-time practice).
 - 2. Ribcage expanding breathing.
 - 3. Deep belly-button breathing
 - 4. Slow ribcage and belly-button breathing with arms over the head (sitting or standing, with caution that the behavior will not cause someone to pass out and injure themselves).

10. Lifestyle controls:

- A. Massage and electrical stimulation, including family, percussion and electrification technologies:
 - 1. Body percussion tool devices produce a feeling of relaxation and may also help release serotonin, just similar to a regular human-to-human massage.
 - 2. Vagus-nerve electrical stimulators typically go around the neck and stimulate the vagus nerve on either side of the front of the lower throat.
 - 3. Electrical muscle contraction stimulators to externally electrically contract at a set frequency specific muscles of the body.
- B. Food composition: The type of food consumed throughout the day over time. Control the type of food over time.
- C. Meal timing: The timing of the last meal of the day can impact sleeping. Control when the last meal of the day is eaten. It is generally, on a day-to-day basis best not to eat three hours before sleep (note: this is also a form of "food-

timing control").

D. Exercise:

- Physical movement and exercise during the day can facilitate sleep. Several enjoyable walks per day, or one longer enjoyable walk per day is a good foundation for physical movement.
- Sleep pressure and deep sleep will be improved at night by walking at least 8000 steps outside during the course of the day.
- 3. Intense exercising before sleep can impact sleep negatively. It is generally best on a day-to-day basis not to exercise directly before sleep.
- E. Bedtime timing It is generally best to go to bed "early", between on or two hours after the sun sets, and to use red lights at night to help induce sleep pressure (i.e., the feeling of being tired and ready for sleep). It is generally best to go to bed at the same time every (or, most) nights.

What if "I" wake in the middle of the night? If "you" wake in the middle of the night, then:

- 1. Do breathing exercises and progressive relaxation meditation until "you" feel sleep pressure again.
- 2. Take an electrolyte supplement and go back to bed.
- 3. Listen to an audiobook.
- 4. Read a book under red light.
- 5. Take a warm shower if the ambient temperature is cool.
- 6. Take a cool shower if the ambient temperature is hot.

Supplements and pharmaceuticals can impact sleeping:

 Be careful with supplements and pharmaceuticals at night, and during the day, because they too can significantly impact sleep onset and sleep quality in good or bad ways. Note that a supplement that may initially have a good effect may start to have a detrimental effect over the long-term (e.g., melatonin).

Of note, human performance can be compromised in the following general ways:

- 1. Body posture.
- 2. Psychological orientation to past, present, future.
- 3. Physical and biomedical composition.
- 4. Exposures to toxins and/or things that make the body weak.
- 5. Sleep quality.

3 Flow dangers

"When you are looking for flow you are climbing the ladder of escalating risk [given what we know]."

- Steven Kotler

Flow is a little dangerous. We now understand to a reasonable degree the neurobiology of what is occurring when people enter flow states. One of the occurrences in the brain during a flow state is that of a large neurochemical release (or "dump"). This neurochemical dump (large release) allows for optimal performance and adaptation (i.e., learning). In a state of flow the brain releases five of the most potently addictive [reward] neurochemicals it can produce. When these neurochemical flood into a brain it produces an extremely addictive (or, "autotelic": an end in itself) experience. And, generally speaking, flow is the only time you get all five produced at the same time, all at once. Someone in flow is essentially getting a very potent and very addictive cocktail of neurochemicals, that enhances one's capabilities, and ultimately, ability to experience life. Once a person starts producing flow s/he will go extraordinarily far to get more of it. In other words, flow encodes and rewards the experiencer to do more of it.

When working with flow it is important to know what you are doing because you are essentially playing with very fundamental biology, and it can go wrong, disastrously so. These neurochemicals are not only addictive; they are also "expensive" for the brain to produce. The flow state may be said to "catch your brains attention and hold it". If you get a dump of these chemicals, and then that tap gets shut off because you don't know what you are doing, then it can be like coming off of hard drugs; there can be serious feelings of being down. Further, during the experience of flow, depending upon the context, the experiencer may lack an awareness of bodily needs and/or ignore their needs in favor of the performance of flow.

Flow researchers state that, "flow is the source code of intrinsic motivation". In other words, once you start producing flow you are compelled to do more of it [and, there is at least a regenerating biochemical process that allows for it]. Fundamentally, humans are hard-wired to have access to the state of flow, they just need to know what they are doing, so that the cycle regenerates and individuals increases its future potential, as opposed to lowering it.

It is important for those who experience flow to give themselves time to recover; it is important to go through periods of restoration. It is important to expose oneself to intrinsically motivating challenges. It is important to create a structure where challenges do not become so chronic that work never stops, or cannot even start.

Scholarly references (cited in document)

- Hadanny, A., et al. (2022). Effects of Hyperbaric Oxygen Therapy on Mitochondrial Respiration and Physical Performance in Middle-Aged Athletes: A Blinded, Randomized Controlled Trial. Sports Medicine: Open 8, no. 22. https://sportsmedicineopen.springeropen. com/articles/10.1186/s40798-021-00403-w
- Lam, G., et al. (2017). Hyperbaric Oxygen Therapy:
 Exploring the Clinical Evidence. Advances in Skin
 & Wound Care 30, no. 4. pp181–90. https://doi.
 org/10.1097/01.ASW.0000513089.75457.22 | https://
 journals.lww.com/aswcjournal/Fulltext/2017/04000/
 Hyperbaric Oxygen Therapy Exploring the
 Clinical.8.aspx
- Suzuki, Junichi. (2017). Endurance Performance Is Enhanced by Intermittent Hyperbaric Exposure via Up-regulation of Proteins Involved in Mitochondrial Biogenesis in Mice. Physiological Reports 5, no. 15: e13349. https://doi.org/10.14814/phy2.13349
- Kea, Howard Eric. (2008). How Are NASA Engineers Motivated? An Analysis Of Factors That Influence NASA Goddard Engineers' Level Of Motivation. Antioch University. Ph.D. Dissertation. https://www.researchgate.net/publication/228384062_HOW_ARE_NASA_ENGINEERS_MOTIVATED_AN_ANALYSIS_OF_FACTORS_THAT_INFLUENCE_NASA_GODDARD_ENGINEERS'LEVEL_OF_MOTIVATION
- Thom, Stephen R. (2011). Hyperbaric Oxygen: Its Mechanisms and Efficacy. Plastic and Reconstructive Surgery 127, suppl. 1. pp131S-141S. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3058327/

Scholarly references (non-cited)

 Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? American Psychologist 54(10), 821-827.

Book reference (cited in document)

- Asprey, D. (2023). Smarter not harder: the biohackers guide to getting the body and mind you want. London: Thorsons.
- Kotler, S. (2014). The Rise of Superman: Decoding the Science of Ultimate Human Performance. New Harvest.

Book reference (non-cited)

- Csikszentmihalyi, M. (1996). Creativity: Flow and the psychology of discovery and invention. New York: HarperCollins.
- Csikszentmihalyi, M. (1997). Finding flow: The psychology of engagement with everyday life. New York: Basic Books.

Online references (non-cited)

 Mihaly Csikszentmihalyi: Flow, the secret to happiness. (2008). TED. https://youtu.be/fXleFlCqsPs

- Ford, M. (2014). The science of flow: Unlocking better creativity and happiness. Matty Ford Blog. https:// mattyford.com/blog/2014/9/11/flow-unlockingbetter-creativity-and-happiness-part-1
- Flow Genome Project's recommended reading list. (2014). Facebook Post to Flow Genome Project. https://www.facebook.com/Flowgenome/ posts/532968720079486
- The longevity deception (part 5 of 5). (2014). Hipcrime Vocab blog. http://hipcrime.blogspot.com/2014/11/the-longevity-deception-part-5-of-5.html

The Education Phase

Travis A. Grant,

Affiliation contacts: trvsgrant@gmail.com Version Accepted: 30 March 2024

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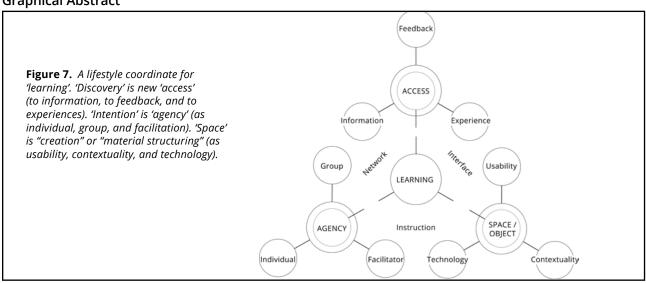
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Abstract

Learning is a lifelong process that originates from within each individual and may be nurtured or hindered by an environment. Therein, education is the self-development of capability and knowledge. Together, a community may facilitate the lifelong learning of the whole population. Humans are capable of experiencing motivation from two sources, internal (with situational components) and external (with coercion-based components). A community-type society where all users are potential contributors enables experiential learning across the population. In a community-type society, learning occurs through facilitation, instead of teaching. It is the learner doing the learning for oneself that most benefits everyone. Learning can occur at the individual level, and it can be formalized in standards at the societal level. There are compositions of society that engage learning in ways that negate and harm individual self-direction and self-integration. Potential learning can be thwarted by aberrant conditions and conditioning.

Fundamentally, humans learn and grow through experience.

Graphical Abstract



1 Learning

"There is no difference between living and learning. It is impossible and misleading and harmful to think of them as being separate." - John Holt

Learning is a lifelong process that originates from within each individual and may be nurtured or hindered by an environment. Learning is natural and innate in us; it is an intricate and complex process for which we are all [neurologically] wired. Learning is [an ability] implicit to embodied consciousness. Practically speaking, learning is the product of the activity of learners and it is the result of living a rich and engaged life. Learning is an intrinsic and active process in which someone is interested and engaged. It is a self-directed process for it originates from within the individual (i.e., learning is the self-integrating and structuring of the contents of our own minds). As a self-directed process, learning can be interfered with and entirely dismantled by external forces (including other individuals and extrinsic processes). If the structure is the function, then in a physical sense, neuro-adaptation [of a conscious entity's nervous system] is learning. Individual animals, including individual humans, can learn and adapt. Fundamentally, learning is a growth process that happens inside someone and leads to changes in knowledge, skills, and motivations. These transformations occur based on someone's life experience and increase potential for well-being, life opportunities, improved performance, and future learning.

Learning is an individual, internal process that takes place in [at least] a person's brain as information is sought, integrated, and applied, and connections are made. For the process of learning to occur the learner must be able to classify his or her own interactions with an environment, which most often takes the form of changing its structure (i.e., by interacting with it). Hence, learning necessitates a relationship and a novel experience -- it requires some degree of action, interaction, and reaction. It could be said that learning is the state of active participation in a relationship. Fundamentally, if "you" don't do anything, "you" are not going to learn anything. Knowing what something is, is not the same as experiencing something for oneself. Seeing and experiencing makes everything seem obvious. Fundamentally, learning is up to "you" and when "you" make it up to "you" it makes a huge difference in "your" life and the lives of others in "your" social environment.

Individuals have the capacity to learn for themselves. To understand the true nature of the universe it must be experienced and explored first hand. Individuals come to know things through verification by their [conscious] experience [of existence], which may proceed a hypothetical inquiry. The answers to human existence come from human interactions with the universe.

Technically speaking, learning is the intentional processing of information in a structurally emergent

access, integration, and memory 'space'. In other words, learning is the process of integrating newly accessible information [spaces]. Therein, discovery is new access, intention is agency, and life is structured creation.

Neurologically, learning is an adaptive process. The brain is adaptive; it is an adaptive learning machine. The brain re-wires its connections based upon experience (exposure) and the learning of new tasks. The umbrella term for this in neuroscience is 'neuroplasticity'. It is wise to remember not to lock into a conclusion too quickly; it is wise to keep some degree of neuronal plasticity so that one is always open to a new idea that might actually be a refinement of an old idea.

No-one can prove that any type of discipline helps a child grow and learn any faster than s/he would naturally, with lots of love and support and gentle guidance. Is it possible that the ubiquity of child-discipline methods, punitive, manipulative ways to train children in the ways of the world, have made humanity forget to question whether they are necessary at all.

Learning is not something imposed upon a person; it is something that happens naturally. Learners make subjects relevant to themselves; when someone else makes a subject relevant, then there is likely coercion present.

Learning is the process of taking every new experience and encounter as an opportunity for investigation and illumination. We learn by experiencing, remembering, and evaluating. Among the many processes that the concept of learning encompasses are: discovering; connecting; integrating; adapting; designing; constructing; and creating. Effectively, learning becomes about openly inquiring and actively integrating our experiences into a referential information set [so that we may more greatly focus our intent on that which is most meaningful]. Hence, it involves trust in the human capacity to be curious, to integrate, and to verify existence for oneself. Learning is thus experienced as the self-integration of mind, body and existence by consciousness; it is an emergent phenomenon and a self-organizing process. It could be said that learning is a dynamic function of consciousness in the awareness of a relationship with existence. Summarily, learners become (or "learn from") their experiences and they follow their passions while they self-organize and self-integrate.

INSIGHT: Learning is about understanding and about relating the understanding to a part of ourselves. And therein, practicing in the betterment of self and/or other.

The most important thing that promotes learning is your own motive interest in wanting to learn something. As long as "you" are interested that is really the only criteria to learning. Learning is a playful adventure. The opposite of play isn't work; it is depression. The world is a learner's playground where every connection (action, interaction, and reaction) is an opportunity for learning. Learners explore and experiment; they experience and partake; they engage and discover; they restore

and recover; they struggle (or "load") and process; they consolidate and make new connections. Note that when learning takes the form of the flow cycle, then it has different experiential and neurophysiological stages (struggle > release > flow > recover).

Learning is a universal consideration. If we have no reference point, no stable point from which to work from, then we cannot run effective experiments and optimize decisions, which is the basis for all learning and the organizing of fulfilling environments. An individual needs a point of reference from which to measure the departures, and then to come back and ask if those departures are adaptive to its purposes or not. Hence, if you don't learn, then you can't adapt. And, if you can't adapt, then [evolutionarily speaking] you won't survive.

When we experience the connections and can verify our experiences, then our lives become an authentic representation of reality. But, when we are given abstractions void of experience, and hence, verification, then our lives become an opinionated representation of reality. If you can't verify information then you can't learn.

A learner attunes his or her sensitivities to the world. Herein, learning a new feature of an environment allows someone to build a model. Once "you" have a model "you" can test it and identify exceptions which engages curiosity and facilitates going deeper (i.e., learning new features and building more / newer and more accurate models). Once we have a model in our minds, then we can start testing it. The way someone develops a grounded understanding is by going out in the world and playing with things; being "told" something is not its equivalent.

We learn through experience and the developing of our sensitivities to real patterns in an existence that can be identifiably experienced by our consciousness. Herein, curiosity brings fulfillment that we do not find by chasing achievement. Unless a child has specific and unique learning challenges, you essentially cannot stop them learning if they have access and exposure to materials and content (besides trauma). There is no substitute for passion.

Humans are naturally curious. In community we discover our interests and then master them to our desired potential. The only learning that ever counts is when the learner drives their own learning (i.e., has passion) and is fully responsible for their learning, and not forced by some authority. Responsibility means that "you" make your own decisions and are not protected from the consequences of your actions. In community, we facilitate an environment where we as individuals can make our own mistakes and learn from them. Learners ought not to be protected from failure since failure is feedback and represents an opportunity [and may provide incentive] for growth. Learners use feedback from an interactive environment to correct their own development and integration processing.

