

Welcome to this week's presentation and conversation hosted by the
Canadian Association for the Club of Rome,
a Club dedicated to intelligent debate and action on global issues.

Social Density Stress as a Missing Limit to Growth.

Our speakers today are Dr. Carmen Hust (RN) & Gordon Kubanek (PEng, TSSF). Carmen has a bachelor's degree (U Montreal), master's (Villanova U), & doctorate (U Ottawa). She is Chair of Nursing at Algonquin College & does mental health counselling. Gordon has a master's in chemical engineering (McGill) & did most of his career teaching High School Physics & Chemistry.

DESCRIPTION: Should Social Density Stress [SDS] be included as a key limit to growth? Social & psychological issues affect our ability to face our challenges & may be the key factor to our success in preventing our current ecological overshoot behaviour from turning into a collapse of the ecosystems & social norms. We will explore SDS research & give you some skills to cope with the SDS. We believe that with these ideas and skills, you will be able to interact in a more healing & constructive manner with others. We see every interaction as an opportunity to reduce SDS, as SDS makes people more unreasonable & harder to talk to. We believe that understanding SDS will improve our chances in confronting ecological collapse..

The presentation will be followed by a conversation, questions, and observations from the participants.

CACOR acknowledges that we all benefit from sharing the traditional territories of local Indigenous peoples (First Nations, Métis, and Inuit in Canada) and their descendants.



Website: canadiancor.com

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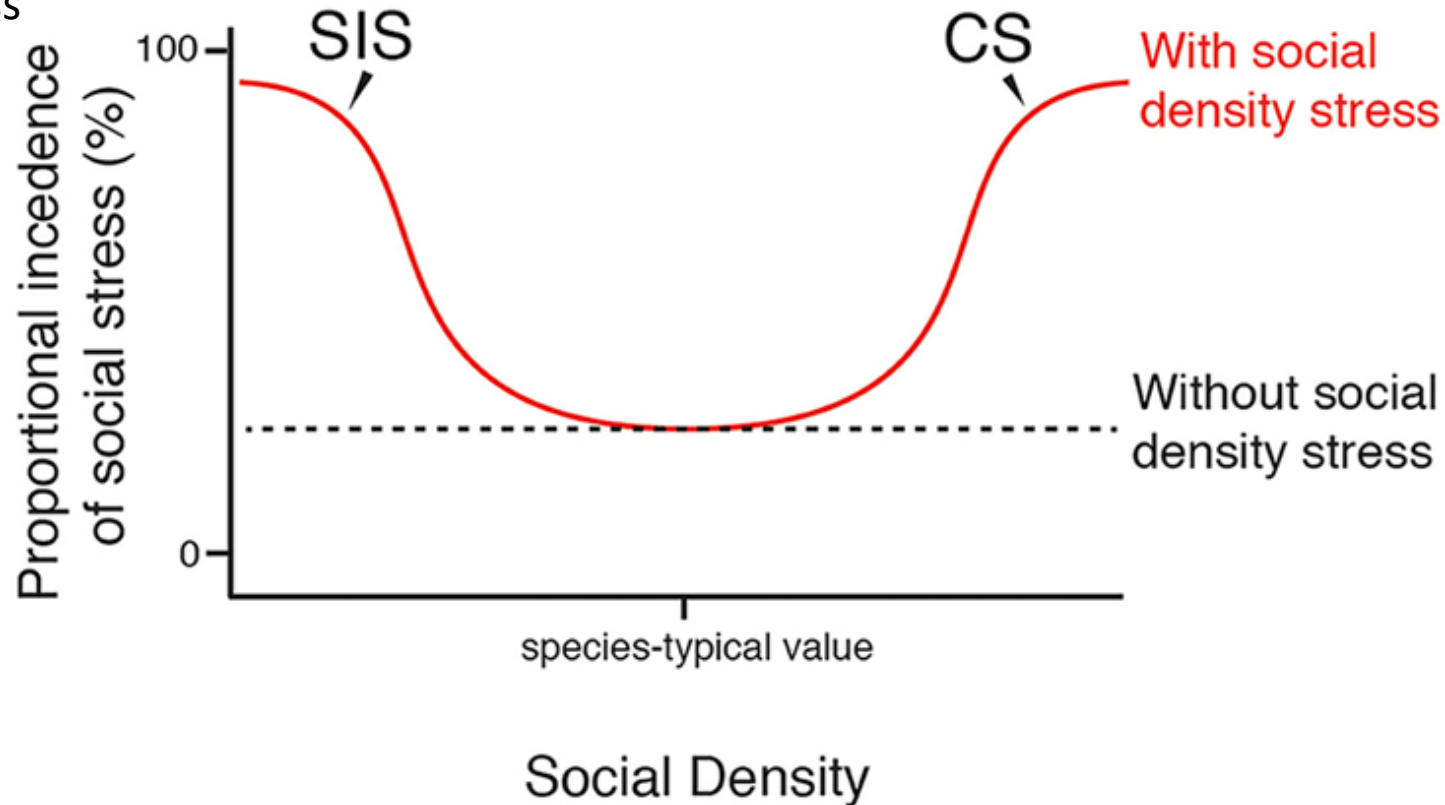
2023 Jul 19 Zoom #156

Social Density Stress as a Missing Limit to Growth

“Adults act like children, are self-centred & seem to have lost their ability to face today’s problems.” [from chat after June 28 zoom talk by Ruben Nelson]

SIS = social isolation stress

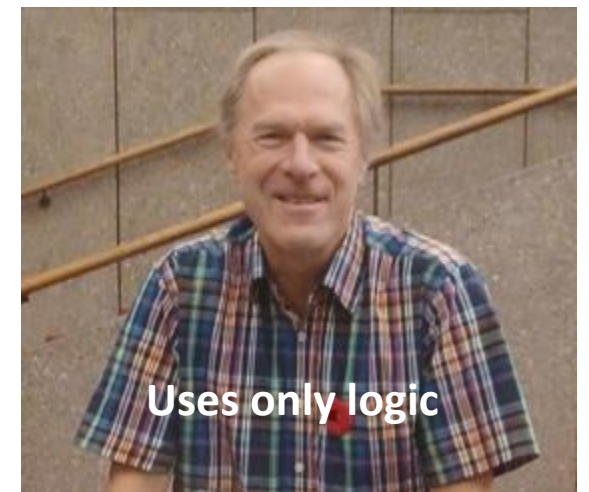
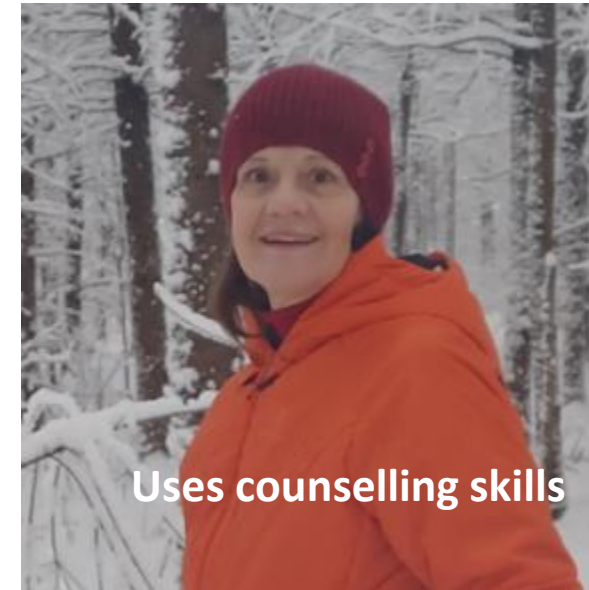
CS = crowding stress



Could social density stress be one of the causes of societal collapse that we have ignored?

