



Overwhelm!  
Learned Helplessness!  
STRESS APATHY!



# Learned Helplessness In The Human Brain

How It Becomes **STRESS APATHY/OVERWHELM**

## LEARNED HELPLESSNESS

The Condition Of A Human Or Animal That **HAS LEARNED To Behave Helplessly, Thereafter Failing & Unable To Learn New Solutions** To Deal With Sudden, Unexpected Problems Even Though The Person Or Animal Has Clear and Available Options Which Could Be Used To Handle Those Very Problems: Either By Avoiding Unpleasant Events Or Gaining Positive Rewards. **Learned Helplessness Ironically, Produces The Inability To Learn.**

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## STRESS

Stress Is That Condition Of Humans And Animals, Defined Biologically As Follows: **"THE FACT OF AND/OR THE FEELING THAT THE DEMANDS BEING MADE OF YOU EXCEED YOUR RESOURCES TO MEET THEM, WHETHER VISCERAL, EMOTIONAL, COGNITIVE OR ALL THREE"**.

## STRESS APATHY/OVERWHELM

**That Condition** In Which, Although You Are Under Stress You Do Not Recognize It ... e.g., You Don't Take Accurate Notice Of Available **Resources** Or You Ignore **Demands**. Another Form: You Don't Calculate The Difference (Shortfalls Or Surpluses) Regarding **Resources** And/or **Demands**. Ironically, People In "Stress Apathy" Often Say, "They Have No Stress", Which Is False Because Everyone Does. It Is How The Human Genome Is Designed. **Stress Is Not "A Psychiatric Disorder From Which 'Normal' People Do Not Suffer"**. It Is Impossible To Be Alive And Not Experience It. PEOPLE WHO TELL THEMSELVES OR YOU THEY "HAVE NO STRESS" SUFFER FROM STRESS APATHY. It is a worse condition than simply being under Stress. It is what is sometimes described as **"being in a chronic state of Overwhelm"**.





## 1973 Event in Sweden

An Event occurred in the early 1970's, which included the puzzling, unexpected reactions of 4 bank employees who became victims of a Hostage situation. On August 23, 1973, it happened that three women and one man were taken Hostage in one of the largest banks in Sweden by two ex-convicts. Ultimately, the four Hostages were held for 6 days.

The Hostage-takers were thieves. They wanted money, not a forum in front of the media to voice political demands. From start to finish, the Hostage-takers threatened, (in conversations with Bank Executives and Law Enforcement, openly and **in the presence of all four Hostages**), to kill the Hostages one by one, if their money demands weren't met.

## Unexpected and Unexpected

A surprising element was that the four Hostages, during their capture, according to their accounts to authorities, claimed that their Captors acted toward them with what each of the four, one for one, reported as "small kindnesses".

As the siege unfolded and before it resolved, reporters both electronic (such as it was at the time) and print, then as they would now, flocked to the scene attempting to provide minute-by-minute coverage of the story.

After a relatively short time, it became clear, that ALL 4 OF THE HOSTAGES WERE STRONGLY RESISTING ALL OFFICIAL EFFORTS TO RESCUE THEM. RATHER THAN TRY TO ESCAPE, THEY SEEMED INSTEAD EAGER TO DEFEND THEIR CAPTORS. THIS CAUGHT THE ON-SCENE OBSERVERS BY SURPRISE.

The Hostages' unexpected behavior persisted, proven by the fact that several months after all four of them had been successfully and safely rescued by police, all four still, when interviewed, without hesitation expressed WARM FEELINGS FOR THE CAPTORS WHO HAD HELD THEM AND **LITERALLY THREATENED TO KILL THEM**. Incredibly, two of the three women eventually became engaged to their prior captors (by then tried, convicted and incarcerated), long after they were well out of danger.

## Precedent

Observers were perplexed. They couldn't explain the behavior of these Hostages. The Hostages weren't trying to cooperate. Their chances to resist were limited certainly, while in the hands of armed Captors. However, it was their after-rescue accounts of how they had conducted themselves, what they'd thought of their



Captors **despite the very literal threats** that occurred throughout their capture, that appeared not to make any sense.



Observers, began to speculate whether this apparent hypnotic-like control by these, in-no-way-sophisticated criminals could be just a single, freak incident. Neither of the Captors was a nuanced or cunning villain out of a Bond movie. They were bank robbers trying to maneuver for a big payday, who had never planned to draw the media attention which they elicited.

Some observers wondered whether they themselves were perhaps naïve to be so surprised, and further wondered whether similar incidents might not have been a common occurrence in previous Hostage situations. They started digging through media archives.