When individuals set their own learning outcomes and self-correct our measures, it frees them to explore

higher order cognitive skill development. Instead of just memorizing individuals can begin thinking creatively and [re-]solving problems. And in doing so, they may feel like they are playing (as children) or in the state of flow (as adults). Learning is supposed to be enjoyable; and if it is not enjoyable for someone, then maybe there is a problem with the context within which others say someone is supposed to be learning. Play is an integration of learning and leisure; in contrast to contribution, which is labor and may hopefully be play, but which certainty must be done.

In general, play has four characteristics:

- It is an activity that is self-directed and self chosen by the players. If it is imposed on them, or if there is an authority figure telling them how to do it, then it isn't play. Play is self initiated and self-directed. Play is not a forced activity. It's not play if anyone is not free to quit.
- It is intrinsically motivated, in other words, it is being done for it's own sake; it is being done (at least in part) because it is enjoyable to do. Play is how you discover and pursue the things that you like to do.
- Play always have rules, and guidelines. Technically, there is no such thing as unstructured play. Play is how people practice creating and following guidelines.

The primary purpose of play in mammals and humans is to practice the skills that are necessary for living a healthy and satisfying life as the species that every individual-self is, for survival and thriving together. Children play at those skills that are important to their survival, their behaviors and appetite are ecologically contextualized species specific skills. These observations show that children are, by nature, attuned to what it is that they need to learn in the society that they are growing up in if they want to succeed, eventually, as adults in that society. Here there is a recursively shared "generational" relationship. (Gray, 2023)

Studies clearly show that children (in education) are much happier and mentally healthier when "schooling" is out, rather than when school is in. There are several studies looking at the suicide rate when "school" is in session compared to the suicide rate for "school" aged children during the summer when school is off. Also, even during mid-term vacation (e.g., holidays and new years). The find is that the suicide rate declines greatly in the summer, and declines a little bit even during the mid-term "school" break; i.e., when "children" are not at "school". Some of the studies show that the suicide rate in the summer (i.e., a duration of vacation/leisure from "school") is less than half per month than it is during the "school" year. (Gray, 2023)

I the early 21st century, "school" has become very stressful. The pressure about testing, instead of

community knowledge and mentoring facilitation, harms the potential optimization of community. Parents in the early 21st century have become convinced that "school" performance is important, to become a functional member of society and to understand reality. Parents become homework monitors, whereupon "school" doesn't even end for the students (of "school"), when the school day ends. Many students feel that if they don't do well in "school" that they will be homeless, that their whole future depends on "school" performance, because after completion they are entering a "self"trade for survival system. "School" (State and belief authority learning) takes up their time, so they have little time left to discover what they like to do, and to pursue those interests. It is not just the school pressure that is causing the problem, extracurricular activities, and adults' fears of allowing independent activity outdoors (because of real and irrational fears of dangers), and this has restricted children's fears to play and do things on their own. And yet, children thrive on independence; the require space, challenge, and knowledge, and skill development activities. The whole purpose of childhood is to become increasingly independent (through contribution and leisure phases), and part of that is the practice of independent play.

Of note, age mixed play is normal play, for kids. Traditionally, play was aged mixed play until the early 21st century where children are segregated in "school", neighborhood play is reduced or not at all present, and children are segregated in adult directed extracurricular activities. In mixed age play, the older children provide a "scaffolding" to bring the younger children up to a higher level.

Although play always has rules, the rules are always such that there is an opening of space for creativity and innovation within play. The rules don't specific exactly what you have to do, but instead specify the boundaries within which you are doing what you are doing. Hence, play is typically highly creative.

Humans are all natural born learners. The efforts of Sugata Mitra, Dr. Thomas Alan, Dr. Peter Gray, John McKnight, John Holt, Alfie Kohn, and John Taylor Gatto provide several examples of work and research in this area that convey some remarkable evidence about humanity's [obvious] abilities to learn without formal institutions and teaching methods.

If learning is a self-organizing practice, then it is a practice we are all pulled toward in order to be the love and the oneness that we awaken to through the intended emergence of organization by changing our structure to one of ever greater fulfillment.

Learning is the process of figuring out how to do something while you can't do it. You are likely not growing unless you are pushing yourself beyond the boundaries of what you are comfortable doing, and therein, messing up and failure (without injury) is the best indication that you are pushing yourself in the way you need to push yourself so that you can grow. Embracing failure as a key to learning is a necessary approach (i.e., "attitude").

Learning is a "fail forward" mindset. Sometimes, the biggest challenge is not the accomplishment that is achieved, but to go beyond one's initial limitations.

Learning may be described, in part, by the following characterization (the first letter of each forms the acronym, FREEDOM):

- 1. Flow.
- 2. Repetition.
- 3. Experimentation.
- 4. Engagement.
- 5. Doing.
- 6. Observing.
- 7. Motivation.

"Children do not need to be made to learn about the world, or shown how. They want to, and they know how."

- John Holt

1.1 Education

"Education is a self-organizing system, where learning is an emergent phenomenon."
-Sugata Mitra

Learning is an iterative process. In other words, you get many chances (or experiences) to get it right [and to refine your precision]. Alternatively, education is an accumulative process. In other words, your experiences build upon one another [toward the development of greater wisdom, creativity, and automaticity]. Over time, the brain knits together a wealth of new circuits that eventually allow someone to execute a skill automatically, without consciously having to consider each action [in isolation]. True learning is intrinsically motivated, and the reward is knowledge and skill (education), selfdiscovery, loving connection, and ultimately, a fulfilled life experience within a fulfillment-oriented habitat service system to which learners are contributing. In the context of an upbrining of someone within society, learning becomes education. Education is creating an optimized environment to facilitate and foster [selfdirected] learning, and present challenges that further enhances learners neuro-cognitive and psycho-physio development. In this sense, the purpose of education is to help individuals achieve their highest potentials - to become holistically development (emotional, physical, and social well-being). In this way, education is empowerment, access to learning resources and tutoring facilitators, and autonomy (let society give "you" the tools "you" need to maximize "your" own personal success in society and autonomy at learning). Importantly, within the context of society, part of education is creating [societal education specification] standards that include a set of core competencies that everyone needs to know about. In community, education standards are based on societal systems-science specifications (i.e., they are based upon society's current societal specification

standard).

IMPORTANT: Because know-how is a generationally emergent phenomena passed down [generationally] by education, without an education, it is impossible to achieve anything socio-technically complex. A community-type society requires a community-type standard[-ized] education system.

In simple terms,

- Learning is a life-long, self-directed process of growth and development of fitness, awareness, and skill. Learning is categorized as informal, because it occurs all the time.
- Education is categorized as societal-formal, because it uses the resources of society to facilitate individuals' learning about society, about reality, and about contribution, in order to participate effectively throughout all phases of life in community. The result of education is someone who contributes effectively, and flourishes throughout all phases of their life. Some education ends in certification and some education does not.

A real education is intrinsically motivated and self-directed. Choice greatly improves motivation. Or, said another way, choice represents the motive opportunity for the expansion of oneself into ever greater folds of understanding, integration, and creation. Alternatively, when authority is present, punishments, rewards, guilt, and shame are often used as means to motivate action. A meaningful education is the freedom to explore and to learn through self-direction. A real education draws out the potential of the individual. A real education is being able to identify tools and have a tools inventory. And yet, what is a greater 'physical education' than understanding your own body's signals and integrating social signals so there is less conflict.

If success is the progressive realization of a worthy purpose, then education is the development of knowledge and skills to help us achieve that success. Herein, an education is a set of experiences that helps someone discover who s/he is and who s/he wants to be in the world. A good educational process is one that helps "you" think about information in a way that is connected to a sense of purpose and in a way that relates to what "you" want out of life. Hence, it is easy to help others make changes in their behavior if we can facilitate the acquisition of self-knowledge and a sense of life-directing purpose. We get the "lessons" that others feel are so important to "teach", automatically, when we have that conducive environment.

We are born curious, and given a supportive environment nearly all human beings will blossom (through their curiosity). Herein, learning that results from self-directed education is more profound, powerful, and rewarding to ourselves and others than what is

seen within the education systems of early 21st century society, which use coercion to acquire compliance.

There are two different Latin roots of the English word "education." They are 'educare,' which essentially means to train or to mold, and 'educere,' meaning to "lead out" or "bring out" (from ex-"out" + ducere "to lead"). While the two meanings are different, they are both represented in the word "education" as it is applied throughout most of early 21st century society. Thus, there is an etymological basis for many of the debates about education today. The opposing views often use the same word to denote two very different concepts, which become even more separated when learning is viewed from the perspective of neuroscience and the individual.

The term 'educare' uses education to essentially mean the preservation and passing down of knowledge through the shaping of a population in the image of those with power (e.g., parents, leaders, teachers, and other "professionals"). Here, 'educare' may be used to mean the equivalent of "to pour in" and "to teach and to educate". The other view, 'educere', effectively sees education as a process of facilitating others as they "draw forth" toward a greater and more integrated understanding of themselves in an emergently discoverable world. The first view, nearly ubiquitous in early 21st century society, calls for rote memorization, compulsory attendance, grading, and being a "hard worker". The other requires questioning, thinking, and the facilitation of an environment where individuals have the space and opportunity to explore and verify for themselves. The first view sees education as the equivalent of indoctrination and the second as a process of drawing forth from within and bringing out one's own highest potential. The two concepts can be more clearly separated by asking the question, "What is the purpose of education?" Is it turning people into disciplined "professionals" and functional "citizens" through obedience and namelessness conditioning: is it 'educare'? Or, is it the process of self-organizing for one's own self-development within an environment that facilitates all aspects of self-development: is it 'educere'?

It should be noted that educere, "to lead out" or "bring forth", does in a way denote the molding and shaping of an individual by the usage therein of the root word "to lead" (Read: "ducere"). Someone who is being "led out" is essentially following. Hence, etymologically and semantically speaking, one could interpret 'educere' to mean something similar to 'educare'. But, when the concepts of 'learning' and 'authority' are coherently and meaningfully defined, then the concept of 'education' begins to separate quite dramatically from 'educare' as well as the pejorative (leading & following) interpretation of 'educere'. In community, we understand the necessity for the individual to take the "lead" in his or her own learning, which represents the only way we know of to truly become educated.

Education could be viewed as a spectrum: at the one end of the spectrum lies the accumulation and integration of information that has great hold on the

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mind and allows for complexly creative thought for it was acquired through passionate inquiry; and at the other end is a disintegrated mind with little hold on understanding for it was rotely memorizing and temporarily accepting to pacify or please an external other. In fact, the very concept of 'education' begins to divide along this spectrum into something which is meaningful to the self on one end, and something (i.e., a product) that is useful to human managers on the other.

Education is powerful a concept in its encoding into a society, and it can be viewed from [at least] two divergent perspectives: it can be seen as the recycling of knowledge and culture through schooling; or, it can be viewed as facilitating the continuous emergence of understanding and creativity through self-directed learning.

To remove the concept of learning from the directed intention of a learner is to remove learning from education altogether, which is likely to generate disempowered individuals who have lost their curiosity and their will to search for integration about life.

Today, we know that learning is a lifelong ability that originates from within the individual. Alternatively, schooling is a finite process done to someone. Hence, a truly meaningful education is not intellectual management; that is the system of schooling. You aren't going to learn and evolve and adapt without taking in more accurate information and novel experiences through your own directions, and that, is education. In other words, at the one end of the spectrum is the notion of an actual education and at the other end is the notion of human management by something called "education". The later form of "education" may be more accurately known as schooling, which is a process with a divergent purpose from the former.

Therein, education is the understanding of concepts and their logical integration into the building of highly complex structures. Education should bring about the integration of life's complexities, which can be demonstrated and verified by us. Without integration life becomes a series of conflicts and sorrows. Education involves the evolution of our thinking and the weaving of new paths to well-being, happiness, and fulfillment. Pragmatically, education is the development of an information network of connections and association that may be referenced for decisions and actions.

Today, the facts can be looked up; hence, it is important to understand deep principles and the particulars of inquiry. Today, a useful education is knowing how to inquire, where to inquire, what to inquire [of], and why you are inquiring. In an information system, the most useful skills are information discovery (i.e., finding and searching) as well as information analysis and synthesis (i.e., processing for integration, application, and communication). The quicker these things can be done, the more efficiently users will deal with the world by themselves. In other words, the more truly educated someone is the more easily they will cooperate for mutual benefit and the more quickly they will solve complex real world problems for everyone's fulfillment.

The schooled thinker might ask, "How are people going to be educated [if not through school]?" Firstly, the question assumes that people are becoming educated in school now. Regardless, it is not the right question to ask. It is very much like asking, how are babies going to learn how to walk and talk if we don't attach this mechanical structure to them that moves their limbs in the way it knows they ought to. We learn to walk, it's self-motivated and doesn't require manipulation. If a government were to establish compulsory evaluation of babies to determine whether they were walking on schedule, everyone would reason that as absurd. We understand that healthy babies walk eventually, and that it would be futile and frustrating to attempt to speed up that process.

There is a critical period for learning language, but other than that there is no critical period for anything. There is no scientific basis for the schedule of "learning" taught in school, besides the learning of language(s). Language has something encoded (intrinsic) within it that humans must be exposed to when they are young. Language has coded within it something analogous to the underlying structure of memory; because, language is dependent on memory.

It seems as if those in early 21st century society look upon education as something that is external, something that needs to be imposed, in the way you make a gingerbread man by putting the cookie cutter onto the dough. The question presupposes that education is something that needs to be imposed from outside. In fact, the question imposes upon itself. The very premise of the question is to be rejected for it assumes upon itself (i.e., the question is fallacious). It assumes that school is the golden standard for education. Because the automatic assumption in the question is, if people don't go to school, how are they going to learn - school is the only place where people can learn. We have an entire society of people who are indoctrinated into believing that school is the golden means; that it is the only opportunity we have for learning and becoming fully functioning and participating adult human beings. We have become accustomed to the idea that education is something that has to be done to people; potentially even that humans are born flawed and that they have to be fixed by putting (or pouring) information into them like filling a jar with beans, which a trained and "professional" bean pourer can do all day. You can take a child and fill them with all sorts of dates and facts and skills, some of which they may have an intrinsic interest in learning and may be useful, and many others of which are not. But, this is not learning. Learning is something that a human being does naturally from the moment they are born.

To a learner [who has not been schooled] it sounds quite strange when asked, "At what age should I teach my child this subject or this skill? Or, at what age should our policy dictate, and teachers enforce, knowing this subject or this skill?" Someone who recognizes what learning actually is might respond with, "I don't know; at

what age should your child wear a size 5 shoe? And, if s/he is not ready for it, should you force him/her into wearing it anyway."

They, the "schoolers", usually then express concern that children will not learn what "they need to" if they have a choice. To which any learner would have a hard time not laughing out loud at. People just simply do not resist information that is truly valuable to them, unless for the sake of rebelling against some coercive authority. It would be self-destructive to do so; it would be unnatural. And, healthy and non-traumatized kids are not naturally self-destructive.

It is also an erroneous assessment to say that school is the only environment that can cultivate the acquisition of self-discipline in the mind of an individual. To make such a claim would be underestimating the potential of the individual learner among a community of learners.