By Carmen Hust, Ph.D. & Gordon Kubanek, M.Eng. For CACOR July 19, 2023

Let's start with a story about my destroyed Smart Car



Outline

- **Part I – Gord – The Challenge of Social Density Stress [SDS]**

- A. Introduction
- B. Social Density Stress
- C. What can you do?

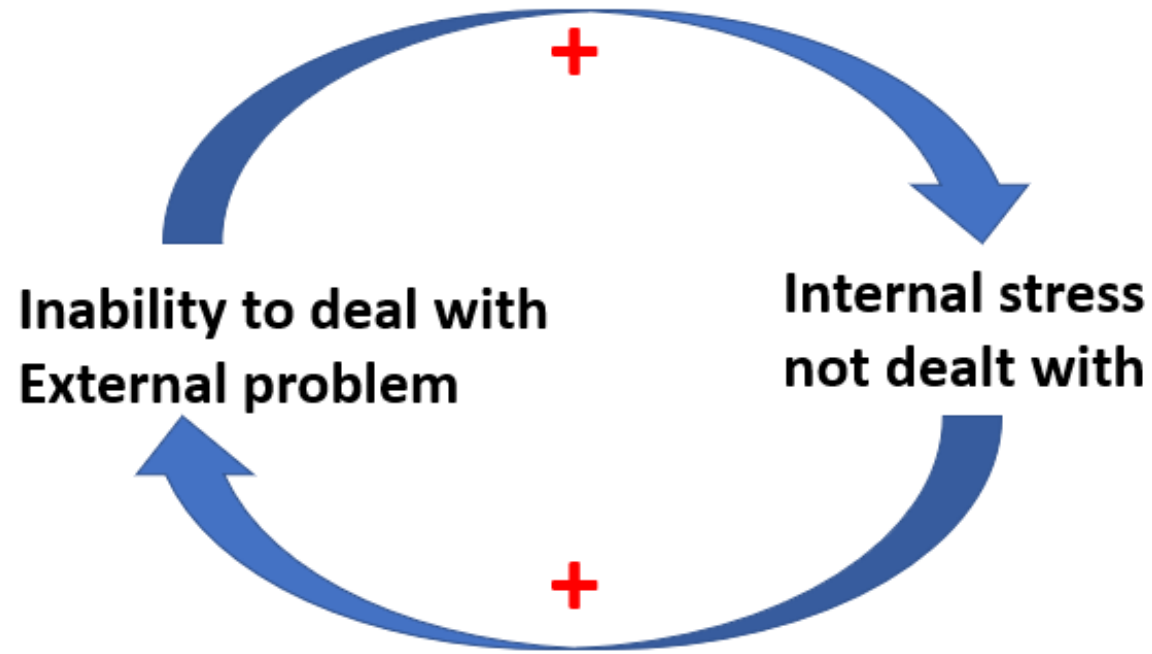


- **Part II – Carmen – Coping with & Counselling for SDS**

- A. Mental Health in Today's World
- B. Counselling Strategies You Can Use



A. Introduction – Why SDS Matters



hurt people
hurt people.



Why the impacts of climate change may make us less likely to reduce emissions

- As the effects of warming are felt more substantially, we may instead vote into power people committed to making the problem worse
- **Stressed people make simplistic and plain BAD choices**
- Ecological destruction brings less obvious problems related to inequality, migration and conflict.
- These create a world of deepening inequality and instability, rapid change and perceived threats – an environment in which authoritarian leaders tend to thrive.

POPULATION DENSITY STRESS IS KILLING US NOW!

An NPG Forum Paper
by Greeley (Gregg) Miklashek, MD

Introduction

NPG is pleased to present the newest addition to our Forum series, *Population Density Stress Is Killing Us Now!*, by Dr. Greeley Miklashek. Veteran NPG readers will quickly notice that this is a rather untraditional piece for NPG. We fully recognize that but encourage you to keep an open mind and finish the paper before you reach your conclusions.

Most NPG Forum papers present an argument for our cause based on new environmental reports or a recent trend in immigration policy. Dr. Miklashek attacks our common enemy, population size and growth, and the resulting decline in our quality of life, from an uncommon angle – the medical field. In the end, however, his basis for seeking what all NPG members desire – a smaller, truly sustainable U.S. population – completely aligns with our goals.

We are grateful to Dr. Miklashek for cooperating with NPG to allow us to deliver a different and unique perspective on a complex issue. We hope you enjoy reading this new paper and find it useful and relevant.

Stress Varies Along the Social Density Continuum

Jay Love and Moriel Zelikowsky*

Department of Neurobiology and Anatomy, School of Medicine, University of Utah, Salt Lake City, UT, United States

Social stress is ubiquitous in the lives of social animals. While significant research has aimed to understand the specific forms of stress imparted by particular social interactions, less attention has been paid to understanding the behavioral effects and neural underpinnings of stress produced by the presence and magnitude of social interactions. However, in humans and rodents alike, chronically low and chronically high rates of social interaction are associated with a suite of mental health issues, suggesting the need for further research. Here, we review literature examining the behavioral and

Escaping the Laboratory: The Rodent Experiments of John B. Calhoun & Their Cultural Influence

Edmund Ramsden & Jon Adams

Abstract

In John B. Calhoun's early crowding experiments, rats were supplied with everything they needed – except space. The result was a population boom, followed by such severe psychological disruption that the animals died off to extinction. The take-home message was that crowding resulted in pathological behaviour – in rats and by extension in humans. For those pessimistic about Earth's "carrying capacity," the macabre spectacle of this "behavioural sink" was a compelling symbol of the problems awaiting overpopulation. Calhoun's work enjoyed considerable

*Accepted for publication in the Spring 2009
edition of *The Journal of Social History**