**What no one predicted was that such unexpected Hostage reaction was COMMON. NOT ONLY THAT, THE STUDY REVEALED IT WAS ACTUALLY MORE COMMON FOR HOSTAGES TO ACT JUST THIS WAY.**

Somehow, what the contemporary Conventional Wisdom of the European Media in 1973 lacked at the outset of the Stockholm incident, was that many of history's most stunning Hostage events as they eventually discovered, were characterized by this kind of "powerless (helpless)" Captor-Dominated Hostage Reaction!

The Research they could pull together quickly extended back over 30 years. It found similarities to the current 1973 incident in all of the following categories:

- Nazi Concentration Camp ethnic prisoner behavior
- Political prisoner reactions in Chinese Communist prisons

The available records extended to the tendency of ...

- Prostitutes submitting helplessly to their pimps
- Rape and incest victims "cooperating" in their own sexual abuse.
- Victims of domestic and child abuse defending and justifying as deserved their own suffered injuries

Similarities extended, to the behavior of

- Prisoners of war in general
- Countless victims of airplane, ship and other types of hijackings.





All of these past-30-years-worth-of instances of Inescapable Capture appeared to provoke Hostage/Captive attitudes and reaction very similar to those of the 4 Stockholm Hostages!

Hostage Submission and Helplessness in the face of Inescapable Capture, regularly happened, it was now clear, when most people would tend to expect, that any Hostage would of course want and work to be freed AT EVERY MOMENT and would eagerly welcome and aid any rescue effort, directly and/or indirectly!

**The research surprised everyone by revealing the fact that Hostages most of the time DIDN'T TRY TO HELP POTENTIAL RESCUERS AT ALL, despite what "everyone thought they knew!"**

During and after the Bank incident, there was no adequate explanation to help them understand why events were playing out with the Hostages as they were.

## Helplessness (As It Turns Out) Is Learned

Unknown to the on-scene researchers in Sweden was the earlier work of an American researcher, Dr. Martin Seligman. Eight years prior in 1965, Seligman had discovered peculiarities about animals in experiments concerning Stress, leading to a revelation and understanding of what came to be called "Learned Helplessness".

The experimental setup was as follows: an animal would be placed in a cage constrained by a harness within the cage. The cage would also be locked and offer no means of escape. A highly unpleasant sensory stimulus would be introduced so that in either case, the animal would want to escape but couldn't. Seligman discovered something noteworthy in what happened in a second trial, completed after these initial conditions.

His research was groundbreaking. **The animals who, during a first trial had experienced** the unpleasant stimulus while in-harness within the closed cage (referred to experimentally, as "Exposure To **An Inescapable Stressor**") WERE STRONGLY AFFECTED BY THE EXPERIENCE. Here's how: during a second, following trial these previously-constrained-as-above animals **could never learn (how) to escape** and **didn't even try** to escape, despite the fact that **ESCAPE WAS NOW EASY**, both because each animal in contrast to the first trial was **NOT** NOW in a harness, plus the very same cage, now had a visible, easily accessible opening out of the cage.

Therefore, if first exposed to INESCAPABLE STRESS, this first group of animals thereafter would not even try to escape no matter how easy it was made for them to do so.

Seligman now took the next step in his experiment. In this next part, a second, separate group of animals was subjected to the same unpleasant stimuli as the first group. The difference was, these animals were neither in a harness



nor constrained in a closed cage when first exposed to the stressful, unpleasant stimuli. Their natural instincts and the lack of constraint drove them right out of the cage the minute the sensory stimuli became too uncomfortable for them.



Seligman went on to discover that this SECOND SET of animals who during their first exposure, **WERE allowed to escape** the unpleasant stimuli by running out of the cage ...reacted distinctly differently than the first group, on subsequent trials: THEY PROVED TO BE CAPABLE OF LEARNING new ways to stop the unpleasant stimuli. Not only that, the second group could be taught to navigate ever more difficult and complex escape scenarios: e.g., they could be taught to press a lever(s) or jump out a different cage opening before they could get away! The second group could be easily trained to take any number of actions [please remember these were animals (and not primates), nor people], to stop or escape the stimuli, even when these required involved and complex actions.

Conclusion: **without an initial** experience constrained by **an Inescapable Stressor** (in this case, harness + stimulus), animals thereafter could and would learn new ways later, to escape or stop the stimulus and not only that, THEY WOULD CONTINUE BY TRIAL AND ERROR UNTIL SUCCESSFUL WHEN ESCAPE, THOUGH AVAILABLE BECAME MORE CHALLENGING TO BRING ABOUT. In other words, this second group of animals showed amazing learning versatility later, if their first experience around the unpleasant stimuli did **not** include preventing them from getting away (**Inescapable Stress**).