Five general principles of education are:

- 1. Cultivate the self. Come to understand who we are and why we are the way we are.
- Cultivate and explore volition. Become authentic[ally driven] versus someone who simply follows [instructions].
- 3. Create from a place of need, passion, and preference.
- 4. Verify existence. Through experience and verification we become capable of maintaining the intentional alignment of our creations.
- Challenge oneself. Learning and growth require tension and challenge. It is wise to discover and to place oneself in new contexts of information which may present an initial tension, but through integration there is growth and self-development.

If the process of education is lifelong learning, then we are resilient in community. But, if the product of "education" is an obedient worker (a potential employee), then there is not the resiliency of community. And, these two different ways of perceiving the individual will result in two entirely different social and economic environments. A lifelong learner does not "aspire" to become just one [professional] thing.

Specialization tends to give a person tunnel vision and a narrow perspective about the actual interrelationships of all physical phenomena. Today it is often difficult for someone schooled in one field to communicate in depth with members of different professions. Among community we encourage each other to view the world in a more holistic manner. Rather than educating toward specialization for a slot in a soon to be obsolete FF market in which most people hate their jobs anyway, a holistic perception is valued and emphasized [in the design of our information systems]. In community, learning flourishes absent the use of grades and compulsory testing.

If neuroscience is correct and we are all natural

learners, then it doesn't make sense to force anyone to learn anything just because "you" or someone else thinks they are important. We now know scientifically that this behavior tends to extinguish the natural desire [and ability] to learn. The more you [are] school[ed] the more the other paradigm becomes self-fulfilling. In other words, the more someone is schooled the more likely it is that someone will lose their interest and ability to learn spontaneously and need to be forced and externally motivated more and more. Hence, the choice for a community becomes obvious. Oddly enough, a lot of people think they understand what is being discussed here, but they do not because of all the training and conditioning they have gone though. They say things like, "well, if there isn't some force then someone is going to miss something", which is an indication that they don't actually understand.

If education is about more than access to educational resources and involves the purchase of a ticket to a job, then we need to ask not only how such an education might be delivered, but what the values and purposes of such an education might actually be.

Notice here that in early 21st century society the product of a schooled education (i.e., an education done to someone through schooling) is employment or ownership in the market (or, unemployment and poverty equivalence). Teachers, themselves, are employees in a market turning out other employees. Herein, we begin to see the emergence of the industrial schooling model where "education" becomes a matter of policy as the design of a socio-economically engineered separation of society. In the real world, education is a lifelong investment in oneself, which is also an investment [in trust] in others; conversely, schooling is a lifelong investment in the current status quo (as in, the State and the market).

We are all natural born learners; hence, school is an aberration. In reality, we don't need a special place with a special set of people and a special policy to do that which is natural. There are natural learning experiences in this world (i.e., not schooling), and a society ought to facilitate them, cultivate them, and integrate them in a continuous and synergistic manner for everyone's benefit. Neither learning nor memory occur in isolation. Herein, we ask, "What is the greatest context of our understanding, and how might this be changing as we change our attitude and re-orient toward a direction of greatest fulfillment?"

The more time you spend being educated [by others] the less time you spend living. In truth, learning is life and life is an open investigation. The less you investigate the more likely you are to become investigated.

Notice the difference in meaning: instruction is meant to engage you and learning is your engagement with something. Learning is akin to an investigation by you and instruction is an investigation of you by an authority [who defines your socio-economic access]. A "great school" represents the latter and real life represents the former. Nothing is quite as simple as "they" instructing "you"

[in school and through the industrial media]. Similarly, when there are "lessons" we are likely to become bored and our willful integration fractured; conversely, when there are real problems and intentional relevancy there is the potential for engagement.

You see, school shapes the outlook of individuals for what education should be; it shapes the meaning of fulfillment and the purpose of our lives. It re-purposes our intent. Practically speaking, schooling and learning are opposites. A student might say, "I go to this place from 8-3 where this thing called learning is said to occur; then, when I am not learning, I do stuff I like which is odd because that is when I appear to learn best and when I am truly engaged with my environment." Learning is not a finite process done to you. Instead, teaching is an imposition and learning is not.

Schooling implies that when someone becomes "of school age" that they somehow learn in a different way to the way they were learning previous to "school age". The undiscussed assumption in early 21st century society is that young humans who have been learning with great vigor and delight and self-direction have suddenly reached an age where their brain has apparently changed drastically and they are no longer capable of learning in that delightful way. Now, they learn by way of teachers, experts, authorities and others with degrees, certifications, accreditations, and voted power. Suddenly, someone else knows better what that [young] person is supposed to learn at that moment. Suddenly the R's of reading, writing, and arithmetic come in as though they are separate from life ... which they are not. At this time, the individual is [often] forced and scared into learning what other people think s/ he ought to be learning. It goes downhill from there, because the individual loses interest, because s/he is not learning what s/he wants to learn, and possibly, because s/he doesn't want [necessarily] to learn what s/he is being forced to learn. It is an unfortunate situation that often results in the individual losing interest in learning in general. And then, when the individual doesn't want to sit still and be dumped on with content the individual is labelled as someone who has a learning deficiency (and is possibly medicated).

Learning is not equivalent to the closed system of schooling to maintain the State, nation, or any other statically recycled institution (Read: an organization that is not open to evolving its structure based upon new and more accurate information).

When education is free then there is likely learning, and when education is compulsory then there is likely schooling. School does not afford natural learning processes. Learning involves discovery in place of debunkery. Learning necessitates study instead of assumption. It requires directional participation (i.e., self-direction) and not extrinsic separation (i.e., extrinsic punishment and rewards). Learning becomes play instead of dictation. Learning is fulfilling and not indoctrinating. Summarily, schooling is unnecessary for learning and harmful to an intrinsic education.

There exist many paths to the acquisition of the same piece of understandable knowledge or skilled movement. At the present, it is impossible to build a one-path technological learning solution that fits the needs, wants and preferences of all learners, although this is to a large degree what schooling environments are like. Real complexity and practical experience are a requirement for "real learning" (i.e., learning about that which exists in reality). Learning about the real world requires a dynamic process involving a complexity of interactions because the real world, itself, is a complex set of interactive and dynamic relationships.

There are no classrooms or paid teachers in nature; everywhere is a classroom and every experience is a "teacher" (or "opportunity for learning").

The dichotomy between school and no-school is an illusion when intrinsic motivation and human fulfillment are introduced. Intrinsic motivation is evident when people engage in an activity for its own sake, without some obvious external incentive present. We must entrain to natural rhythms ourselves; no authority figure can do this for us.

Learning is a natural process; schooling is not. Learning and schooling are opposites. Learning and living are synonymous – learning is the process of fully living. Through living we learn. Through schooling we learn to be that which is not whom we could be.

As a society, we do not have to channel learning into some sort of framework that resembles what we have in school: learning is an instinct; it is an instinct that can be conditioned out of us. Learning is not necessarily the absence of a routine or schedule; it is the absence of an authority figure directing the process by which we engage with our world.

Here, we return the focus of attention to the individual experience. We have been slaves to ideology transmitted hierarchically and based on a tremendously alienating instrumentality. What we need to do is to "decompress", to release the traumas from authority that haunt our dreams, and to re-connect with our self-esteem and self-empowerment.

In community learners [have the opportunity if and when they so desire] to interact with the world at large, gaining experience with everyday activities and situations. In community, learners draw from worldwide resources as they help one another pursue interests and goals. In truth, it is schooled children who are being sheltered. Students in the schooling system spend a good part of their days set apart from society, sheltered in schools, information typically provided by one textbook per course of study, in a singular environment that doesn't represent the real world, which they become ever more separated from. So, when we speak of physical spaces, schooled children seem more sheltered than learners among a community of learners. The consequences of being sheltered reach beyond physical location. In some cases, maybe many cases, the conventional school lifestyle shelters students from exploring and learning how to get along in the world-at-large.

It takes a special kind of system to make learning boring. Most government education exists to rob the youth of a love of learning, to rob them of a love of reading, to rob them of a love of thinking, and to rob them of experiencing things that are outside of the accepted scope [of history and the cultural ideology of the time].

QUESTIONS: What facilitates inert behavior versus exploratory behavior? What generates passivity vs. curiosity behavior? How ridiculous it is to force people to do what comes naturally.

1.1.1 Education as a phase of life

A.k.a., The phase of life known as education.

In community, there are many different things that are important to everyone, and one of the most important is to have neighbours (i.e., other people living around in the habitat) who are intelligent and companionable persons and with whom it is intuitively easy to live in harmony with. Therefore, one of the most important things people in community can do for one another is to ensure that all are educated. Ensuring neighbours are educated ensures one's own well-being. To educate some and leave others without, as well as to educate via extrinsic methods, creates strong feelings of disconnection among individuals and produces socioeconomic class inequality within society. What could be more inhumane than the force of education on someone who is intrinsically designed to learn. In community, education is a life and exploratory requirement facilitate universal, intrinsic enjoyment of learning. Education allows one to contribute, to live a refined socio-technical life, to self-develop, and to explore life's potentials.

IMPORTANT: In concern to education, it is clear there is an interest in the coming generation in having educated parents and an educated habitat population.

In community, there are three main grounds on which the educational system rests:

- Access to the completest education a society can provide. Must include an account of self-direction (demand), intrinsic motives. The behaviors of everyone has an influence throughout all of society. Others desire access to and the safe enjoyment of the society
- The common understanding that education is a human need for one's own and all others' experience of an explored higher potential life. Individuals desire access and enjoyment of society.
- The common understanding that the unborn desire an environment of intelligent and educated individuals to sustain a high-quality upbringing where they too can have the highest quality of flourishing.

1.1.2 Societal education

Socio-economics affects everyone's life. Maybe, "you" as an operator of a vehicle, unlike a mechanic, does not need to understand all the inner workings of the vehicle; but, "you" as an operator of the vehicle, "you" need to know which way the car will move when "you" turn the steering wheel. Similarly, "you" as a common user of the habitat service system, and community services in general, unlike a specialized InterSystem Team member, don't need to understand all the inner workings of the particular service sub-system "you" are accessing; but, "you" as a user of the socio-economic system, "you" need to know how decisions "you" take are going to impact the [societal] system as a whole. Metaphorically, a socio-economic system does have a steering wheel (navigational model) and pedals (work), it is just that in the early 21st century, most people don't know how to use them and/or don't see their unification and optimizability yet. In this way, education can have several interrelated functions:

- 1. To develop one's interests (in society).
- 2. To develop one's ability to contribute (to society).
- 3. To develop one's ability to use (the services of society).

Among the many purposes for education (for the self and for society as a whole) are:

- 1. Neuro-cognitive development (thinking and problem solving).
- 2. Novelty access.
- 3. Passion and flow development.
- 4. Communications and visualizations development.
- 5. Language development.
- 6. Reading, writing, math.
- 7. Basic and complex literacy and competence (reading, writing, rhetoric).
- 8. Emotional and social intelligence development.
- 9. Systems science intelligence development.
- 10. Philosophy and abstract reasoning.
- 11. Societal morality.
- 12. Physical fitness, and appropriate eating.
- 13. Civic education (citizenship studies, history, money systems, political systems, etc.), legal systems.
- 14. Societal standards education (community standards).
- 15. Life skills (cooking, cleaning, paying bill, fixing things around the house, etc.).
- 16. Contribution skills.

1.1.3 Autodidact

APHORISM: Know well what moves you forward and what holds you back.

The term 'autodidact' means "self-taught". Generally,

the term is applied to someone compelled to learn for himself/herself what s/he needed to know in life. In this sense, it indicates passionate motivation for learning which, in truth, is the only necessary ingredient. However, the term is still something of a misnomer. Firstly, it applies the concept of "teaching". Yet, it may possibly be the only appropriate application of the verb "teach", for an autodidact is essentially someone who teaches oneself. Secondly, the term "auto" could imply that learning happens in isolation, which is almost never correct. Learning generally occurs in the context of a social and larger ecological environment. It does, however, accurately imply that learning is [in part] a meta-self-cognitive process. Also, the term might be useful in facilitating a shift in someone's perception of learning away from something someone gets given to something someone selectively takes (Read: chooses). Two possible synonyms for the term 'autodidact' are 'self-education' and 'self-development'. In truth, we can (including children) "teach" ourselves complex knowledge.

APHORISM: It is wise to recognize that it is from the nature of existence that anything is discovered and learned.

1.1.4 Unlearning

"To obtain knowledge, add things every day; and to obtain wisdom, subtract things every day." - Confucius

Unlearning involves the releasing of behavioral patterns and sets of information (i.e., "knowledge") that are no longer serving one's highest fulfillment or the most accurate expression of their own information space in relationship to an existent commonly discoverable existence. Here, we learn how to evolve beyond our established biases and understandings, which may have served well as protection for some time. As we enter a more technologically thought responsive environment it is important for us to effectively and efficiently integrate new information in alignment with our highest fulfillment.

Unlearning is akin to the revision of an error. We can error correct ourselves (i.e., our information space), when we care to. The notion of an unlearning strategy may be applied as a metaphor for both the scientific method and the Trivium Method. In essence, the scientific method is a process for challenging the reality of the connections we form between different entities; thus, we are always working toward a greater comprehension and ability to act in our world.

"If scientific/technical knowledge is doubling every 7 years that means that everything we know today will represent only 25% of future knowledge in just 14 years. Before we can take advantage of this new knowledge, it will require a great many (and very intelligent) people to unlearn what they spent much of their life

learning." - Jack Uldrich

1.1.5 Challenge

A.k.a., Hormesis, stress, tension.

Sometimes growth requires a struggle, just like lifting heavy weights in order to build and sustain muscle. The general term for this is 'hormesis' - stress that leads to adaptation and benefit. Without tension there is little growth. In a certain sense, the "hurt" that someone feels when lifting weights is due to a very positive process. In learning there is a similar feeling, but it feels like "failure". Laying down new neural pathways is metabolically expensive, and so it requires conscious effort, which can feel challenging. Overcoming the "pain" of failure is fulfilling and leads to competence (and mastery), and when the environment is conducive, more flow. Mentors and guides can be useful here to reduce and prevent injury, and to improve efficiency.

Sometimes the best thing someone can do for/to themselves is tone back the comfort, not all the time, but sometimes.

There are different subcategories of stress. Stress, itself, could be considered a neutral concept. Then, there is eustress (good stress) and distress (bad stress). The body and mind try to adapt to stressful situations. If the stress become to great or the person dosn't adapt, then, at first, the body goes through alarm, then resistance, then exhaustion, and then, diseases of the autonomic nervous syndrome.

To advance significantly, cultivators (a.k.a., learners), including both self-cultivation (service-to-self) and social-contribution (service-to-others) know that they must challenge themselves and train (or, practice) their skills. Therein, things become much easier to learn when they have practical use.

INSIGHT: Individuals need challenges, and if they don't have challenges, there is a problem.

1.2 The learning community

INSIGHT: When we know and trust that our community doesn't judge, then we will get more from our community.

A great learning environment is one in which the learners have the opportunity to tune into and become attentive to their own needs [as learners]. It is an environment that facilitates self-directed education, which is ultimately the only educational environment worth having. Wherein, a self-directed education is the only "degree" worth having. Among community, we create an environment where natural learning can flourish and we learn from experience, asking questions, following interests, exploring existence, and being. In a sense, the Community [itself] represents the [organized] act of learning.