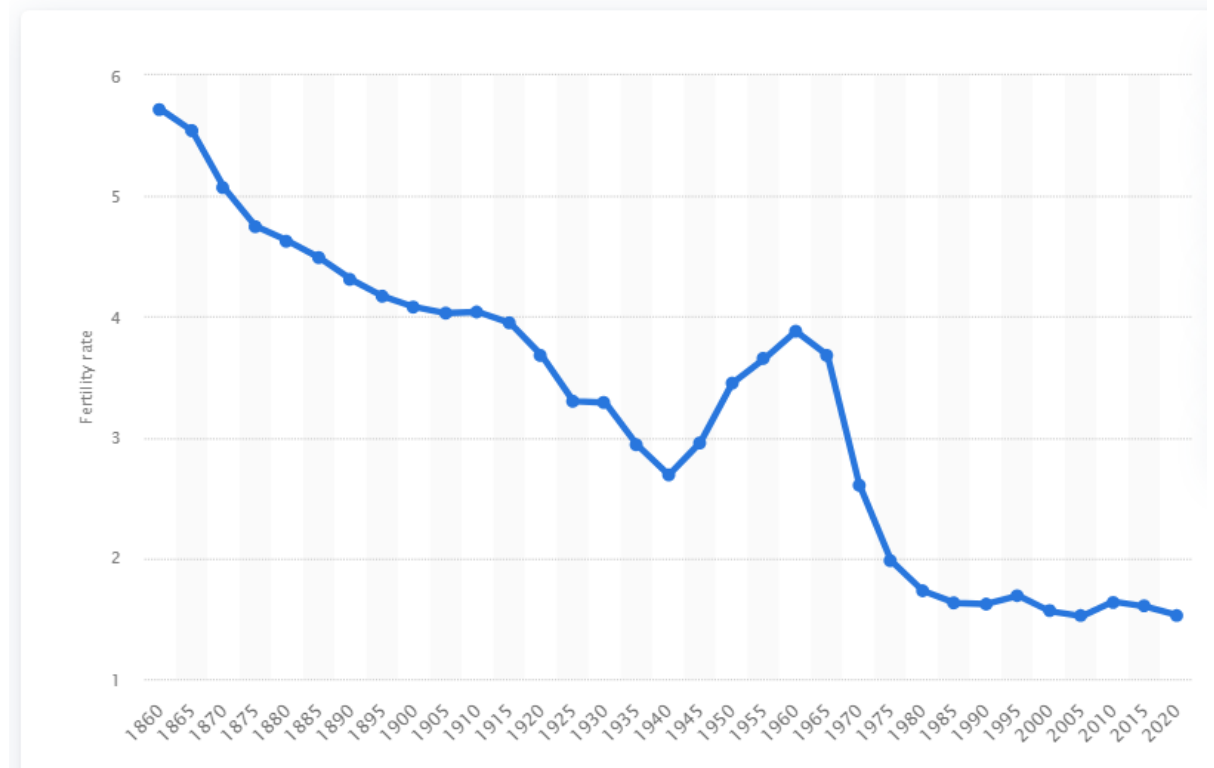
many chose to counter.³ To his growing frustration and dismay, few drew upon his later research, dedicated to ameliorating the ill-effects of crowding. Through the effective design of space, he attempted to develop more collaborative and intelligent rodent communities, capable of withstanding greater degrees of density. **For Calhoun, contrary to many interpretations, population growth was not inherently bad and humanity was not destined to destroy itself.**

but Canada's huge - so SDS isn't affecting us?

- 1 in 4 CDNs live near GTA
- Only 18% rural population
- Canada's growth rate in 2022 of 2.7% annually tops the average African growth rate of 2.4%.
- [over one million people](#) immigrants in 2022 to sustain GDP growth as fertility rate is 1.4%
- The Lebanonization of America & Canada- social fracture
- Winnipeg: deaths from car crashes increased from 9 to 21 from '2021 to '22
- Many topics are Taboo... you get fired if you have the 'wrong opinion'