The 1973 observers, from law enforcement, from the bank, and from more senior government agencies didn't have access to Seligman's findings in America. Therefore, absent any knowledge of the Seligman research, the Bank Hostage incident observers in Stockholm couldn't do much more than give a name to the phenomenon before them, (which they couldn't explain). That name became famous: **The Stockholm Syndrome**.

## 21<sup>st</sup> Century Brain Science: **Mirror Neurons**

As of 1973, a separate body of explanatory scientific data, which the Stockholm onlookers would undoubtedly have appreciated, wasn't available BECAUSE IT SIMPLY HADN'T BEEN DISCOVERED YET. This second body of research results, this time from Neuroscience, did not take place until the early part of the 21<sup>st</sup> century, over 28 years later.

This later 21<sup>st</sup> Century Research concerned the discovery of a type of Brain Cell or Neuron that came to be called collectively **Mirror Neurons**. In the early 00's, these Specialized Brain Cells were discovered to exist in only three or four distinct locations in the Human Brain (and, outside of Humans, in the Brains of just a handful of primates, excluding surprisingly, many with strong genetic similarities to Humans). Indicating that these Mirror Neurons were something **very recent in Human Evolution**.





They are relevant to the discussion of strange Hostage Behavior, Human Submission, Learned Helplessness, Stress Apathy, etc. in or out of a literal hostage situation. Here's why: **"Mirror Neurons" are THE BRAIN CELLS BY AND THROUGH WHICH WE LEARN TO DO THINGS, to act or take action.**

Ever learn to ride a bicycle? Your Mirror Neurons were pivotal to that process. Ever learn to throw a baseball or a football? Or swing a tennis racket or a golf club? Your Mirror Neurons were pivotal to every one of those acquired "doing" skills, too.

You learned to stick your tongue out soon after you were born because mom and dad playfully stuck theirs out at you and smiled — you and other infants could and did copy those movements and reactions and hundreds of others, THANKS TO MIRROR NEURONS.

**But these Mirror Neurons do not operate just in infancy or childhood. They are at work every time any Human Being LEARNS TO DO anything.**

## Mirror Neurons are Always "On"!

One important fact about Mirror Neurons is that **they are in the "On/Record" position all the time (something not true of all Brain cells).**

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Mirror Neurons cause you to **copy or mimic** whomever you are in the vicinity of; not only their **behavior** but also the **intention(s)** driving the behavior. When you are not under Stress, your Brain has discretion not only in what you copy but also how far you take that mimicry. Mirror Neurons are evolved, to be **"On"** at all times. We learn TO DO from what we see, smell, taste, touch and hear others doing - so their being **"On"** is highly advantageous to survival.

That said, there is one oft-occurring circumstance in the course of daily life, during which their "Always-On" status however, is **disadvantageous**. That is when you are under Stress, especially when prolonged or recurring.

## Weakness ...

This Always-On arrangement of Mirror Neurons produces a weakness (under Stress).

Having such powerful Brain cells always recording both the goal-oriented behavior and intentions around us, disposes us to also perform, copy negative and self-destructive actions and intentions toward us.



Post-Stress, our Mirror Neurons **replay the actions and intentions of the source of our Stress earlier**. The point: Under Stress, the Brain **copies**

**everything** going around us automatically and later re-creates these situations in memory, corrupting accurate perception of later, current environments!



When Mirror Neurons copy behavior and intentions, they hold them in memory so that when we ourselves are about to take related action thereafter, these Brain cells “replay the actions and intentions of others” in our Brains first, **acting as a preview, model & guide for our own actions**. They also **copy our copying** of others’ actions.

The conscious Brain evolved to be a major player in this process. Mirror Neurons are how we learn to DO things. But UNDER STRESS, that learning happens automatically below the level of consciousness, without any censorship whatsoever! For there to be censorship, and another way of saying for there to be willpower, the conscious portion of the Brain has to be operative. But Stress cripples the conscious portion of the Brain. All this might seem complicated, but actually, it is very understandable. Here’s how it works...