When a society is structured right, then learning becomes effortless and inevitable. Hence, community represents the deliberate design of an environment where learning means the freedom of choice to learn, and therein, the state of flow becomes effortless and inevitable to access. At the scale of community, education becomes the structuring of an environment to bring out and facilitate the highest potential [creative] expression of the individual. A voluntary system is a system that is itself "invested" in individual's self-development and life-long learning process - a user-centric system. In a community-type society where self-direction is a component of fulfillment, the social population is most interested in who this person "student" is choosing to be through time, and how may it be guided and facilitated to the ultimate mutual fulfillment of all of us. All individuals may recognize that it is desire and choice that make real education happen.

A community of learners requires a particular structure. Although we are born learners (i.e., it is an innate characteristic to all human beings), the instinct to strive, develop, and grow can be quickly derailed by the kind of structures a human encounters early in life (and by uninformed and irresponsible social interactions throughout life). For example, take the issue of praise (as operant conditioning): those praised for being "smart" learn that intelligence is a fixed, innate, effortless gift, and they often fail to reach their full potential. If a society chooses a culture of praise, then it is much wiser to praise effort rather than outcome. Effort is salient to life-long learning and the exceeding of initial expectations. Such are the findings of social psychologist Carol Dweck who has conducted extensive research into the "fixed mindset" versus the "growth mindset." In one study, young students take a simple non-verbal test. Later, those praised for being "smart" or achieving a "good score" showed less confidence and enjoyment than those praised for "trying hard". And, the effect was immediate: students praised for effort performed better on the next test. The performance of those praised for intelligence declined, and they even lied about their high scores later. Another study of older students had similar findings.

Effectively speaking, praise is a form of feedback and the structure / type of feedback someone receives can help or hinder their progress. If a culture chooses to praise, then there are certain principles to which it would be wise to adhere. These principles make it is less likely for praise to reduce performance and long-term pursuit of the individual being praised, which may be the consequence of the misapplication of praise: praise effort; do not over praise; be clear and concise; do not praise by comparison; and, be cautious of sarcastic praise. (Mueller, 1998)

One might not think that the positive things one says to others can be as destructive as negative labels. But, there are times when this is true. Rewards and praise can quickly condition others to seek approval such that they end up doing things to impress, instead of doing

things for themselves. We must use discernment and examine experiences critically if we are to maintain the commonly possible experience of fulfillment.

Fundamentally, not all structures will facilitate the continuation and sustainment of lifelong learning. A community that neither acknowledges the value of learning, or worse, structures itself against its continuation is unlikely to sustain a fulfillment orientation and a meaningful direction of development. A learning-oriented community is respectful of the individual, and is a natural extension of a supportive social network of relationships. One of the continuing goals of a learning community is to facilitate an environment where learners are more [scientifically] likely to become or remain intrinsically interested and curious about life, which is a curiosity of ours. In a highly 'thought responsive' (i.e., an environment that responds more quickly to thought) social environment we need congruent community support to maintain our focus along lines that facilitate our life development [as we rapidly iterate our consciousness].

If we are to cultivate any culture it ought to be one of intense curiosity and inquiry. In an effort to facilitate self-directed experience the community maintains structures that allow people the time and space to reach their desired level of mastery and enjoyment. A community can provide resources and maintain structural environments that facilitate learning, which may include challenges and other opportunities.

A learning community is a "nutrient rich" environment. As such, it ought to facilitate a foundation of self-directed explorative education for its next generation where passion and an abundance of opportunity represent a system for learning. Necessarily, in community, we create environments where failure is recognized as an opportunity. After all, failure is the greatest of all "teachers" (i.e., failure is the only real "teacher"). One of the greatest scientists of the 20th century once said that the secret of his repeated breakthroughs was that he had made more mistakes than anyone else. Individuals with their self-esteem intact will always find ways to benefit from their failures as well as their successes. Herein, success means achieving a temporary goal that someone set for oneself.

A learning community works when we are committed to doing absolutely everything we can to provide a healthy, interesting, and nourishing environment for each other, though particularly, for the young. And, in that environment a young person will not be able to help, but learn. In community we are responsible for our own education and we caretake an environment responsive to our interests. We provide the conditions that allow us to educate ourselves. We learn from others of all age groups quite naturally.

A fulfillment-oriented community is emergently designed by individuals who are self-sufficient in their living and effortful in their learning. A truly educated population needs no external controllers.

When the adults in a society are continuously learning

and acquiring new knowledge, understanding, and skills, the younger generation sees this as a good example of a lifelong learner and a value orientation toward self-development becomes commonplace.

In community, we learn that which we are eager to learn, we pursue that which we have a curiosity in, and we apply effort toward that which we desire. Here, we learn that which we desire to learn on our own initiative. We are free to choose our own materials, mentors, facilitators, and environments. The only learning that ever counts in life happens when the learner has thrown himself into the subject on his own without coaxing, bribing, or pressuring. The drive comes from the individual with the community responding to the individuals drive.

There are no required studies at any age, ever. Individuals learn of their own accord and discover that which they need in order to get where they want in life. Here, we experience the full meaning of responsibility from everyday experience. No one is thinking for you, and no one should be protecting you from the consequences of your actions. This is essential if we as individual among community want to be self-directed and the "masters of our own destinies". In community we learn according to our own needs and what is relevant to our lives. Herein, learning "works for us" (vs. for some authority) for it is authentic, it occurs in context, and it happens exactly when we are passionate and developmentally ready for it.

To fully understand a learner-oriented community one may go through a few of the principles that need to be "unlearned":

- 1. Unlearning the culture of blaming others, in order to be honest with our own mistakes.
- 2. Unlearning the school- and media-induced embarrassment of using our bodies to do real and authentic work (i.e., physical tasks).
- 3. Unlearning our modern and urban disconnect from nature
- 4. Unlearning the deference, submission, control or oppression which defines institutional relationships.
- 5. Unlearning our own biases.
- 6. Unlearning the belief that we can't build a new system to make the old system obsolete.

All of this unlearning is important, if we are to recover our innate capacities to nurture healthy relationships with one another, and to give and receive with authenticity and integrity. Be cautious, generations of government school graduates are running early 21st century society.

INSIGHT: In community, there is no such thing as, "being behind on a subject".

1.3 Facilitation

A.k.a., Tutoring, mentoring, etc.

There are many ways to help others learn, and one of the most effective ones is the facilitation of another's learning. The term facilitation has a liberatory connotation. Herein, facilitation refers to the process of being someone who shares in another learner's learning process by actually helping them. Additional descriptors of facilitation include assisting, freeing, aiding, guiding, and empowering learners in their learning process. Put simply, facilitation is the process of helping other human beings learn when they want or otherwise need help learning. Learning does not require mediation, although the process of education can be made easier through facilitation. Therein, the aim of a facilitated education should be to support the development of capable critical thinkers and doers who are thoughtful, productive, and responsible. Fundamentally, facilitation is the act of supporting, encouraging, and empowering learning.

INSIGHT: Sharing our own interests engages the interests of others.

The very nature of facilitation is allowing another (Read: the learner) to determine what interests him/her to create or select his/her own "roadmap" for learning. There is more or less structure, relative to need. Sharing one's own interests engages the interests of others. With proficiency comes responsibility to encourage others who are less proficient to use systems safely; not impress others, but express what is possible. Bringing out the best in others is how we find the best in ourselves. It is necessary to give to one another the tools to structure information in meaningful ways so that anyone can do something fulfilling with it. Failure is never a problem when there is play.

Fundamentally, in a social environment, individuals have to help others to ultimately help themselves. Practically speaking, you can't help someone get up a hill without getting up the hill yourself. Facilitators share in the potential social impact of a learning experience. Among community, individual learning gets tied up with the learning of all others and a synergy occurs.

The definition of facilitate is "to make easy" or "ease a process". Literally, the word 'facilitate' means to make something, usually a process, easier or less difficult. Facilitators in the Community seek to make the learning process more efficient and effective while supporting each other in their progression toward a higher potential.

Generally, the three skills necessary for effective facilitation are: **attending**, **responding**, and **understanding**. Attending involves the development of a physical and psychological relationship where full attention is given to the learner. Responding refers to a showing of empathy, respect, genuineness, and concreteness for the learner and the learner's needs. The third skill, understanding, involves the communication

of a refined understanding [and possibly a reciprocating communication of understanding]. Taken together, these skills suggest ways facilitators can build a more meaningful and efficient learning environment.

Practically speaking, facilitation involves providing support, guidance, and direction. A facilitator is thus an entity (human or computer) who helps, guides, and supports the learner where necessary or requested. In some cases this direction and guidance may be as simple as providing answers to questions and clarifying confusion. Generally speaking, the specific responsibilities and tasks of a facilitator will vary depending upon the learner's needs and those learning activities the learner is involved in, and the degree of "experience" of the facilitator.

In other words, a facilitator helps another accomplish a goal. Facilitation is a relationship between someone with experience and someone who wants to learn.

Facilitation requires orchestration of a meaningful interaction for the learner. Effective facilitation is about the learner, not the facilitator. Although, in facilitating, the facilitator may be practicing what they have learned while maintaining a shared connection with another human being. Facilitation is learner-centered, and not self-sacrificing.

"You" have the potential to see your way out of any challenge. Facilitators are there to help and support you when you ask (possibly to be a "coach"), or when you may have put yourself at risk unknowingly, accidentally. Essentially, facilitators are responsive and helpful guides; they are more experienced learners. Mostly, a guide is a person who advises or shows the way to others; it is someone (or some systems) who directs or has [potential] influence on the course of action [of another].

In the context of the learning community as a whole it could be said that facilitation is the structuring of an environment to meet the needs of learners, while maintaining a safe environment for inexperienced learners, as well as fostering the creativity of all learners' self-expression.

In the facilitation of others' learning it is often said that the best kind of guidance is modeling (Read: showing an observer through example and by multiple sensory relationships). When an experience interfaces with more of our senses, then we are more likely to recall that experience later (i.e., our technical recall of information increases when more sensory content is connected). Something as seemingly innocuous as spanking provides a moral model of relationships [for a young person that may last throughout their entire life].

If facilitators create anything, they create nurturing and fulfilling environments wherein life, and our coherent relationship to it, becomes experience. A responsive facilitator is sensitive to the needs of the learner in the context of the learners request for facilitation.

Herein, the facilitated learner overcomes a temporary learning hurdle and the facilitator practices and reinforces (Read: lays down additional myelin) their learning.

Facilitation represents the power of helping others through a variety of strategies to realize that they have a much greater potential than they might have initially thought. Facilitation represents the potential of helping others to realize their internal confidence for themselves. And, the amazing thing is, as soon as we start feeling confident in our own abilities we naturally help each other [under the environmental condition of cooperation]. It's called "trust". The basic navigational attitude that underlies the foundation for a self-directed learning community is trust -- we trust the intelligence, competence, and innate organizational capabilities of each other.

In order to facilitate, a facilitator must be knowledgeable of the subject (or experienced in the practice) the learner is inquiring into or having difficulty with. Herein, facilitators use data to diagnose what the learner is having difficulty with.

Herein, one-to-one facilitation is a temporary interaction of one experienced learner to one inexperienced learner for the purpose of assisting the inexperienced learner in overcoming a short-term, temporary learning challenge. The facilitator may provide guidance, direction, feedback, and most importantly, concrete assistance to another learner who is in need. The learner who is being facilitated has come upon a difficult and/or challenging learning problem and is in need of and requesting assistance. In effect, the experienced learner is "facilitating" the inexperienced learner on a subject or problem with which they themselves have demonstrated experience.

A teacher is a pre-selected content transmitter regardless of the learner; whereas, a facilitator may transmit content if asked by the learner. A teacher controls the "learning" experience; whereas, a facilitator is a guide and recognizes that the learner directs their own experience. A facilitator is learner-centered and removes obstacles to learning; whereas, teachers are institution-centered and often put obstacles in the way of learning. Facilitators do not stand over you like authority figures. Facilitation is only "required" when the learner asks for it. Or, when an inexperienced learner may unknowingly be putting themselves in danger. For example, a young human needs facilitation prior to walking across a trafficked street, which they are unlikely to request - if someone doesn't look both ways before crossing there is a significantly increased likelihood of them getting hit by an automobile; any mistake at doing this puts your life at risk on every trafficked street.

In the context of formal knowledge or skill acquisition, to be a listed facilitator for a subject, an individual must have completed the module (or socially demonstrated acquisition of the information) that the learner is presently having difficulty with. Note that community learning modules are discussed later in this document. Here, inexperienced learners have an awareness of whom has previously or socially demonstrated that they are informed and possibly able to help. Whereupon, a learner may pick/schedule an open facilitator based

upon their own preferences and the feedback / reviews others have given about their facilitation.

Also, the system maintains an dynamic database of individuals who have openly selected for their names to be listed as someone interested in a topic for cooperative discovery/learning. Learning through discovery and equal peer relationships has the potential for increasing the rate of learning of all participants through a synergy of discovery. It is further relevant to note here that on the "cutting edge" of knowledge discovery there are not yet sufficient answers to questions, and so, self-directed and cooperative discovery will be the only way to find answers.

When learners work in an open, supportive and caring environment alongside each other day after day, even the most inexperienced, shyest learners become comfortable asking for help from other more knowledgeable learners.

Thanks to the Internet millions of people can have their say. This is, however, a double-edged sword. The opinions (Read: neither reasoned arguments nor evidence) of millions of individuals litter the Internet and create huge discord, confusion, and entrapment of time. When ideas and content are pooled, organized, and assessed for evidence and reasoned clarity, then the process of content acquisition (as a part of the learning process) becomes more efficient.

Those who refer to themselves as facilitators in schooling-oriented environments appear to have seized upon the sudden rise of the Internet and its abundance of material to transition from the role of "teacher as content provider" to "teacher as facilitator". For many people, facilitation is just another way of teaching. The teacher behaves in a different way, encouraging the class or group to contribute, but ultimately tells them what to "learn", how to "learn", and how it will be assessed. The type of facilitation that a teacher might provide in a schooling environment is not equivalent to facilitation among a learning community. Altogether, schooling ignores the personal nature of learning.

In the Community, facilitators exist to facilitate learning; they are there for the learners to answer questions, provide guidance, and convey/pull in resources. Here, a facilitator facilitates learning [and is respectful of the learner's direction and autonomy] rather than telling someone what to learn (teaching).

A facilitator who wants something from "you" is not someone "you" want as a facilitator. A facilitator's reward for facilitating is principally intrinsic — meaning s/he is getting just as much if not more out of the interrelationship as "you" are, because s/he is enjoying the process of helping another. The second reward is self-refining - the laying down of more myelin along a circuit by practicing what they already know.

Additionally, it is important for learners and facilitators alike to remember that removing symptoms of discomfort is not always the best action. Often, the symptoms are necessary. The symptoms are our feedback, and they help us learn and grow and recover.

Take the human body for example: Inflammation is the body's attempt at self-protection; the aim being to remove harmful stimuli, including damaged cells, irritants, or pathogens - and begin the healing process. Inflammation is a symptom, and it is an essential part of the body's attempt to heal itself. Inflammation is also an indicator of injury that alerts us to take more care [with the location of injury].