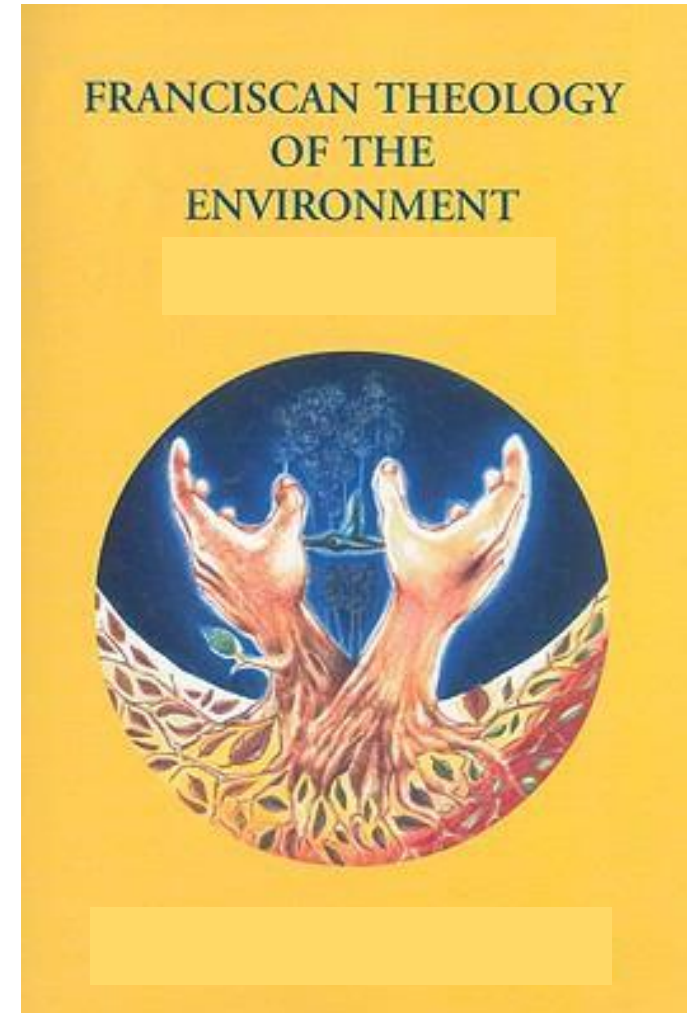


Total fertility rate in Canada from 1860 to 2020*



CRISIS = OPPORTUNITY

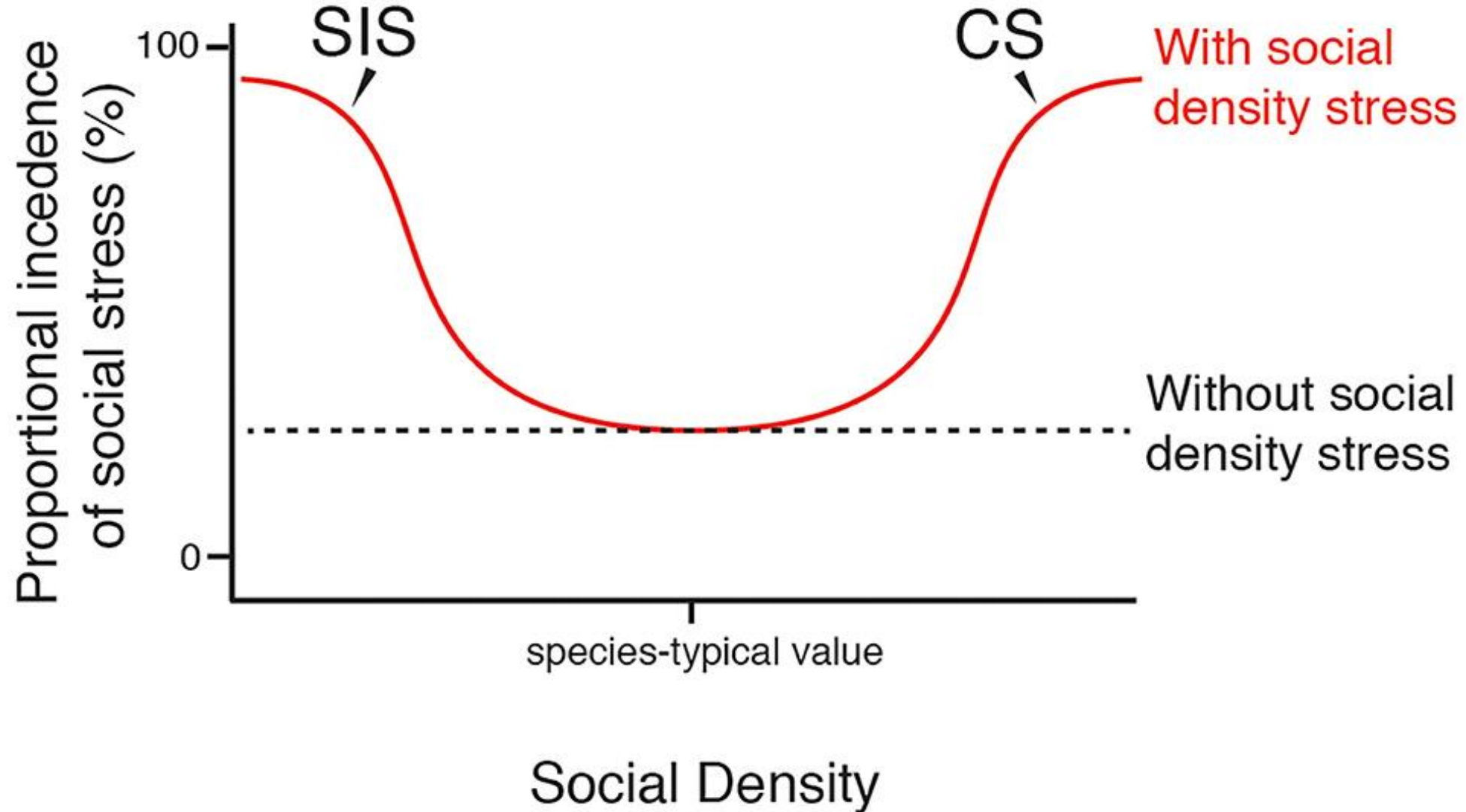
- If, by chance, our time in evolution is a dark-night time—a time of crisis and transition that must be accepted and fully lived.
- **Paradoxically, a situation of no potential is loaded with potential....**
- Dare to believe that new possibilities, beyond immediate vision, exist and strive towards this unknown
-



B. Social Density Stress

SIS = social isolation stress, eg. COVID

CS = crowding stress, eg. social housing mega projects



Social Density Stress Defined

- **Chronically Over-Active Stress Response**
chronically elevated Cortisol in our blood
- Loss of our ancestral clan-social structures
- Estrangement from nature
- Stress inducing and isolating technologies
- More individuals living alone
- Unable to maintain long term relationships
- More childhood trauma [G. Mate]

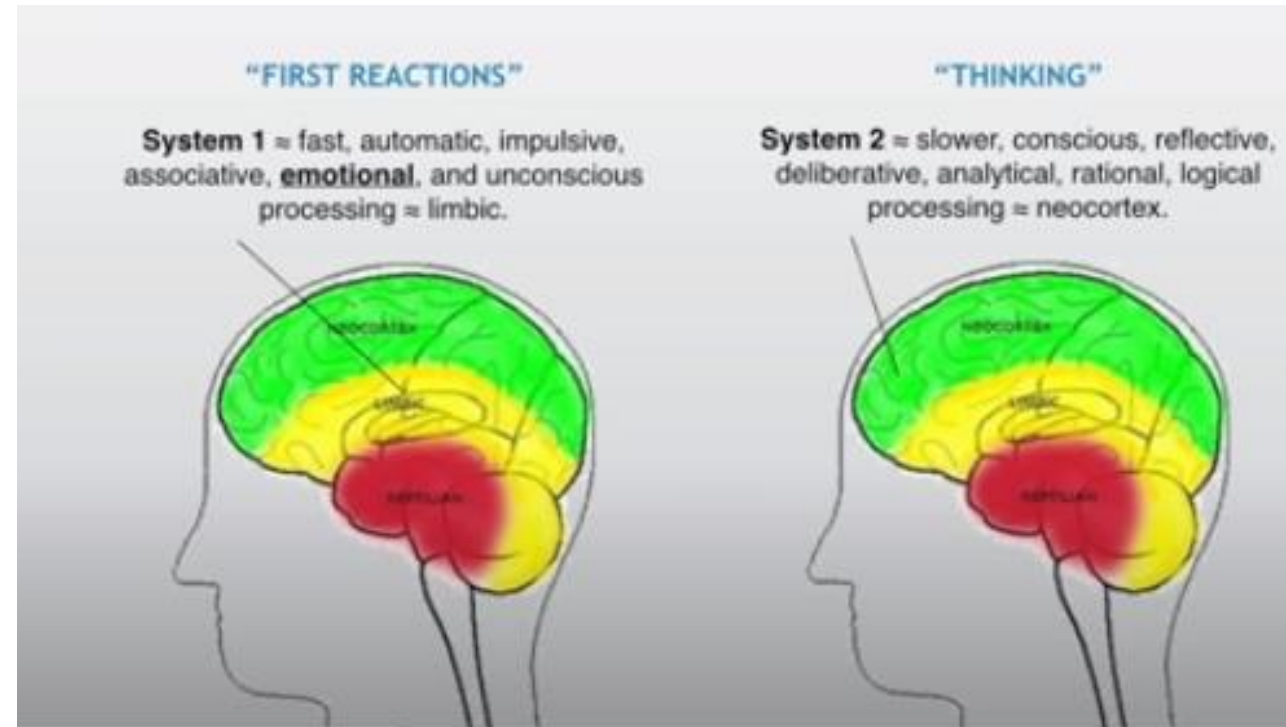


Digging a bit deeper

- **Chronic** – always “ON”, unrelenting stimulation 24/7
 - **Social** – trust & social connections are fracturing
 - **Population** – 7.9 billion of us competing for fewer resources
 - **Density** - urban fertility has reached levels well below replacement
 - **Stress** – uncertainty, lack of trust, unsafe, lies are normal
-
- We do have the power to change these factors by building a society not reliant upon exponential growth and the worship of the individual

SDS keeps us in...