When you or I are in the line of fire Stress-wise, i.e., where Stress-producing actions and intentions are aimed at us, **our own Mirror Neurons COPY AND STORE the actions and intentions of: A) the Stressor; B) those around us also affected by the Stressor; C) ourselves in reaction to the Stress**. All of that is stored and in a jumbled arrangement IN A NON-CONSCIOUS AREA OF THE BRAIN, known as the Limbic Brain. Remembering that Stress is biologically defined as an imbalance in favor of Demands over Resources, it is now possible to see just how negatively contagious stored negative actions and intentions relevant to **A-C** above are: because under Stress we internalize them and later replay them over and over, strengthening them every time they are repeated!

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Here are some real-world examples: **1] If you have an ABUSIVE SPOUSE, you will have a neural predisposition to mirror his/her behavior and intentions BECAUSE abuse puts you under Stress. 2] These very Stockholm Bank Hostages (unconsciously) mirrored their THREATENING CAPTORS in 1973 and "worked" to remain captured. 3] The Mirror Neurons of GERMAN CITIZENS under the overwhelmingly Stressful rule of 1930s’ and 40’s Nazi Germany, were pressured relentlessly to act or at least tacitly, “never actively oppose” the behavior of Hitler and his Third Reich thugs.**

## Strength...

All of that said, what’s fortunate about Mirror Neurons, is that the conscious portion of the Human Brain **when not incapacitated by Stress**, acts as a strong and effective check on the automatic, virtually slavish mimicry, which is characteristic of Mirror Neurons during and after an individual is UNDER STRESS.



Therefore, IF YOU ARE AROUND SOMEONE, SOMETHING OR SOMEPLACE THAT CAUSES YOU STRESS, then like the Bank Hostages and the many Hostage-victim types described above, you will feel strong pressure



to mimic AUTOMATICALLY, the very same anti-survival/negative/harsh treatment levelled at you, plus your own & others' reaction to it, ALL OF which then influence YOUR BEHAVIOR ON AN UNCONSCIOUS LEVEL. These translate to INCREASINGLY SELF-DEFEATING AND SELF-DESTRUCTIVE ACTIONS & ATTITUDES in later similar situations.

This is automatic. This is genetic. This is unconscious. And except for the research done in the early part of the 21<sup>st</sup> century re Mirror Neurons, of course unknown both to the 1973 Stockholm observers and earlier to Professor Seligman in 1965, we would not know **why people get into repetitive negative patterns of behavior**, as observably they do.

THOUSANDS OF REPEATED NEUROSCIENCE EXPERIMENTS PROVE STRESS ACUTELY REDUCES CONSCIOUS BRAIN FUNCTION AS MUCH AS 80%! But here's the upside: recovered Human Brain function counters automatic Mirror Neuron Mimicry and Replay, allowing an individual to consciously determine what he does and does not mimic.

This discovery is worth stating again: TO THE DEGREE AN INDIVIDUAL CAN EITHER AVOID OR REVERSE STRESS, (THEREBY KEEPING HIS/HER CONSCIOUS BRAIN UNDIMINISHED), CONSCIOUS BRAIN FUNCTION IS POWERFUL ENOUGH TO OVERRIDE AUTOMATIC MIRROR NEURON MIMICRY OF A STRESSOR'S BEHAVIOR AND INTENTIONS, WHETHER THE STRESSOR IS A PERSON, PLACE OR SITUATION.

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This is what the 1973 Stockholm Hostages could not do: **THEY COULDN'T CONTROL THEIR UNCONSCIOUS RECORDING AND REPLAYING OF THEIR CAPTORS' BEHAVIOR AND INTENTIONS.** They didn't know of the phenomenon or have the skill.

**Because the Stockholm Hostages were at the inception of the Bank incident, (not unlike Seligman's experimental animals) terrified by a Stressful Environment FROM WHICH THEY COULD NOT ESCAPE, and lacking knowledge of the existence or the function of Mirror Neurons ... they were driven unconsciously to mimic and (therefore aid) their Captors in every way.**

Reminder: Mirror Neurons ARE **NOT** CONSCIOUS BRAIN CELLS!



## The Mirror-Neuron-Overwhelmed- “Hostage” Effect-Stockholm Syndrome



The 1973 Stockholm Hostage on-scene researchers, did manage to analyze enough historical data to conclude correctly that virtually anyone can fall prey to the Stockholm Syndrome which occurs, they concluded, whenever All 4 the following Conditions, are simultaneously achieved and for as long as they are thereafter simultaneously maintained. We'll add to their findings the relevant Brain Science labels. The Stockholm Syndrome commences and continues powerfully therefore, anytime ...