The reality is that a learning environment fails its purpose when feedback is removed (i.e., when feedback becomes uncontrollable, or when there is "sheltering behavior"). In the real world if you touch a flame, you get burned. You experience physical pain that conditions you to avoid contact with flame in the future. Touching something which will burn is a great natural example of consequence, since the consequence is the same no matter how many times you experience it, and no matter how many people encounter it.

Social facilitation is the tendency for people to do better on simple tasks when in the presence of other people. This implies that whenever people are being watched by others, they will do well on things that they are already good at doing. (Strauss, 2001) Note that this type of facilitation should not be confused with facilitation of learning. Instead, this could be seen as social facilitation of performance.

The only source of knowledge is experience. [We must expand our experience to obtain the answers to questions we have about the universe and oneself.]

- Albert Einstein

1.3.1 Tutoring

A.k.a., Formal education facilitator.

Tutoring excels in providing targeted guidance, individualized attention, and a supportive learning environment. It often addresses specific learning gaps, reinforces concepts, and boosts confidence and can do on the fly assessments of knowledge and skills.

Tutoring has many benefits, including but not limited to:

- Personalized learning and self-directed learning: Learner adaptive tasks, methods, materials, goals, and pacing to suit the learner.
- 2. One-on-one support: Specific user-centered support and guidance; individualized attention.
- 3. Supportive role: Facilitators in education and tutors act as supportive figures, guiding students through their learning journey. They help clarify concepts, answer questions, and offer guidance to enhance the student's understanding.
- Skill enhancement: Appropriate content and timely feedback.
- 5. Dynamic assessment: Continuous assessment of knowledge and skills.

6. Building confidence: Providing unbiased encouragement, positive reinforcement, and constructive feedback.

1.3.2 Mentoring

A.k.a., Formal contribution facilitator, apprenticeship.

The mentor is the guide and the learner:

- 1. Follows the motions of the guide and through practice and understanding performs a skill well.
- 2. Arrives at the discovery on their own.

Human history has gone from a culture of discovery and mentoring to instruction and schooling. Historically, there was discovery and mentorship. In the early 21st century, primarily, there are classrooms for training and instructing.

A mentor is someone with established competency who offers support and guidance to another (or others) who are working on their own competency in that area. Generally, a mentor is someone who is currently practicing and has agreed to facilitate another (or others) in their own development of competence in that practice. A mentor is a guide, role model and advisor.

INSIGHT: *Upbringing can shape a persons future incentives and motivations.*

1.3.3 Tell-show-try-do (and sometimes, ask)

If a learner prefers, a facilitator can first describe and explain (or "tell") the learner about that which the learner is inquiring (i.e., orally answer the learner's question). Then the facilitator shows the learner in real life what it means / how it works or is done (maybe several times depending on when the learner lets the facilitator know they have "got it"). After that, the facilitator watches the learner try it for themselves while providing immediate and/or subsequent feedback (and this can continue for some time, too). On particular occasions noted later in this document concerning technologies that could put the community at risk, the community will ask the learner to demonstrate that s/he knows a piece of knowledge or can perform a particular skill with some qualified degree of proficiency. In other words, in such cases the learner will show that s/he can perform the action in question oneself and/or duplicate the process and assist someone else in his or her learning of the objective.

1.3.4 Socratic (questioning) method of selfdiscover facilitation

Facilitation that involves a the socratic method of intrinsically motivated learning facilitation involves the facilitator asking questions to the learner, about a learner's initial question, in order to lead the learner in a way that the learner can achieve, self-discovery. Useful learning is intrinsically motivated and easily facilitated

through self-directed project-supported curriculum and socratic questioning, whereas extrinsically motivated memorization is easily forgotten.

APHORISM: When serious helped is asked a facilitator seriously helps.

1.3.5 Education-facilitation campus

A.k.a., University.

A university could be seen as a physical place ("campus") where a number of people who are interested in learning gather and:

- 1. Have time and resources to learn.
- 2. Have a diversity of interests they are exploring, thus providing greater opportunity for growth.
- 3. Have a focus of interest on some specific discipline, including that of the discipline of society itself, societal sciences, the output of which is a "living" set of applicable, community-type, societal specification standards.
- 4. Have an interest to gather together to learn, hold compassion and focused critical thinking, and practice skills with others, to experiment and progress in self- and social-development.
- 5. Have a graduation phase into the contribution phase of life, where there is service for society by the educated, temporarily.
- Have a facilitating and tutoring team mentor/ intelligence that guides and provides a personalized learning, skill development, and testing environment.

1.3.6 Scheduling education and schooling

A.k.a., Schooling work periods, schooled education work periods.

School "education" periods in the market-State are typically counted in:

- 1. School days of the week.
- 2. Home (non-school facility) work hours per week.
- Classroom (school facility) presence and work hours.
- 4. Sessions work weeks per months
- 5. Semesters work months per year.
 - ... with breaks in between.

Herein, there is typically an hourly work cycle counted in hour credits (Read: non-exchangeable sum-able personal token acquired per hour of participation and/ or performance) in course with classroom time and performance assessments on products. Typically, the university student in the market-State is supposed to complete a number of hours and/or deliverables, and

be physically present during a course of study (expected communications and actions periods of time) in order to pass a course of schooled instruction. School is typically operational during the same days of the week as employees (teachers and school administrators) are expected to be at work.

And yet, learning is not school-time only activity; learning is continuous and life-long. In this context, the idea of a "university" may arise as a place of, at least, focused social education. The more generalized idea of "school" is, a place for training citizens and future business participants (i.,e, employees and employer roles). Of course, a university is a place of focused education for doing similarly; it is a place for self-directed knowledge gathering, sharing, and thinking, a place for skills acquisition and project executions, mentoring production, and test qualifications.

In community, education is an intrinsically motivated activity that is structured by community-orienting societal specification standards, and facilitated by contributing habitat InterSystem team members who guide the development of future community contributors. Education is a contribution facilitated, community structured, and intrinsically-driven, lifephase activity set. In community, facilitators are contributors who structure and support the work and education of learners, who will become the future generation of contributors (and later, leisurers). Both in schools (in the market-State), and education centers (in community), facilitators come together with learners to learn, discover and develop personal knowledge, skill, and other potentials. The work of contributing facilitators is coordinated together with usage by learners (Read: community members in the education phase of their life) to produce appropriate education services [for the users] as part of the exploratory platform of the habitat service system.

1.4 Teaching

"To save man from the morass of propaganda, in my opinion, is one of the chief aims of education. Education must enable one to sift and weigh evidence, to discern the true from the false, the real from the unreal, and the facts from the fiction."

- Martin Luther King

Sugata Mitra speculates that education is a self-organizing system, with learning as its emergent and phenomenal outcome -- just let consciousness self-organize and wait until the learning happens. There is nothing else "you" can do. Facilitation is like gardening; the plants grow themselves. You plant the seeds, water and wait. One might then ask the question, "Can the young learn to read by themselves?" If the answer to this question is yes, and Sugata's speculation is correct, then "primary education" comes into question, for suddenly there is the realization that society doesn't need the role of a "teacher"; there are very few things needed besides

the individual and access to a nutrient rich information environment.

What is TAUGHT and what is LEARNED can be two completely different things. For instance, parents think that they are TEACHING respect and obedience by spanking their kids. In reality, what the children LEARN is that the bigger and meaner you are, the more power you can wield. Effectively, teaching is just the presentation of information, and tutoring is a more individualized and interactive one-to-one presentation of information.

From the perspective of a learner there is no such thing as [the notion of] "teaching another". A "teacher" who thinks s/he is "teaching" is in fact not "teaching" [what s/he thinks s/he is "teaching"]. A learner might say to a school teacher, "You are not telling me anything; you are sharing and are allowing me to think. Don't set out to free the world if you have a cage in your head."

Teacher is the name for a profession in the market-State; it isn't an action anyone can take. Teaching isn't a thing you do to someone else. Rather, learning is something that you might, if you're lucky, get to assist with. When "you" are looking to help someone "you" might want to ask someone what help they actually need.

The reality is that those who call themselves "teachers" are in fact just other learners who have adopted and adapted to an unfortunate set of socio-economic circumstances. Learning is not the product of teaching. Learning is the product of the activity of learners.

Those who care too much about right answers can very easily slip into teacher mode and start instructing and commanding rather than just letting the conversation flow naturally. In community, we have to stop seeing ourselves as "teachers" (if we have started) because we are not. We are facilitators and co-explorers; we are colearners.

Neuroscience shows that the brain is changed through active experimentation, not by teacher-centered pedagogy. The human brain physically forms new neural connections when someone looks at their mistakes – the brain will actually grow. In a sense, failing is just another word for growing if someone keeps learning.

Hence, teaching is not an action that exists. When a teacher thinks s/he is teaching, what s/he is in fact doing is, for example: verbally explaining; writing; visually demonstrating; drawing; dancing; or possibly even singing. But, s/he is not 'teaching'. A teacher who thinks s/he is teaching is actually reviewing for oneself something already known while presenting information into an environment and generally collecting a paycheck.

If someone were to walk up to "you" with a question about a linguistic punctuation issue they were having, and "you" knew the correct linguistic punctuation rules, then "you" might show them or write them out. If the inquirer didn't understand then "you" could draw a picture or give other examples. When "you" perceive that they have learned the thing they wanted to learn, then the action is completed (i.e., "you" have facilitated their understanding for which they likely showed

acknowledgement, and everyone can go back to what they were originally doing). They learned. "You" helped them learn (i.e., facilitated their learning). "You" were "the teacher", but "you" didn't do the work that resulted in learning. The learner did that in his/her own head. Anyone can put ideas in the air, but without another's active work no "teaching" can possibly take place. The term is not reflective of what we empirically know about that which we have identified as 'learning'.

So, if "teaching" means competently and compassionately facilitating learning, then teaching does exist, no? Here's the truth: teaching has no action to show for itself that is "teaching". You can't pour useful information into anyone else's ears or eyes against their will. We as individuals have the potential to direct the structuring of the contents of our own minds. You can learn, but we can't make you learn. And, if we try to make you "learn" through coercion and constriction, then we harm you; we harm your development toward your higher potential.

When someone is "teaching" someone else how to do something and the individual being "taught" is thinking of something else or is only paying attention because there is a threat or bribe being applied to them, then what is the "teacher" actually doing? A "teacher" who thinks they are teaching is actually playing with, and otherwise fooling, themselves.

"Teach" has inherently negatively objectifying connotations. The word "teach" is a verb which places the teacher in the active role (subject) and the student in the passive role (object). It implies through the grammatical structure of any statement made using the word that the "teacher" is doing the work and the "student" is merely acted upon. The "teacher" has planned and prepared something, and the "student" has arrived to accept it. Whereas the concept 'learn' makes the "student" the subject of the statement rather than the object. S/he is doing the work, not merely showing up and being the passive recipient of another's knowledge. And hence, there is no need for either the concept "teacher" or "student". They are unnecessary at best and divisional at worst.

To most school teachers, knowledge is regarded as a substance that can be poured into the students' minds. Thus, "education" is seen as the process by which knowledge is transferred into the learner's minds (and to constructivists, "education" involves prodding and assigning so that individuals construct "their own" knowledge). Wherein, "teaching" is the packaging of knowledge for efficient transfer (and to constructivists, it is the evaluating of the quality of the constructed knowledge). Individuals become regarded as 'empty vessels', and the range of knowledge and central experiences that they come with is hardly acknowledged. Effectively, school becomes a mass production factory. And the lifestyle that it creates is one devoid of fulfillment. Alternatively, in community, we nurture our own and each other's inherent potential; herein, we carefully think about the structures we place

ourselves in and we create for each other.

The reconciliation of the teacher-student contradiction is learning [that there is neither a teacher nor a student among community]. True education must begin with the resolution of this contradiction. Education within the institution of schooling maintains and even stimulates the contradiction through the following attitudes and practices, which mirror oppressive society as a whole; wherein, an oppressive society generates and oppositional lifestyle:

The teacher teaches and the students are taught. The teacher assigns and the students construct. The teacher knows and the students know not. The teacher thinks and the students are thought about. The teacher chooses and the students adapt. The teacher talks and the students listen. The teacher disciplines and the students are disciplined. The teacher chooses and enforces, and the students comply. The teacher acts and the students have the illusion of acting through the action of the teacher. What does the teacher do? The teacher confuses the power of self-verification with his/her own "professional" authority, which s/he sets in opposition to the freedom of other human beings.

Here, one might come to ask themselves whether one has been repeatedly sold the story of a "powerful and great teacher"? (Keller, 2013) To be sold "the power of the teacher" is to not realize that we are all learners; that we are [at least] self-directed and goal-oriented consciousness. We can self-organize and self-integrate without some external authority doing it for us. In practice, teaching disrupts the internal coherence of the intrinsically motivated individual, who may become worn down and psychologically crippled over time.

In understanding that we learn through experience we might come to realize that the ultimate "teacher" is our relationship to our environment. If the term "teaching" is to be used at all, then it is the process of self-reflection upon one's [past] experiences of and through an environment; it is not an entity. In other words, we can learn from that which has happened to us in life, and from it we move forward, letting the past guide and teach us. Therein, the environment and our responses to it are the actual opportunity creators for our learning.

Fundamentally, learners are not dependent upon "teachers"; though ironically, the "teachers" are dependent upon the students for their income.

In general, early 21st century society sticks individuals of all ages, though particularly the young, in classrooms where they have to sit, stand, and be quiet most days at the behest of an individual who has been told, typically speaking, that all individuals learn and think the same and should do so according to the ethics and principles and standards and procedures and paradigm of their institution. These people are enculturated to believe that this type of system is one of "progress", and that those who are opposed to it are to be codified as oppositional, and they must therefore be ostracised, shamed, and if

need be, drugged for their opposition.

If there is something called "classroom control" or "teacher control" in a society, then maybe individuals in that society need to go back and check their premises. For, if there are "learners" then there is neither "classroom" [control] nor "teacher" [control], and if there is either of these things, then there is not a [f]actual understanding of learning. "Classroom management" is a euphemism because a classroom is a group of static items: a room; desks, maybe a whiteboard and computers. The classroom manages itself. "Classroom management" is really human management.

A community is built on trusting relationships. The urge to control what others learn is still a form of the urge to control others.

All schools, by spectral degree, are based on the notion that all kids are lazy and need to be forced to do this thing called "learning". The emergent and experiential view is that we are all natural learners, which modern brain research does confirm. Worst of all, most school teachers in early 21st century society believe that "their kids/students" are dependent upon them for their education. Not only is this untrue, it is harmful to both the "teacher" and the "students" (i.e., it is harmful to all learners). It is wise to continuously ask ourselves whether we see each other as self-directed humans with desires and needs, or do we see each other as storied roles?

The teacher says,

"You ask me why and I tell you: Because I said so, because I am your mother, your father, because I am the teacher, the principal, the authority figure. So by definition because of this role you need to obey, you need to conform, you need to comply, you need to be obedient and do as you are told. You need to do what I think is best for you."