- System 1 Response
- Automatic, knee jerk
- Emotions dominate that simplify & amplify extremes
- little or no effort and no sense of voluntary control
- System 2 Response
- Includes a pause
- Reason guides emotions gently
- allocates attention to the effortful mental activities that demand it



Mammals respond poorly to extremes in social abundance and density

- In comparison to moderate levels, extremely low or high social density constitute a situation for which the nervous system is not tuned to efficiently handle, **especially when administered at chronic levels**
- social isolation stress (SIS) and social crowding stress (CS), are well-known to induce chronic stress in animals
- Chronic stress accelerates our ageing and the ageing of a society



Without the glue of Social Support we cannot solve our environmental challenges

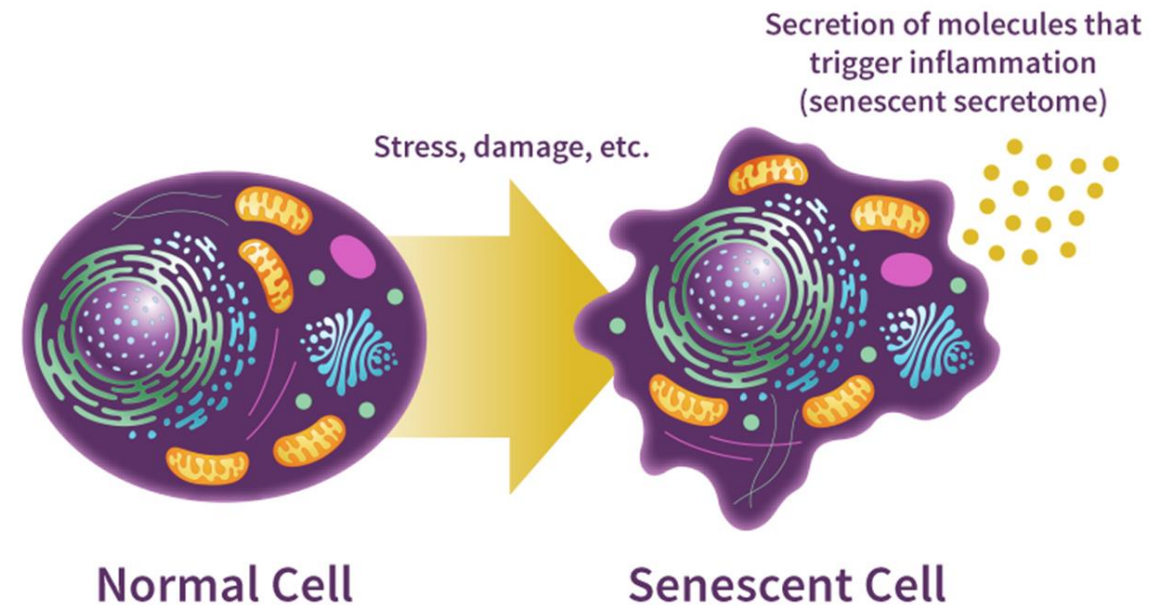
- In stable social systems, established dominance relationships result in predictable behaviour. As a consequence, low positions in the hierarchy do not necessarily lead to enhanced endocrine stress responses.
- Under conditions of instability, however, distinct increases in the activities of the pituitary-adrenocortical- and the sympathetic-adrenomedullary systems are found.
- The ability to establish and to respect dominance relationships is a prerequisite to build up stable social systems.
- **The time around puberty seems to be essential for the acquisition of those social skills needed to adapt to unfamiliar conspecifics in a non-stressful and non-aggressive way**
- Whether this ability is realized, however, depends on social experiences made during behavioural development when a child/teenager.
- **Stress responses can be ameliorated by the presence of members of the same species. This phenomenon is called social support.**

Biology: Constant stress creates “COASTER”: Chronically Over-Active Stress Response quote book and author

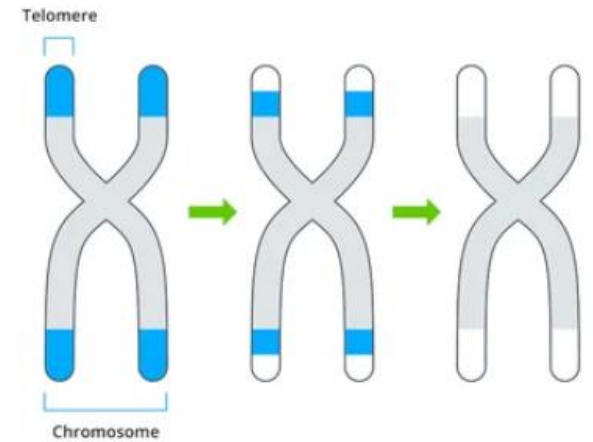
- Chronic stress over-works our adrenal glands and is ultimately caused by stressors that are part and parcel of overpopulation
- In developed countries, stress can be measured in blood pressure elevations, insomnia, domestic assaults, mental illnesses, road rage, heart disease, cancer, diabetes, anxiety, depression, addiction, loneliness, reduced birth rate and more
- Numerous conscious and unconscious environmental stressors (noise, movement, strange faces, competitions on the highways, myriad visual stimuli, stressful media, disrupted families, economic and other worries, etc., etc.) in our daily lives trigger our often unconscious stress response and **elevate cortisol levels**, as well as other aspects of **our overactivated stress response, including over-activation of our sympathetic nervous system.**
- This over-activated stress response results in our feelings and physical symptoms of “anxiety” and eventually “depression”.

Diseases of urban civilization are linked to social density stress

- high blood pressure, atherosclerosis and heart disease, stroke, cancer, ulcers, kidney disease, immune deficiency (remember cortisol suppresses immune function and kills T-lymphocytes-formed in the thymus gland), addictive behaviors, anxious and depressive behaviors seem to be side effects of SDS
- "**Behavioral sink**" is a term invented in 1950s by [ethologist John B. Calhoun](#) to describe a collapse in behavior & population which can result from [overcrowding](#). [rat paradise]
- Rural Populations have less SDS: 65% India, vs 18% Canada



Let's get personal: Stress = Ageing



- Telomeres keep DNA from unraveling, otherwise we age rapidly and die.
- These chromosome end tip protectors are the secret to “living younger, healthier, longer”
- Cortisol disrupts the work of telomerase to prevent restoration of the telomeres at the end of our chromosomes and thus hastens our death?