1. The Mirror-Neuron-Overwhelmed “Hostage” is terrified unconsciously by a serious threat to survival and is emotionally engulfed by the belief that his/her Captor(s)/Stressor(s) are both able and willing to act to harm them, physically or emotionally or even economically ... **This is always an element of the Effect.**
2. The Mirror-Neuron-Overwhelmed “Hostage” during and after the serious threat to survival persists, perceives what he/she delusionally experiences as small kindnesses from his/her Captor(s)/Stressor(s) ... **This is always an element of the Effect.**
3. The Mirror-Neuron-Overwhelmed “Hostage” will be denied one way or another by his Captor(s)/Stressor(s) a complete picture of all the facts surrounding his “Capture” and with that, is thereby denied a clear understanding of the situation he/she is in, except as dictated and orchestrated by the Captor(s)/Stressor(s). **This Delusional & Corrupted “Situational Awareness” is always an element of The Effect.**
4. Ironically, the Mirror-Neuron-Overwhelmed “Hostage” during capture, never considers as real, the possibility of being other than “captured”. This acute sense of entrapment, which later becomes chronic, appears, delusionally from the “Hostage” perspective during and after the event, to be a permanent state from which there is no expectation (or need) of escape. **This last element marks the most virulent aspect of the entire Effect.**

Each of these four components of The Mirror-Neuron-Overwhelmed “Hostage” Effect is entirely driven by activity below the level of consciousness in the Limbic Brain. And recalling the definition given at the start above, each “Hostage” eventually slips into the condition of Stress Apathy or Overwhelm Victim.





**IN EVERY INSTANCE OF HUMAN FAILURE TO DISCOVER AND PURSUE AVAILABLE "BEST OPTIONS" viz.,**

... Anytime you have come across a Human Being(s), including yourself unable to adapt to Uncertain, Threatening and/or Dangerous circumstances, acting as if "frozen" in attitudes and behavior which repeat the same or nearly the same bad outcomes, which in the past have resulted in lack of success or unhappiness ... you are looking at a condition that began as an initial, terrifying, "Hostage" Experience which produced the condition of **"Learned Helplessness"!**

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## Learned Helplessness ... Global Context

Finally to give this all a real-world, ripped-from-the-headlines perspective, demonstrating that Mirror Neurons (under Stress) have, hundreds of billions of times throughout Human history, **negatively influenced individual or family or company or marketplace or client base, even world events**, consider this next, more than representative example ...

... On September 11, 2001, the U.S. and the World viewed with unprecedented as of then, shock and horror an exact instance (in form, if not content) of the 1973 Stockholm Hostage Situation times four, or perhaps more accurately times three and a half.

That morning at the outset, 4 planes were successfully hijacked, (passengers and crew taken Hostage). Two of the aircraft were eventually aimed at and crashed into the World Trade Center in NYC, immediately killing 2800+ who were unable to escape, barely sparing between 11,000 and 16,000 who did. The two planes leveled both Towers, which in crumbling, discharged massive lethal black clouds of damaging and choking debris across lower Manhattan, eventually killing many others, even while on the same morning, a third plane crashed into the Pentagon demolishing a portion of its exterior taking yet more lives.

The Bin Laden Terrorists took over 4 in-flight, commercial airliners in broad daylight using nothing more sophisticated than box-cutters and simple knives. How? Counting on what you now understand to be The Mirror-Neuron-Overwhelmed-Hostage-Effect as they did, (Bin Laden was nothing if not a well-read man), and the presence of a relatively small number of passengers on each plane, they **predicted correctly that their Hostages would freeze long enough** for them to accomplish their respective horrific missions.

**Except** that on the fourth flight, United 93, one passenger on a cell phone made contact with the ground, eventually breaking the hold of Stockholm Syndrome Condition 3 above. The Terrorists' propaganda orchestration was breached when Todd Beamer, discovered that 3 other planes had been hijacked that day and been **crashed deliberately** unlike virtually any known hijacking prior to that time. Beamer now had "the big picture" that neither Bin Laden nor his Captors on United 93 had ever wanted him to have.

Abruptly, The Mirror-Neuron-Overwhelmed-Hostage-Effect was shattered when Beamer informed other passengers about the other three planes and together they went into action, forcing United 93 into a Pennsylvania field, far from its intended target.

Had Beamer and his courageous fellow passengers been trained in The Mirror-Neuron-Overwhelmed Hostage Effect detailed above, prior to boarding, they might have recognized their dire circumstances and acted effectively earlier during the Flight.

And if they had, they might even have saved their own lives in addition to their courageously saving, one of the two Terrorist Target Options set that day for United 93 in Washington, DC: The White House or The U.S. Capitol Building.