The Milgram experiment(s) on obedience to authority conducted at Yale University by Stanley Milgram make an interesting note here. To summarize the experiment(s) briefly, "teachers" were asked to administer increasingly severe shocks to the "learner" (who were actors and were not actually shocked) when questions were answered incorrectly. At some point the actor would refuse to answer any more questions, and the teachers were told to ignore the silence and continue with the shocks. Teachers were instructed to treat silence as an incorrect answer and apply the next shock level to the student. Results from the experiment showed that sixty-five percent (65%) of the teachers were willing to progress to the maximum voltage (possible death). (Milgram, 1974) It is interesting to consider here that within the schoolbased classroom setting, teachers are the authority who punish students with increasingly bad (i.e., low) marks (i.e., grades) when they fail to comply or fail to know "correct" answers. In the Milgram experiment the teachers were given instructions by a greater authority; similarly, in the classroom, sometimes the teachers are

the sole authority, but sometimes the higher authority is the State, school, or possibly local culture, which sets the curriculum, teaching methods, and punishments for noncompliance or wrong responses. Hence, schools re-enact this obedience experiment in a normalized manner on a daily. Of note, in the case of the Milgram experiment, in general, more shocks were given by the teachers when: (1) the higher authority figure was in close proximity; (2) teachers felt they could pass on responsibility to others; and (3) experiments took place under the auspices of a respected organization. (Milgram, 1974)

The person who has adopted the role of a teacher cannot make a mistake; with a façade of being perfect, the protector, the legitimate authority, the saviour, the hero ... the great and powerful teacher. The role of an authority [nearly] always comes coupled with infallibility, which creates a dangerous environment for everyone, which doesn't necessitate tyranny, but it can certainly sow the seeds.

The understanding put forward herein is expected to be fairly foreign to traditional "educators" that are taught to select a pre-defined curriculum, pouring knowledge into individuals, and then subsequently testing them. In reality, many people don't want to let go of the word because it takes the focus off of them and their marketable profession. By using the word teach (teaching, teacher, etc.) they can give themselves a pat on the back (and continue to feel good about the pay-checks they collect) for all the learning someone else does. It gives them the sense that they are doing something good for another. In community, there are no teachers there are only those who share in the process by which we are all learning and growing.

Teachers want attentive students. Learners are free to come and go when they choose. Teachers would not appreciate people randomly coming and going from their class. Conversely, there is no expectation or coercive reinforcement for your presence in a free presentation environment.

School is often the experience of sponging up information which is jettisoned when it is not needed for tests anymore. School is not designed to facilitate self-directed learning; self-directed learning is fundamentally NOT the experience of schooling. No school board or governance committee is in a better position to determine a course of study for another human being than that human being is for himself/herself. Teachers are not necessarily the benevolent providers of wisdom we are told they are. Don't accept something as the truth just because it comes from someone you respect.

One technique for finding just the right level of challenge for each "student" is so simple that few of us think of it: let the learner choose their challenges, and facilitate a value-oriented environment where they choose challenges wisely.

Essentially, the above idiom implies that people who are able to do something well can do that thing for a living, while people who are not able to do anything that well make a living by teaching. In early 21st century society

there are many people in the market who are relegated to teaching because they didn't "make it" in their initially desired career field. However, the idiom is short-sighted, in part, because it doesn't recognize that teachers become victims of the system too. It is interesting to note that most people who end up teaching, even those to whom the idiom might apply, claim they did so because they want to "make a difference".

In a socially governed school the teachers might say, "You kids, don't bully and don't use force against each other; you kids, you follow these rules"; but, we school teachers are going to force other people to pay our salaries. In truth, regardless of what we think we are teaching, we teach what we are and how we behave. If you did not before, do you now see the process of enculturation replicating itself among our species?

Someone might then ask, "Isn't teaching the best way to learn? This is just common knowledge." No; and, it is unfortunate that it is considered "common knowledge". A common saying in early 21st century society is, "the best way to learn is to teach", but in community we are all learners, creators, and sharers wherein our shared creations and communicated learnings have the potential of facilitating the learning by others.

It is interesting to think about who wouldn't flourish in a loving, supportive, interesting, fun, nurturing, resource rich, and stimulating environment? In other words, every young person would flourish if the "parents" and "community" were morally aligned with fulfillment, so to

"Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will spend its whole life believing that it is stupid." - Albert Einstein

1.5 Oualification assessment

A measured assessment of knowledge and/or skill can be achieved by any of the following:

- 1. Qualifying with consequences assessments (a.k.a., consequential assessment, consequential for future access) - a qualifying life event that gives access to potential dangerous and societally impactful systems.
 - A. Summative (e.g., pass/fail exam*, education project contracts) - demonstrates accountability by demonstration of a specific skill and/or knowledge over a specified period of time. Here, there is accounting for a specific demonstration of skill/knowledge. Assessing/evaluating (via observation) the ability of someone to complete a task per standard procedure. *Note that the result of a summative exam may be called a "grade", which should be distinguished from additive event grading/scoring (directly below).
 - 1. Is pass/fail exam (demonstrated mastery

- of standards-based certification) If the exam is passed, then mastery is sufficiently observed to qualify. If the exam is passed, then there is evidence of being able to safely and appropriately do something. Someone who is certified to be able to practice a modality and/or use a tool must have passed a final specified exam (either knowledgebased or practical) information and/or be able to practice a skill on demand with some specified accuracy. The standard (in knowledge and/or skill) is the target.
- i. If the exam is passed, then access will be given (based on availability).
- ii. If the exam is failed, then access will not be given. The exam must be re-taken; or, in some cases, the entrant is forbidden from ever retaking the exam.
- 2. Is contract of accountabilities (demonstrated contract accountabilities) - If the contract is fulfilled, then there is evidence of having done the work [to pass the course of study]. Is the course content mastered by evidence of contract completion. A contract of accountabilities/responsibilities is intrinsically linked with a course of study; whereas, a onetime pass/fail exam may not be.
 - i. If the contract is not fulfilled, then the course of study is not passed, and consequentially, access will not be given. The exam must be re-taken; or, in some cases, the entrant is forbidden from ever retaking the exam. The completion of the contract is the target.
- 3. Significant questions about consequential assessments include, but are not limited to:
 - i. Does the assessment where there is a passing grade/score (and a failing grade/ score) only reflect knowledge and/or **skill-ability?** Is the final determination of pass/fail only based on the demonstrated knowledge/skills of the learner? If no, then it is not a community method; because it includes arbitrary data that ought not be used for decisioning when it comes to qualifications with confidence.
 - ii. Is the assessment a gate to future human fulfillment? Is an exam or education contract a gate to a future lack of fulfillment beyond contribution sector preference? If yes, then it is not a community method.
- B. Additive of events (e.g., # of hours, formative events score, grading score, hours of university

curriculum, etc.) - counting and or adding together the outcome of a series of events. Note here that grading fits under the category of additive, not summative. Qualification after operation for some number of accountable hours fits here also (e.g., piloting for some # of hours per year).

- 1. **Objective** Observing continuous action over a set duration of time (e.g., counting the number of hours operating an airplane). Here, there is accounting for the number of hours an operator actually operates a system. For instance, to certify as a pilot, the learner must have x (or more) number of hours operating a specified aircraft.
- 2. **Arbitrary** grading is assigning a score to someone during a course of study, which is summed up at the completion of a course of study and positions the student either on a pass/fail score scale (e.g., 90 and higher pass, below fail), or a "graded" score scale (e.g., A, B, C, D, F). In the market-State, because courses cost money, the exam becomes linked to taking the course. Hence, if an exam is failed, it is in the best interest of the business (university, certifying organization, State) to have the individual be forced to pay for the course a second time. Hours of university curriculum which then grants access to a test, (e.g., architecture, engineering, law) is an arbitrary measure of whether or not someone is prepared to take the test. Here, hours of university equates to hours of study, which is an arbitrary value, because someone can study for a long time and still not understand and another person can study for a short time and understand quickly. In the market-State someone's grade (point average, GPA) has consequences. Another arbitrary way of grading is having students and instructors determine the final grade together.
- 2. Timely feedback assessments (a.k.a., training assessment, consequential/used for self-development) timely feedback with no significant consequences if not followed. Importantly, it is now known that feedback alone is key to student learning, improvement, and motivation. (Bulter et al., 1986)
 - A. Simply, coached feedback. This is the feedback a trainer givers a learner as they practice some skill-set and/or knowledge-set with them. Mentors give useful advice as the learner practices.
 - A. Self-evaluation assessments. Learners practice

their knowledge and/or skills through a mock exam/assessment. The assessment is corrected and a facilitator gives feedback.

In community, qualifying exams are based on the content in open standards. In community, there are courses of study, and then there are exams for certification of safe access. The exams are pass or fail; their is sufficient knowledge and the system can be accessed safely, or there is not. Exams may be seen as separate from courses of study -- a course of study is an intrinsic drive, and an exam is an accountability measure. It is an accountability measure that a system can be "handled" correctly. A summative qualification assessment ensures society that someone may be held accountable for their InterSystem team contribution role and responsibilities. An entrant may not be permitted to even take an exam for access, for instance, because of: former dangerous acts with a technology, senility, or disability. Community focuses on a healthy learning process.

It is possible to link pass/fail assessment exams with a course of study in following ways:

- 1. No linkage and no need for course of study: The learner can just take the exam without participating in any formal course of study.
- No linkage and must take one course of study (and another if there are significant changes): the learner must take the course once, whereupon they can take the exam as many times as they need in order to pass it (as long as the standard, and hence, course of study doesn't change significantly).
- 3. **Linkage to course of study:** The learner may only take the exam after taking the course of study. To retake the exam, the learner must re-take the course of study.

When a course of study has a pass/fail assessment at the end of it, then instead of conventional grading, it could have one of the following assessment profiles

1. Education project contracts (a.k.a., labor-based contract assessment, specification-based contract grading, standards-based grading, mastery-based grading, etc.) - a learner contracts at the start of a course to do a certain amount of work. The learner has specifications set in a contract for where they need to be by the end of the course of study, and as long as they make it by the end, then they receive the pass ("grade") specified in a contract. The learner agrees to a project and an amount of work that is to be completed by the end of the course (only by the end). At the end of the course, the amount of work is matched to the contract and the learner gets an

objective pass or fail as specified in the contract. What is being assessed here is the education work on the part of the learner in relation to the contracted statements of what would be done and is to be known by some deadline (i.e., course end date). This is effectively an education contract (also acts as preparation for later contribution contracts/ agreements).

A. Standards-grading - students do what they are contracted to do to meet a specific standard, with multiple opportunities to do so (students can re-submit without penalty).

1.5.1 Grading and ungrading

"... One of the best ways to destroy love for any of these activities would be through the use of grades, and the coercion and judgment they represent. Grades are a cudgel to bludgeon the unwilling into doing what they don't want to do, an important instrument in inculcating children into a lifelong subservience to whatever authority happens to be thrust over them."

- Derrick Jensen

The process of assigning a grade (arbitrary point value) to a student is called grading. A grade is an extrinsic reward and/or punishment. In school, teachers do the act of grading. Grades are the sum of a series of additive events that are said to "fully assess the student". In fact, grades are arbitrary point values, and in the market-State, they are the determining factor for someone's future access. Obviously, when grades become important, then the grade becomes the target. Learning becomes just a vehicle by which to earn a grade. Grades are only a way to ensure mass production of basic competency in a scarce environment. Grades are suboptimal assessments. They create perverse incentives (e.g., to cheat and compete, and teaching to the test).

INSIGHT: It is unfair to other members of community to have any complete for arbitrary point values (grades) and then have them complete for socio-economic access fulfillment (jobs).

Research into learning sciences and education practice clearly finds that (Kohn et al., 2020):

1. **Grades do not promote deep and meaningful learning.** Students put less effort into courses
that are graded. Grades are terrible motivators
for doing sustained and deep learning. Learning
requires mistakes, which grades punish.
Punishment interferes with flow and deep learning.
Grades conflate obedience with learning. Just
doing what "you" are told by a teacher is not
learning, though teachers often conflate obedience
(doing a behavior "you" have been told to do) with

learning. In market-State schooling, obedience and conformity are synonyms of excellence. Grades create a preference for easier tasks, and shallower thinking. Grades decrease the enjoyment of learning. They make learners more risk adverse, because they don't want to try out something new that could cause a failure. Because learners are then not pursuing tasks of sufficient challenge and motivation, they do not get into flow (as easily), and learning is severely stunted when not in flow. A grade signals the end of a learning process, interrupting flow.

- A. In a community-based education, instead of focusing on the extrinsic reward (i.e., the grade), learners can focus on learning and doing what is of greatest interest, effectively and efficiently.
- Grades do not motivate, except negatively.
 Grades are based on fear, coercion and threat, of a "bad" grade. A grade is a threat of a future potential lack of fulfillment. Therein, grades harm intrinsic motivation and contribute to learner suffering.
 A. In community, learners learn for themselves, and not for the grade.
- 3. Grades are not effective forms of feedback and do not provide an objective evaluation of knowledge and skill. Grades do not appear to provide effective feedback that constructively informs students' future efforts. This is particularly true for tasks involving problem-solving and creativity. Even when grading comes in the form of written comments, it is unclear whether students even read such comments, much less understand and act on them. (Schinske, 2014) Teachers in the early 21st century wrongly believe that grades give valuable/useful feedback about performance. In fact, when "you" see a grade on an assignment or report card, it tends not to convey a lot of information about what a student actually has learned. Grades are not a good representation of [student] learning. Maybe a student already knew the material before taking the class that they got an A-grade in; then, they didn't learn anything. And, if a student came in and struggled to get a C, they may have learned a lot. Grades don't communicate clearly or consistently. Grades are not communicating to another person what a student has been evaluated on (e.g., whether it be effort, rightness, quality, attendance, participation, improvement, etc.). Because grading is a summary score of a set of formatively graded events, it is arbitrary; grading is arbitrary. For example, who decides and why any specific exams should make up some percentage of an overall grade, that quizzes make up some other made up, that

attendance makes up another part of the ratio, that participation makes up another, etc. The decision is arbitrary.

- A. In community, facilitators (mentors, coaches, etc.) are available for structured learning, for useful feedback, as clarifiers and for additional support. Feedback signals that the learning process is still ongoing.
- 4. Grades (if there is a bell curve) promote **competition** over cooperation. Here, students are ranked among one another (norm reference grading, curve grading). The teacher can change the score of what one student has earned based on the score another student earned ("adjustment") in order to get a bell-type curve. Bell-curve grading exists to rank students for purposes of awards and advancement of further study or career. Those students low on the bell curve do not get advancement, and there must always be some proportion of students who do not advance, because of the "curve". Effectively, grades create internal-student rivalry for advancement; increased competition among peers. Curved grading will alienate certain groups of intrinsically motivated/ talented learners. Grades become a zero-sum game with definite winners and losers.
- 5. **Grades contribute to learner suffering** and substantially increase anxiety, stress, depression and suicidality. In concern to grading, there are serious concerns about students' mental health. The number of college students with one or more mental health problems has doubled since 2013, according to a study by researchers at Boston University and elsewhere. Teenagers said that the pressure to get good grades was their biggest cause of stress, a 2019 survey by the Pew Research Center found. Grades make people think about a future potential loss of access inducing deep states of anxiety in people.
- - A. In community, students are learners and teachers are facilitators.

If universities shift their focus (of key performance metrics) of learning away from grades and job hires, and to community [human-need] fulfillment, then universities would be able to tell whether they are graduating people with the skills that they say they are graduating them with.

INSIGHT: Studying does not equal competence.