- Chronic stress does the same thing to a society – it accelerates the ageing and collapse of that society
- It isolates us
- Has us see what's wrong instead of what's right
- Enables socially contagious emotions to dominate us
- Dumbs down our thinking so we only see Us & Them [polarization]
- Reduces the birth rate

The Evidence that we are living with Social Density Stress

- Over dose deaths increased 4x over last 7 years in BC
- 55% of American adults currently have at least one chronic disease
- Sperm counts around the world have halved over the past 50 years
- 1 in 3 entering college freshmen & 1 in 4 adult women are taking an antidepressant
- Rational, factual responses to Population Shaming are impossible to discuss in public [Overpopulation denial syndrome <https://www.ecologicalcitizen.net/>]
- 28% of all U.S. occupied households were one-person households in 2020, up from just 7.7% in 1940



6-year-old shoots his teacher



Teachers are calling it quits amid rising school violence

Referee abuse – why are people so angry?

- Over 50% of the high school referees who complete one year, do not return the following year.
- The main reason for this attrition is the verbal abuse coming from the parents.
- refs are also physically threatened and hit
- **Ontario refs now want body cameras**



ADHD linked to emotional development problems



- inattention, hyperactivity and impulsivity - the condition also comes with self-control problems, affecting the ability to regulate emotions
- the dopamine reward/motivation circuit in the brain is important in ADHD development
- this circuit is developed when before school age and required a **safe, trusting, stress free, unconditional love environment**

Why S Korea is paying young recluses to leave home

The fertility rate has dropped to a world record low of 0.78



- Self-isolation can be "comforting" to some people.
- "When you try new things, it's exciting but at the same time, you need to endure some level of fatigue and anxiety.
- But when you are just in your room, you don't have to feel that.

Yoo Seung-gyu used to isolate himself in his room - and even avoid the washroom to not have to see his family

Here are some examples of the disorderly conduct that has transpired from September until now:

- Students have defecated on the floor of bathrooms and rubbed their feces on the wall
- Students have ran through the hallways doing things such as playing baseball or throwing water at each other
- Students will vandalize the washrooms and write hateful speech about teachers targeting their ethnicity
- Students will leave school property during class time to go get food at the nearest plaza
- Students will open random doors of the school and throw metal door stoppers, food or drink at other students sitting in class
- Students have no sense of physical boundaries with teachers, they will come up behind you and yell in your ear or blow on your face
- Students are smoking or vaping in corners of the school and washrooms leaving those spaces inaccessible
- Students will utter homophobic slurs towards staff and students
- Students will steal other weaker students wallets, phones and materials
- Students are piled up in the hallways unwilling to go to class
- Students are threatening others with Exacto knives or hitting each other so hard with a meter stick that their tooth falls out
- Students will bang down doors to get into classrooms or washrooms even when teachers are barring doors while crying and screaming
- Students will throw empty cups at teachers heads
- Students will vandalize the office by going into the photocopier room to steal materials or go into the room where announcements are made, stealing the microphone and making crude remarks over the loudspeaker
- Students will play loud music or alarm sounds in the hallways to disturb other classes
- Students will run through and interrupt assemblies
- Students will threaten physical violence to any staff or students in the building
- Students will get into physical fights before, during and after school, the fights are filmed and then distributed
- After school students will harass people and their property in the community, the school has received many complaints
- Students are scared to go to the bathroom so much that they soil themselves at school

These incidents are a snapshot of what the school year has been like at Tomken. As a staff, we are concerned for the students. Every door at our school is locked and windows are covered up. There is nothing left of our community except for a shared hope that this will be fixed.

We have made attempts to receive help and we have exhausted all methods that we are trained to use. No suspensions or expulsions have been made. There are no consequences other than restorative conversations with students and the parents that are still willing to show up. We have pleaded with our administration to receive help or some type of direction. We finally arranged a meeting with our superintendent and on the day of the meeting they said they forgot. No one wants to intervene and we can understand why.

As a staff we are looking to reinstate some type of structure at our school. We want to ban cell phones. We want students to



Please
Help
Us !



Toxic Politics

I have been a candidate in 7 elections

- Reality
 - **Politicians just do and say what will get them elected**
 - All mainstream parties only want to maintain the status quo [BAU]
 - ***The electorate is chronically stressed and thus open to hearing to simplistic answers*** [which are always wrong]
 - **The electorate doesn't think – it feels**
- Response
 - Vote for anybody who seeks to transform the status quo, no more BAU
 - Find common ground
 - Help those you disagree with in any small way
 - Stop any polarized, US/THEM thinking
 - Change and learn new things
 - Get involved!
 - Vote with your money and your actions FOR what you believe and NOT against a person or idea

Reactance & the Desire to Return to Normal



- Is the motivation to regain a freedom after it has been lost or is threatened – it leads people to resist the social influence of others. [Brehm, 1966]
- Reactance describes an intense desire among individualists to downplay threats and risks, especially if they perceive a loss of their personal freedom as a result.
- People who are threatened u feel uncomfortable, hostile, aggressive, and angry
- ...then more and more people encourage and even reward each other for disregarding the health and safety of those around them, discount the future and are obsessed with life returning to “normal”
- **They want life to return to normal.**

How to React to Reactance?

- “not doing behaviour X will result in bad outcome Y” is likely to promote greater reactance
- **Rather** say “doing behaviour X will result in good outcome Z”
- Be non-judgmental, calm & empathic
- Talk more about family and community & less on self
- Reduce the perceived threat to level the person can cope with
- **choice-promoting language**
- provide more than one option



- Recently, as I was clearing the dinner table, I told my daughter to wash the dishes.
- “I was going to, Dad,” she said. “But now that you’ve told me to, I don’t want to anymore.”



Related Issues

- **Rat Paradise** – overpopulated colonies became stressed and ALL died well before physical limits were reached
- Calhoun anticipated that there was a window of time to apply these findings to develop human social sciences, and that the same patterns wouldn't occur in human societies until around the present time (2020; now), and not in the more extreme forms until around the time-frame of 2040. He thought the damage would have been done by then, that overpopulation would have led to the negative changes seen in rats before that time, on the order of when there were 7-8 billion people alive, so now.
- ***"Behavioral sink" is a term invented by ethologist John B. Calhoun to describe a collapse in behavior which can result from overcrowding.***
- **Humans & Bees** – humans are now, in cities, biologically complex societies like bees/ants
- **Emotional Contagion** – we are “infected” by social emotions that can control us
- **Epigenetic Trauma in Childhood Development** – stress gets hard wired
- **Stress & Ageing** – cells, bodies and societies age in similar ways
- **Our Toxic Culture** – evidence and causes and cures for social toxicity
- **Frontal Fatigue** - the unique pressures of modern life overwhelm the prefrontal cortex, making us susceptible to mental illness.



C. What can you do?

a Focus on **personal mental health** **and nurturing social connections can overcome SDS**

- The longer the erosion of the **social bonds** that knit us to society and give us a sense of purpose and meaning the more inevitable an authoritarian state or a collapse into anarchy. – Chris Hedges
- **Overpopulation Denial Syndrome:** Overpopulation may not be the root of all evil, but it is indeed at the root of many of the world's other miseries. Not being able to even talk intelligently about population control without a System 1 emotional charged accusation makes constructive solution impossible - Umair

Any activity that moves you from System 1 to System 2



- Accept SDS as a real threat to our ability to build a sustainable society
- All of us are infected by stress
- Understand that anxiety and addiction are actually rational responses to SDS
- Be compassionate
- Don't judge

Part II – Coping with & Counselling for Social Density Stress

- One Useful tool is motivational interviewing
- Motivating people towards seeing change not as a threat but an opportunity

Social Density Stress- and Mental Illness

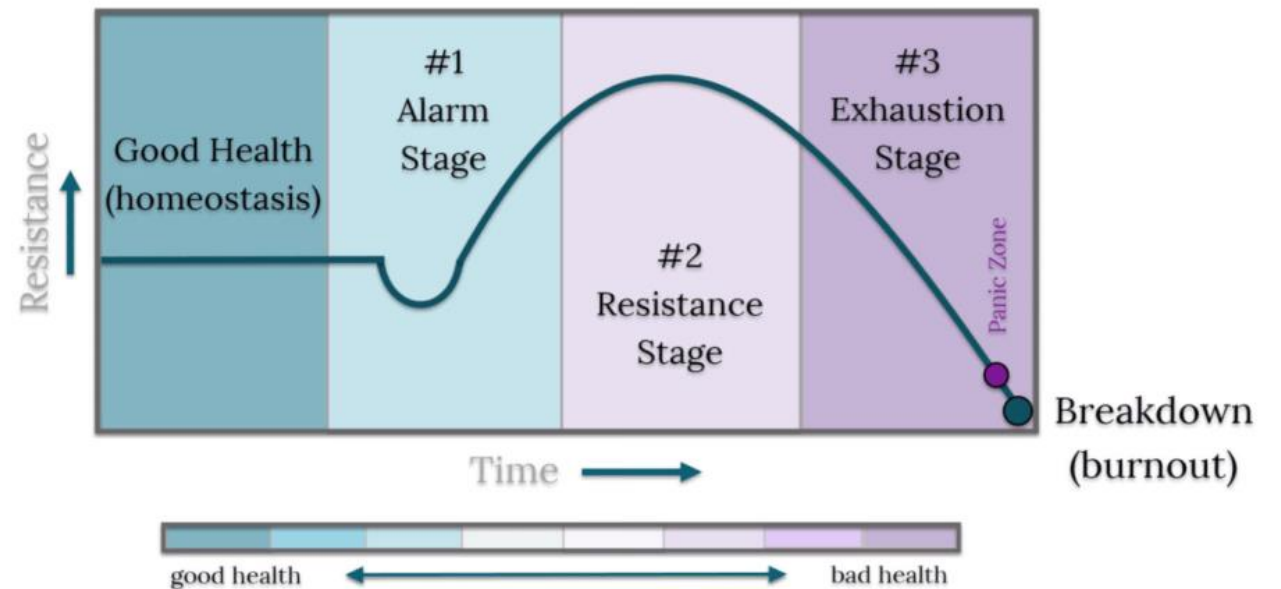
- Our chronically over-active stress response, due to population density stress, is quite likely responsible for our epidemics of anxiety and depression
- And other epidemic health problems suicide, alcoholism, and addiction

**1 in 3 Canadians
will be affected by
mental illness in
their lifetime.**

Statistics Canada, 2022

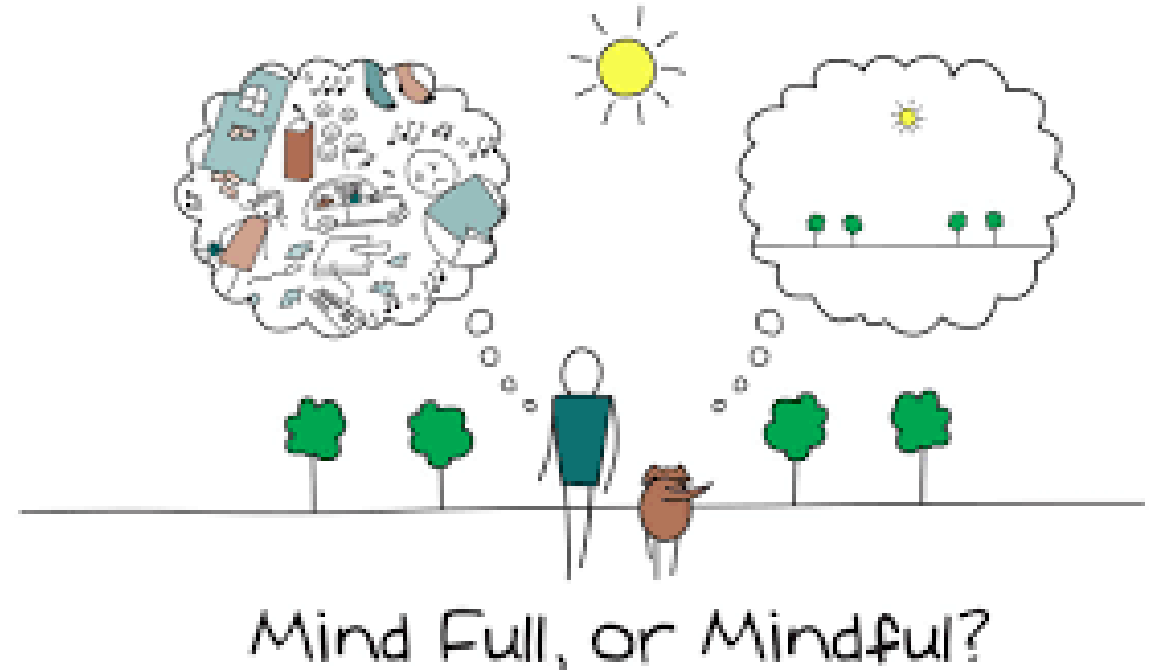
Hans Selye's General Adaptation Syndrome (GAS)

Hans Selye's General Adaptation Syndrome



Stress management for yourself and others

- Quiet the stress response (sympathetic) – activate the parasympathetic nervous system
- Find a quiet stressor free environment and take ten deep breathes – equal length in and out- concentrate on this task, being mindful - you can't worry and concentrate on breathing
- Protect our minds and bodies, avoid over stimulation, walk, massage, exercise, yoga Pilates, Tia chi, forest bathing, hiking, non addictive/competitive activities



Relaxation Techniques

Progressive Muscle Relaxation



Why the need for Progressive relaxation?

Because many of us have forgotten what relaxation feels like.

Build Resilience

- *Resilience* ability to handle stress when it arises, and to protect oneself against future stress.
- Research has shown that there are several qualities that contribute to resilience: social support, optimism, sense of humor, spirituality, self-esteem, and adaptability.
- These qualities can be fostered.