When students are given grades in school, three

things tend to happen, and this is the scientifically studied result:

- Students become less excited about and interested in learning. The results of every study on the effects of grading and learning have found a negative effect
- 2. When students are given grades, they tend to pick the easiest possible task when given a choice. This is not because they are lazy, but because they are rational. Of course, "I" would pick the shortest book [to read] because the point is to get a grade or point, so the easier thing "I" am doing the better the chance "I" have of reaching your goal (i.e., the authority's goal). Effectively, the goal is not intellectual risk taking, it is the opposite, it is risk avoidance. But then, you blame "me" for not being motivated or having enough grit (or something) to select the more complex task. To you, it is all about "me", as opposed to looking at the structure and the way it predictably elicits artificially limited behaviors. Fundamentally, the goal is not to learn, learning pulls in the opposite direction of the grade.
- Students that are trying to work for a high grade in school tend to forget more quickly that which they were taught. They also tend to think in a more superficial fashion and with less depth, than students given the identical task in a grade-free environment.

Educational reform often involves the question of how to assess and grade: should we grade for effort or not, should we include zeros or not, as opposed to taking a step back and asking, why are we talking about how to grade when all the research, all the real life experience argues strenuously for the non-encoding of grades, and for more authentic forms of reporting that are not reduced to letters and numbers.

INSIGHT: There should not be consequences to future fulfillment for trying out something new in the education context.

Radical questions must be asked of ourselves and others -- "radical" comes from the Latin meaning "root"). Practically speaking, grades are only an assessment of how well a student has learned to play the school game. Generally speaking, the better someone's grades the more that someone has bought the lie, hook and sinker; the more s/he has conformed and obeyed.

In reality, grades are a problem. On the most general level, they're an explicit acknowledgment that what you're doing is insufficiently interesting or rewarding for you to do it on your own. In school, what does the grade, letter or number tell you? It tells you what the teacher or the institutional system happens to believe about

your ability to follow orders and memorize. From the institution's perspective grades are useful for comparing students, and from the student's perspective grades represent a form of competition.

Grading and subjective evaluations by authority figures in one form or another are inherent to school. Yet practically speaking, grades are unhelpful [to self-development] at best and damaging to the individual at worst.

Punishment with a failing grade is still punishment. What sort of tools does a teacher have when a child is simply not interested in what the teacher has to teach them or where the teacher wants to keep them? It comes down to coercion, one way or the other. Effectively, failure means being forced to repeat the lesson this year or next. In higher education it often means paying a second time for a repeat of the course, or losing a scholarship. And, if "you" are grading them for class participation, then that is the definition of a lack of safety. The kids are now contributing to impress you and get a grade (or evaluation), which is the opposite of doing it for authentic and intrinsic reasons.

To consciously integrate is the polar opposite of extrinsic motivation, as that which you are assigned to do. Creativity arises from self-integration and not from authoritarian conditioning. In community, we focus into the areas of life that we find the most interesting and exciting, and we see what grows out of that. It is unwise to sacrifice the identification of [your] consciousness to collective conditioning. Herein, emotional investment in your own conditioning is unhelpful.

Table 1. Table showing teacher-centered versus learning-centered education.

| Teaching-based (teaching-centered, teacher centered) | Learning-based (learning- centered, learner centered) |
|--|--|
| Teacher | Facilitator, mentor |
| Uniformity | Flow, optimization |
| Compliance | Self-direction, opportunities |
| Points | Learning |
| Certification/qualification assessment exams | Certification/qualification assessment exams |
| Fear | Understanding, confidence |
| "Do I have to? | "How do we?" |
| Grades | Communication and appropriate feedback |
| Competition | Cooperation, teamwork |

1.5.2 Certification (a.k.a., readiness benchmark)

A.k.a., Equitable assessment and qualification, societal social assurance, operation readiness, technician readiness benchmark, practitioner certification, practitioner readiness benchmark, level of understanding and practice, level of comprehension, measured level of knowledge and skill, measured level of awareness, evaluation, social evaluation, social certification

accounting, grade, score, marked completion.

In any advanced socio-technical society, there is an access certification (a.k.a., coordinated control, "authority") gate for the usage of specific societal systems -- the usage of these systems requires individuals to become certified by passing an exam. To get through the metaphorical "gate" requires passing an exam. Pass or fail exams for certification (of access) inform society about the mastery of skills (techniques and/or tools) and knowledge, so that the rest of the people in society can trust that the certified individual can live with, and operate, specific societal systems safely. Society has standards with requirements for specific roles and specific sociotechnical operations, to ensure the safety of the rest of society from the operator, and to ensure the safety of the operator themselves. In other words, to become an operator/accessor of specific societal systems, one must demonstrate their ability to use the system safely and appropriately. The certification conveys trust between the operator and society, and facilitators the operators trust in themselves to use the system appropriately.

Facilitators (of education/learning) in community look at themselves as guides, rather authorities, except during times of certification, because at that time, it is important to ensure the safety of community by ensuring complete trust of qualifications and abilities (e.g., a driver's exam). During exams, facilitators assume the role of evaluators of competence, to ensure the future safe and sensible operation of society (of the societal InterSystem Team, and of common and personal habitat access technologies and systems.

INSIGHT: The objectively best way to assess learners progress and help them meet their goals and achieve their highest potential is one-on-one tutoring and mentoring. And particularly, individual assessment during one-on-one tutoring and mentoring.

In society, there are jobs (contribution work roles) that are potentially dangerous and pose a danger to oneself and others. Further, in concern to personal and common user access, there are accessible machines and activities (e.g., driving or flying) that pose a serious potential danger to oneself and others. In the market-State, a regulated job (a.k.a., regulated industry) and/or regulated civil activity (e.g., driving) is one where, in order to perform it, certification or accreditation is required by the State, or the work product (deliverable) needs to be inspected and approved by a State regulating body (food and drug agency, medical board, etc.). There is a similar certification system in community for contribution and usage of specific tools and technologies.

Half of the idea of "education" is about learning (acquiring information and skills), and the other half is about assessing learning (evaluation, for oneself, and for evidence of one's qualifications to the rest of society). Exams (a.k.a., assessments, certification events, tests, etc.) serve as a measure of knowledge and skill

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(assessment of learning). Assessments are necessary for Assessment for safe and correct practice and usage of societal knowledge and technologies (e.g., driving a car, operating a machine, performing a medical procedure, etc.).

In time, certification may only be acquired at the end of a course of study. In other words, certification comes after the completion of education. In concern to societal accountability, certification always requires some form of assessment to ensure accountability that a certification acquiring individual has the knowledge and skills stated in the [education completion] certification.

1.6 Cheating

INSIGHT: Only systems of distrust incentivize (and even, encode) the idea of "cheating".

Cheating at formal assessments is not acceptable. The questions are,

- 1. Under what conditions is cheating emerging?
- 2. How is cheating defined and how does it work?
- 3. Can cheating be defined outside of the context of a competitive game?
- 4. In a cooperative learning environment, what is cheating; what is its meaning?
- 5. In a community, what is cheating?
- 6. What incentivizes cheating?
- 7. Does cheating potentially put the lives and safety of others (and of habitat assets) at risk?
- 8. Is cheating the taking of someone else's work and passing it off as your own?
- 9. Is cheating the observation of the answers to a blinded assessment?
- 10. Why would individuals do that within a system where learning and participation does not come through the permission, approval, or judgment of an authority figure?
- 11. Is there less cheating when all assessment is during learning, and there is no final formal assessment?
- 12. When access and participation are open, then where is the term "cheating" applicable? Cheating occurs when individuals are pitted against each other for their survival, or perceived survival; and therein, "all becomes fair in love and war". In a cooperative human system there is no incentive to "cheat"; and, in a sense, there is no meaning to the concept.

There are those who might say that copyrights are important in protecting the "rights" of the creator, and the protection of things that do not belong to others, wherein the using of another's work [in competition] is "cheating". This perspective admits two things. Firstly, that the socio-economic system is a competitive game. And

secondly, that there is some degree of monopolization and forced exclusion such that individual participants in the game cannot use ideas, objects, or items that they have possession of, but have not "created" themselves (because they don't "belong" to them). And also, there is often punishment for using another's work without permission. When there is monopolization or force or punishment in a competitive game for life need, then there is not "cheating", there is 'surviving'.

INSIGHT: It's not surprising that: no tests + no homework + no grades = no cheating; no coercion = no reason to cheat; no disparity in socio-economic access = no reason to cheat; intrinsic motivation = no reason cheating.

School is a system of distrust, deception, trickery, fraud, and the swindling away of the natural desire to learn and the innate ability to integrate. Only a system of distrust would encode and incentivize the idea of "cheating" into its structural fabric and then punish its structurally incentivized behavior. Remember, the system is what it produces. In truth, there is no problem with "cheating"; the problem is with the system of schooling itself.

INSIGHT: Without constant extrinsic reward and punishment (grading), without incentivization for competition and advantage over others, and without unequal socio-economic access, cheating in all forms is significantly reduced. In community, there is no incentive to cheat [the system], because the system works well for "you".

What is often called "cheating" in school is actually discussing, comparing, questioning, sharing, asking, and looking up the best answer possible [often to avoid punishment or maintain a reward]. It is ironic and sad that students that get caught are punished for the very skills they will need to do well in life. Therein, a lack of compliance with is not immoral. What is immoral is the coercive demand to do otherwise. One could go so far as to say that to follow the rules of a tyrannical system [of individual and social limitation] is immoral.

Consider that in many ways, the behavior in school called "cheating" is exactly the behavior society desires from people in a participatory and cooperative world. Think about it. What behaviors are called "cheating" in the school system? Generally, they involve asking others for help and copying answers. In the real world, these activities are called inquiring, helping, networking, working cooperatively, and sharing. In business, managers don't ask their employees to continuously reinvent the metaphorical "wheel" when they are working; instead, answers are shared and help is appreciated.

In early 21st century society, the taking of someone else's work and passing it off as one's own to an authority figure or to an entity in the market is generally known as "plagiarism", which is considered a form of "cheating". So, several questions arise. In order to more

greatly understand the concept of 'plagiarism' we might ask some questions in the context of what we know of learning:

- 1. What sort of system would require an authority to approve work you have done for your own supposed benefit?
- 2. What sort of social system would incentivize people to pass off another's work as their own? And, what sort of economic system would punish someone for passing off another's work as their own?
- 3. Why would a learner require the permission, approval, or judgment of an authority figure to continue their learning process?
- 4. Why would someone "cheat" if one were not in competition with others for reward or award or praise or grades or employment or resources?
- 5. Why would someone "cheat" [on an assessment that qualifies one to operate a technology that could put others' lives at risk] if one's survival and basic needs were covered and one had the freedom to pursue a subject or skill to mastery in a fulfillment-oriented value environment?
- 6. What sort of system predicates your survival on the work you do for others?
- 7. What exactly is the meaning of the concept of "cheating" in a society based on cooperation, sharing, transparency of operation, and the generation of abundance?

In the real world, "cheating" is a term without meaning. Once we begin to recognize the damage that school has done to us, then we can begin correcting our direction toward one of greater fulfillment for ourselves and for all others.

Often, the most successful "students" become robotlike, learning how to memorize and spit out information, but not too deeply analyze it and integrate it without contradiction. They fully accept and adopt the meaning of concepts with little to no relationship to the true nature of the reality around them (i.e., they become well indoctrinated).

Often, students with a strong loyalty to authority (i.e., a strong authoritarian "honor code") will turn other students in for cheating. These "honorable" people establish a culture of denunciation and "snitching". Denunciation (McElroy, 2013) is the act of accusing someone of wrongdoing and its inculcation into the minds of young people extends far beyond their school experience. In a political context, it means reporting a person to the State for investigation and possible punishment.

We are intelligent beings and can initiate and quantify our own "progress" (i.e., we have intelligence and can seek feedback; we can self-assess, which requires selfempowerment). And, if assessment can't be authentic, then the variable it is assessing likely shouldn't be assessed. When we have passion and care for the things we do then we are more likely to self-assess accurately. If the work is real, there will be a real audience. The real audience will be assessing the work by giving feedback in the form of viewing the work, sharing their appreciation for the work, and critiquing or otherwise commenting on it. If there is no real audience interested in doing that, then you're wasting your time. As a point of clarification, it is okay if the person doing the work is the only interested audience member. It is not okay if the only interested audience member is the teacher or some other authority figure.

INSIGHT: *Ignorance (ignoring evidence of life and suffering) is a necessary ingredient for oppression.*

1.7 Homework

"Real wisdom is not the knowledge of everything, but the knowledge of which things in life are necessary, which are less necessary, and which are completely unnecessary to know."

- Leo Tolstoy

The industrial educational system is addicted to homework, which is tedious busywork from the perspective of an autodidact (i.e., a self-directed learner). How does killing the excitement around learning by making someone work what is essentially a second shift [with more academic assignments] help them to become someone interested in life-long learning with a wide variety of passions? Most people hate most homework even if they can manage to get it done successfully.

From a business perspective, homework meets the needs of the school perfectly:

- 1. It reduces the responsibility and accountability of the existing system, teachers and school processes.
- 2. It makes parents accountable to the school.
- It keeps the student feeling guilty and disempowered.
- 4. It maintains the illusion that there is so much to teach and the school mission is so important that it is worth consuming all aspects of a child's life.

Homework helps the school system, not the learner. Homework is ironic considering the general situation that those who were already proficient have to do the homework anyway, and those who were struggling and are having difficulty doing it on their own are expected to do it on their own.

In fact, homework is more akin to robbery: it robs the "student" and their families of meaningful time; it robs individuals of self-paced experimentation and reflection time; it robs passion; and it robs individuals of the "right" and respect to decide what to do with his/her time away from school. What gives the institution of schooling and its associated authorities the right to dictate what a

person does when s/he is away from their control?

In terms of standardized test results, there is a distinction between high-school and before high-school for homework. At the high-school level, there is evidence of a modest correlation between standardized test scores and how much homework kids do; if, someone happens to think that test scores are a meaningful marker of intellectual proficiency, which they are not. But even then, that correlation tends to vanish with multiple controls. Below high-school the research clearly shows that there is no case to be made for homework of any kind.

INSIGHT: Develop a system that meets human needs for fulfillment, and there will be trust at all scales (from the education to the contribution).

1.8 Plagiarism

Plagiarism is the false assumption of someone else's work. In community, there is little incentive to falsely assume someone else's "work" as one's own since there is no ownership of property, no market, and no economic encoding of the idea of authority.

Effectively, plagiarism is a culture bound form of intellectual ownership based upon a set of economic ethical principles. To be intellectually honest, one must acknowledge the existence of, and future emergence of, cultures that do not perceive the use of someone else's language, ideas, or thoughts, without reference, payment or exchange, as unethical. The idea of plagiarism presupposes that language, thoughts, ideas, and expressions are neither learned nor an intellectual accumulation, and can have a single concrete originator. In practical application, the ethical principles of plagiarism establish the intellectual ownership of thought, ideas and language. A community, however, recognizes these things as an intellectual accumulation that exists in the domain of the commons.

Many state blanketly, "Plagiarism is a form of cheating because it is stealing another person's ideas". In community, we value cooperation over competition, and cheating is not an encoded element of the community system. Herein, ideas and their application cannot be "owned", and therefore, cannot be "stolen". There are approximately 7 billion people on the planet at the time of this writing, and 1 billion have been added in the past ten years. It is unrealistic to think they all have unique thoughts all of the time, or to punish them if they share the thoughts of others without acknowledgement.