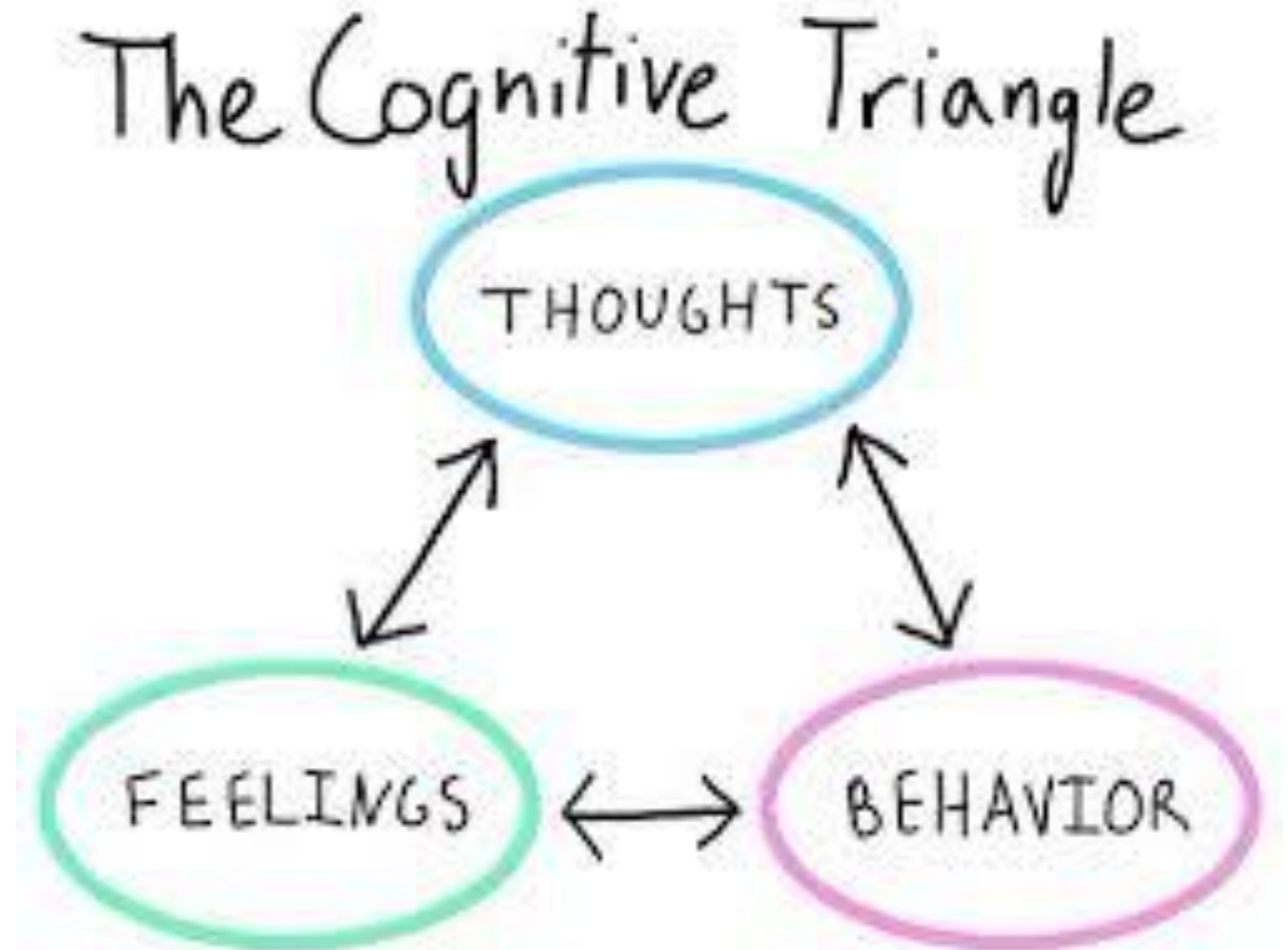




- When stress is at its worst, hobbies, relationships, and free time are neglected. As a result, stress worsens. This creates a cycle where self-care is neglected, and stress grows.

Cognitive Restructuring

- Stress is caused by our thoughts about a situation, not by the situation itself



Therapies for Chronic Stress Management



- Cognitive Behavioral Therapy (CBT)
- Acceptance and Commitment Therapy (ACT)
- Positive Psychology
- Mindfulness

A final note...

“The pessimist sees difficulty in every opportunity, The optimist sees opportunity in every difficulty”

Winston Churchill

May we all manage to find ways to address Social Density Stress and together find opportunities in every difficulty we face

Chi Miigwetch, Merci, Thank you



*PHENOMENA ASSOCIATED WITH POPULATION DENSITY**

BY JOHN J. CHRISTIAN

PENROSE RESEARCH LABORATORY, ZOOLOGICAL SOCIETY OF PHILADELPHIA, AND DEPARTMENT OF PATHOLOGY, UNIVERSITY OF PENNSYLVANIA

The mammals and their populations which are the topic of this discussion presumably have evolved adequate means of adapting to their environment and possess sufficient physiologic flexibility to meet daily and seasonal changes in their environment. They also must have developed mechanisms of population control which have prevented overutilization and destruction of their environment and therefore their own extinction. The growth of mammalian populations usually ceases short of this point; yet declines in mammalian populations are widely and loosely attributed to shortages of food. Critical studies generally have failed to associate these declines with exhaustion of the food supply other than in highly localized areas. Any dependable, extensively effective system of population control surely must be density dependent, directly or indirectly, and therefore would be integral to the population itself. Some years ago we proposed that population growth and decline were regulated by series of feed-back mechanisms, particularly involving the pituitary-adrenocortical and pituitary-gonadal systems, and that these in turn were activated by socio-psychological factors (intraspecific competition) within the population.^{13, 14} Present evidence indicates that interacting behavioral and endocrine mechanisms comprise at least an important part of such a system in the individuals in a population: a system responding to changes in the number of animals in such a way that population growth is self-limiting and self-regulating. This paper will summarize the evidence for such a mechanism, il-

While Lebanon's struggle is a regional tragedy, America's internal chaos could signal the death of an entire empire.

- *The United States is becoming like Lebanon and other Middle East countries in two respects. First, our political differences are becoming so deep that our two parties now resemble religious sects in a zero-sum contest for power. They call theirs 'Shiites and Sunnis and Maronites' or 'Israelis and Palestinians.'*
- *We call ours 'Democrats and Republicans,' but ours now behave just like rival tribes who believe they must rule or die. Second, as in the Middle East, so increasingly in America: Everything is now politics – even the climate, even energy, even face masks in a pandemic.”*
- <https://ottawacitizen.com/opinion/nasrallah-the-lebanonization-of-america-is-well-underway>

We know that they are lying, they know that they are lying, they even know that we know they are lying, we also know that they know we know they are lying too, they of course know that we certainly know they know we know they are lying too as well, but they are still lying. In our country, the lie has become not just moral category, but the pillar industry of this country.

Aleksandr Solzhenitsyn