The encoding of the idea of "plagiarism", in any context, rewards those who are "first" to an idea or thought. Yet in truth, we have all stood on the shoulders of a community of creators to accomplish that which we have accomplished. To reward anyone who extends an idea beyond its historical composition with economic benefit over the economic benefit of others is highly likely to create a socially corrosive atmosphere.

If someone is assuming another's work as their

own, then it is wise to ask, "What is the context? What structural element incentivizes this behavior? What is being gained through false pretence? And, what does it mean to "assume" or "represent" another's work as one's own?" In an educational system with established principles of plagiarism, students will necessarily modify the "work" of others in such a way as to avoid plagiarism and acquire the reward – a non-failing grade on a turned in paper. Grades, scores, marks, and tuition are the most rewarded elements of the modern schooling system. Our community's learning system has been designed so that cheating is not a factor (i.e., cheating as a means of advancement or acquiring rewards has been specifically designed out of the system). In a highly self-directed learning environment "cheating" and "plagiarism" become meaningless and unnecessary.

A common incentive for plagiarism in the market is the profit (i.e., bio-survival tickets) derived from the contracted acceptance of a book by a publisher. Other times, that which is called "plagiarism" is simply one person enjoy the published written work of another and desiring to share a similar, but slightly modified, version of the "original" piece of work. In other words, someone takes a piece of written work, creatively and playfully modifies the work, and then shares the new version.

Yet, in community, we understand the necessity for **c**iting sources and documenting new knowledge. Appropriate sourcing practices and transparency are important as they ensure that evidence-based information can be checked for accuracy, objectivity, currency, and coverage. The ability to identify fact from fiction and opinion is a necessary element for the existence and continuance of an emergent community. In concern to responsibility, it is the responsibility of each individual in our community to ensure that evidence-based information is appropriately sourced and cited, and herein, our technologies facilitate this. Notice here that there is a difference between evidencebased information and creative works of fiction. Among community it is unnecessary to cite or reference creative works/designs of fiction, and it is fundamentally desirable (and also, quite obvious) for everyone's fulfillment to document and cite evidence-based information. Besides being useful metadata, it is often irrelevant (to society at large, and the users of any given information) to cite the name of the individual who came up with some idea

INSIGHT: To some degree the idea of plagiarism leads to the division of language because individuals are forced to restate what another may have stated quite clearly and concisely in a different or new way.

1.9 Learning as a lifestyle

"Education is not the learning of facts, but the training of the mind to think."

In community, our interests and desires evolve based upon our experiences and the information we come into contact with. Herein, individuals progress from one experience to the next, dependent upon their evolving interests, curiosities, and goals. Essentially, we come to learn about ourselves and the world through investigation and discovery, wherein an emergent formal/structural learning environment stands in contrast to a planned or programmatic curriculum, as a lifestyle that intrinsically facilitates learning through self-direction as opposed to institutional force. In other words, the community provides the opportunity for structuring our learning so that we have a context of what we have learned in relation to what is possible to learn. However, it does not programmatically force an individual to learn [anything] within that structure. Instead, the structure is present and individuals may use it or not. If we choose to use it then we progress at our own emergent pace, and we may add to the structure freely wherever we desire. Practically speaking, in community we have the freedom to learn in a structured environment (or not) about a subject matter (or set of relationships) from other learners.

It is relevant to note here that education is both an exploratory and a life support prioritization, because it concerns the survival and flourishing of the current and future generations. Education involves the sharing of knowledge amongst learners who can use the education to survive and better their lives. The habitat service system team operation is often called the InterSystem Team, because it is recognized there exists an intersystem relationship amongst the primary habitat services.

The biological term 'selection' defines the process of physiological change that takes place within an organism when it selects new information that helps it more effectively adapt to its world. The most important element of a selective system, such as our brain, is that all new information must in some way attach itself to data that has been previously encoded into our neurological structures, either by our genetic program or by our previous encounters with the environment. In selective systems the individual-self has this constructive power, not some outside authority, such as a "teacher". It is the individual who is actually doing the matching (Read: pattern recognition), as his or her brain unconsciously selects new information that resonates with previously acquired knowledge for inclusion into long-term memory.

Learning is the conscious pursuit of self-growth and self-development. If someone is relying on others to tell him or her what s/he has learned, then it is likely that s/he is not learning much. Former market-State efforts to develop effective learning systems that produce dramatically positive and "flow"-like neurological changes – and thus dramatic learning and optimized contribution – have been hampered because of a failure to understand that learning takes place though the process of 'self-selection', not the academic professing

of "instruction".

There are substantial differences between the biological term "selection" and the academic term "instruction." The academic term implies a method in which learning is claimed to take place through directives and orders from a central authority (e.g., a "teacher" or "leader"). Instructive methods view the brain as an empty container to be filled through the authority's direction, using the Newtonian and behaviorist tools of leverage that every learner in early 21st century society is likely familiar with: the reward and punishment of good and bad grades, marks, scores, and evaluations.

A learning community does not force a predefined (or planned) program of study or career of tasks on individuals. Planned programs cannot adequately accommodate the evolving interests of learners and the expansion of our knowledge. Planned programs advance students down a single path toward a prechosen [authority directed] goal, often in a single discipline. In community, we realize that learners have interests that span numerous disciplines, and that in truth all disciplines are connected. Here, we begin to see the interconnectedness of the world around us.

Individuals in community don't generally segment their life into academics versus life. Instead, learning enmeshes with life. There is hurtful artificiality in separating learning from living through institutionalization of learning into academics. In community, we look at life more as connections and less as academic subject matters. 'Academia' represents the compartmentalization of life. Effectively, school diverts our attention from a sensitivity to, and the fulfillment of, our life needs. One of the consequences of school is the disconnection of learning from living.

The truth is that when you dig deep intellectually, everything has an interdisciplinary synergy. We can't talk about nutrition without also talking about biology. We can't talk about biology without also speaking about physics. We can't talk about physics without talking about mathematics, and so forth. There is a synergy in life that we can integrate [over time] and use to organize a more fulfilling lifestyle for all of us.

INSIGHT: Often, academia is the parroting of what another parrot who came before him/her was told to parrot.

1.9.1 Self-direction, life-long learning

A.k.a., Individual learning, self-directed learning, self-directed tutoring,

Self-directed learning (or self-directed study) is the process by which learners initiate, monitor, and reflect on their own learning, and it is potentially the most important element in life-long learning. Our community exists to support individuals in their pursuit of learning throughout their entire lives, and therefore, self-directed learning must be an inherent part of our community. Self-directed learning provides an environment for the

natural continuation (or "development") of self-directed individuals. To have a self-directed education at its best is to have an individualized learning experience where the learner selects the topics, goals, objectives, strengths, challenges, interests, passions, and weaknesses, that are all naturally expressed by someone. The Community offers individuals the freedom to explore their personal interests and to fulfill their continuously evolving aspirations. Here, learners are nurtured into taking the initiative and the responsibility for their own lives, their learning, and their routines. In community, learners are responsible "owners" and "managers" of their own learning process and progress. Here, learners design their own path to their own highest potential. The modular, continuous learning approach [discussed later] ensures that learners have the time to process, integrate, and fully enjoy what they are learning.

Self-directed learning nurtures the intrinsic motivating factors of autonomy, connection, mastery, and purpose over factors of a more extrinsic nature, such as reward and punishment. Self-directed learning allows for a state of flourishing among individuals, for herein, we are following the interests and curiosities of our own hearts and minds, which have not been shackled and beaten by the self-serving agendas of others. Environments that support learning shift the role of the "instructor" [if one is present] from that of the "bearer of knowledge" to that of a "facilitator of learning". Hence, in community there are no "instructors" or "teachers"; there are only learners, some of whom may have sufficiently mastered a subject or task to a degree that they have the capacity for adopting the role of "facilitator" or "guide" to other less developed learners.

Only a limited form of self-direction can be achieved in a programmatic or pre-planned environment wherein individuals are told (or "instructed") on what they must learn and how they must learn it. Alternatively, an emergent curriculum is founded upon the principle of individual self-direction, and it is therefore in line with how learning and change actually occur in our natural, biological systems. This leads us to acknowledge that optimized learning, the efficient and logical integration of new knowledge, and movement toward a true higher potential, necessitates a self-directed environment. Self-directed environments appear when individuals have the freedom to express their desires, wants, and preferences. Note that self-directed freedom is one of our community's core values, and it is discussed at length in the Social System Specification.

When individuals have a choice as to where they focus their physical, creative, emotive, and intellectual energies, therein exists alignment with our natural world. If we seek a continued movement toward our higher potential, then the decision to learn something must originate from within the individual. In community, individuals have the opportunity to self-select their intention and focus their intention without intrusion by others.

What is Confucius stating in the above quote? Should

a "good teacher" not show you all four corners, laying everything out plainly? Confucius apparently thought otherwise. Nature provides the corner of experience. To truly learn, to remember and understand and integrate, a mind must be in a state of questing, of seeking to find knowledge.

In the Community, most formal learning is delineated into what may be commonly referred to as formal learning experiences ('learning objects' or learning modules). A learning object is a collection of activities, events, and content that has been temporarily assembled based upon one or more closely knit learning objectives. 'Learning objects' represent smaller, self-contained, re-usable and often assessable units of learning or purposeful experience. By organizing learning into manageable chunks, learners can smoothly transition between experiences and disciplines. Many technical learning objects are even designed to span disciplines.

Metadata about 'learning objects' is an important component of the learning system. Metadata provides learners complete transparency within and between learning objects and experiences, allowing for an informed choice about the direction and path of their own learning.

"I never let my education interfere with my learning. [In other words,] I never let schooling get in the way of my education." - Mark Twain

1.9.2 Learned helplessness

John Taylor Gatto

"Whatever an education is, it should make you a unique individual, not a conformist; it should furnish you with an original spirit with which to tackle the big challenges; it should allow you to find values which will be your road map through life; it should make you spiritually rich, a person who loves whatever you are doing, wherever you are, whomever you are with; it should teach you what is important, how to live and how to die."

Learned helplessness is a mental state in which an organism forced to endure aversive stimuli, or stimuli that are painful or otherwise unpleasant, becomes unable or unwilling to avoid subsequent encounters with those stimuli, even if they are escapable, presumably because it has learned that it cannot control the situation. (Nolen, 2014) In other words, learned helplessness develops when an organism learns that its efforts are wasted and it's easier to just conform, when it believes its problem is permanent. It is characterized by decreased motivation, failure to learn, and negative thoughts and emotions.

The learned helpless [behavioral] response pattern was discovered accidentally during the mid-1960s while studying the relationship between fear and learning in animals: psychologist Martin Seligman observed that after exposure to inescapable electric shock some dogs passively accepted the shock even when they could take action to turn it off. Seligman and colleagues discovered

that the conditioning of dogs led to outcomes that opposed the predictions of B. F. Skinner's behaviorism, then a leading psychological theory. (Seligman et al., 2916; Overmier et al., 1967) In the attributional reformulation of the theory it was found that humans with a pessimistic explanatory style who perceive "negative events" as permanent, personal, and pervasive, are most likely to suffer from learned helplessness and depression. (Peterson et al., 1995) Certainly, learned-helpless individuals see failure as permanent (ability not effort), pervasive, and very personal. Learned helplessness has a high chance of occurring when someone feels a lack of control of one's time and space and activities.

INSIGHT: Among the many things that schooling creates is learned helplessness in the face of authority. As a result of being harnessed for a period of time, even when that harness is removed, that animal may act as though it is still harnessed.

Learned helplessness is formally defined as a disruption in motivation, affect, and learning following exposure to non-contingent (uncontrollable) outcomes. There are three essential elements to its definition: contingency, cognition, and behavior. It also produces three basic deficits in someone - cognitive, emotion, and motivational - which inhibit the desire to learn. For all practical purposes, learned helplessness involves a "giving up" that is incompatible with new learning. Contingency is the idea that there is an identifiable relation between one's actions and the environmental response. In learned helplessness research, contingency is more often operationalized as its converse—uncontrollability—so that when an agent acts, there is no identifiable relation with a specific response. Cognition refers to the way one understands and explains contingency or lack thereof. And, behavior refers to the observable effects of being exposed to uncontrollable outcomes; including, relative passivity versus activity in coping with situations that are potentially controllable. The motivational deficit of learned helplessness aborts the initiation of a productive response. Teachers and parents often state that a struggling student isn't trying, but research shows that such individuals have likely learned to be helpless to learn. The learned helpless individual believes s/ he has no control over the learning process, and, after many failures, the gives up trying because it hurts too much to try. It is a cognitive deficit in that it is a learned conditioned response; it is learned rather than rational. Someone who has adopted a mental state of learned helplessness will experience some degree of cognitive debilitation, including a reduction in awareness, logic, and thinking. The emotional deficit is the experience of substituting energy-depleting emotions for energymobilizing emotions. The emotional deficit may lead to anxiety, depression and lowered self-esteem, which may result in anger, aggression, and avoidance.

1.9.3 Learning and bedtimes

One ought to ask oneself what the meaning of a "bedtime" is when there is the understanding that our bodies have naturally evolved rhythms. What are you actually enforcing when you enforce this thing you refer to as a "bedtime"? We now understand that modern technologies, particularly lights and televisions that emit photons of blue and green light will interrupt or offset sleep cycles. In nature void of modern technologies, when the sun sets our bodies naturally begin shifting toward sleep, with the exception that ancestrally, those younger in age might still be active for several hours after the sun goes down. There is a natural timing cycle which we can entrain to, and the entrainment can be interrupted through modern technologies and practices. Using red and amber lights at night and shifting television screens and monitors toward a lower kelvin value can help mimic the light cycle we have evolved with. We might ask ourselves, how can we facilitate a change in the environment to ease us more naturally into sleep [so that we drift off to sleep when our body is ready instead of forcing a schedule or agenda]? Fundamentally, you can't force someone to sleep. Of note, exposure to sunlight for at least 15 minutes first thing in the morning is also fundamentally natural, and it helps to set the circadian rhythm. Clearly, we evolved to wake up and walk around outside wherein our retinas [at least] would be exposed to sunlight. Further, the foods that one consumes throughout the day, though particularly in the afternoon and evening, play a role upon when we begin to feel 'sleep pressure'. Temperature is another environmental factor. Goals and values also play a role. If we have more conscious awareness during the process of sleep, then we might be keener to sleep. In other words, do you dream and do you enjoy your dreams? Are you possibly practicing 'lucid dreaming'? And finally, the knowledge of what sleeping is and its value to performance is another factor. Sleep is when we build, cleanse, and consolidate our tissues (and memories). Hence, it is empowering to know that we can do things and know things which may facilitate sleep pressure and reconnect us with our natural cycles, which will improve our waking-life performance. Here, guidance and a restructuring of the environment are significantly useful; imposing rules and arbitrary consequences are probably unhelpful and possibly hurtful, certainly disrespectful to the individual and to the individual's self-directed rhythms, which can become offset and disrupted by technology and may be different than one's own, naturally. The real question is, how do you as a "parent" seek consistency between your knowledgeable understandings about how individuals learn and have evolved to thrive, and your actual practices (i.e., your approach to connection) as a "parent"? When someone goes from years of a strict bedtime to no externally set bedtime, then sometimes they binge; they go crazy and don't want to go to sleep. It can take time to reset natural cycles.