My Claim for Damages

My initial claim for brain damage due to Morse code to include memory loss was denied. In doing so, they concluded, "The medical evidence of record fails to show this disability has been clinically diagnosed." On April 22, 2020, my appeal was also denied. They concluded, "The previous denial of service connection for brain damage due to Morse code to include memory loss is confirmed and continued."

Please be advised, the following is based on my logical interpretation of the NSA documents and the specific injuries. Some may need to be more fully developed by a professional taking a closer look.

Document B
HIGH-SPEED MORSE CODE EXPLAINED IN THREE PARTS

After high school, I added two years to my enlistment to join the Army Security Agency which was the Army's signals intelligence branch and under operational control of the National Security Agency. At the time, lightning-fast Morse code was the standard of communication between a country's military and their outposts. The washout rate for this MOS was one of the highest (see top of page 4) because, in order to pass the

training, the brain had to be rewired. The fact that there was a Morse code exam on the Army Classification of Tests is very telling.

I've included three documents to help identify how high-speed Morse code affected my mind and body. The papers are; 'How to Make a Morse Op' ((DOCID 4019712) (redacted & declassified)), 'The Use of Compressed Speech in Selecting Morse Code Operators' ((DOCID 3928820) (redacted and unclassified)) and 'Effects of Communication Load, Affect, and Anxiety on the Performance of Information Processing Tasks' (Supporting Document 1).

Morse code was measured by Groups Per Minute (GPM) which contained five characters per group.

MORSE CODE AS A LANGUAGE

Quoting from DOCID: 3928820-

≫ Page 45 (1st paragraph), "The problem of selecting people for Morse code training has perplexed researchers for nearly a century."

≫ Page 45 (2nd paragraph), "The ability to learn International Morse Code (IMC) is apparently a special aptitude unrelated to other aptitudes or skills (Goffard, 1960). Goffard said: For some men code skill seems to be impossible to learn, while for others it presents no problem. Although methods of selecting men with a high aptitude for learning IMC have been the object of research for a number of years, they are still only moderately satisfactory. With the least apt men eliminated by the

Army Radio Code test of the Army Classification Battery, the range of aptitude for code among men in courses which include IMC is still wide open."

≫ Page 45 (3rd paragraph), "Ability in telegraphy is probably a special ability… The fact that years of schooling does not agree with ability to learn telegraphy indicates that this is a special ability."

≫ Page 45 (4th paragraph), "Low correlations have repeatedly been found between Morse code achievement and intelligence, educational level, mechanical ability, and knowledge of subject matter."

≫ Page 45 (4th paragraph), "He found that attempts to link general ability, achievement, and aptitude tests as well as nontest factors such as age and sex to code ability were unfruitful. Specific aptitude tests included auditory factor test and clerical, musical, and mechanical aptitude tests as well as many others."

≫ Page 45 (5th paragraph), "The present attrition rate among Morse trainees is high."

≫ Page 46 (4th paragraph), "Morse code can be thought of as the first language to undergo rate compression."

Quoting from DOCID: 4019712-

≫ Page 5 (3rd paragraph), "The usual progression for a Morse trainee is that after about 110 hours the average

student can copy eight GPM. From this level, the student will progress rapidly, usually attaining 13 to 15 GPM after an additional sixty hours of work. At this point a plateau is reached, after which it will take another 150 hours of copy to progress to 18GPM. By the term "plateau" we mean the level at which the student can copy at his highest speed accurately and with relatively little trouble. The next higher speed, on the other hand, seems to present the student with an inordinate amount of trouble."

≫ Page 5 (4th paragraph), "This plateau is apparently the transition point at which Morse code copying becomes a psycho-motor response rather than a cognitive translation of the sounds to symbols. After the transition is made, code speed acquisition again rises steeply with a gradual flattening of the curve as the natural limits of the student' abilities are approached"

≫ Page 5 (6th paragraph), "Morse learning is a very individual thing with students progressing at different rates, reaching their plateaus at different code speeds, spending different amounts of time on their plateaus and so forth."

COMPRESSED SPEECH

Quoting from DOCID: 3928820-

≫ Page 46 (3rd paragraph), "Time-compressed speech is defined (Foulke and Sticht, 1969) as speech which has been reproduced in less than the original production time."

≫ Page 46 (4th paragraph), "Large individual differences with regard to the ability to comprehend compressed speech have been observed in literature but have virtually been ignored in previous research. This is understandable since most of the previous research has emphasized the use of compressed speech as a communications or educational medium in which individual differences were interpreted as error variance. The ability to comprehend compressed speech does not seem to improve significantly with listening exposure to compressed voice tapes. Persons receiving training designed to improve comprehension of compressed speech have frequently been found to show little or no significant differences over neophite listeners (e.g., Foulke and Sticht, 1969). Morse code can be thought of as the first language to undergo rate compression. It is unique when compared to compressed speech in that up to a rate of 20 GPM (CODEZ) the integrity of the Morse code characters themselves does not change. That is, in compressed speech, small bits of words are usually randomly discarded in order to increase the word rate, thereby decreasing the intelligibility of the words. In speeding Morse code rate up to the 20 GPM, the character sound is not changed, only the spacing between characters and groups is decreased to increase the rate. Therefore, the ability to comprehend time-compressed speech can be interpreted as "aptitude" related to the speed at which one can accurately process auditory stimuli."

≫ Page 52 (3rd paragraph), "Student perceived intelligibility of compressed speech was a function of speed. However, this technique of measuring the effect of compression was not useful for discriminating between successful and unsuccessful trainees."

≫ Page 52 (5th paragraph), "Further research using the ability to comprehend compressed speech as an aptitude may help in selecting students for other jobs which may require auditory information processing, i.e., foreign language training. Individuals who are capable of processing auditory stimuli more rapidly (or have larger auditory channel capacity) may be more apt in carrying out the cognitive functions of "translating" the second language back to their first while auditory input continues."

≫ Page 52, At the end of the document, an indiscernible number of paragraphs, which are the final conclusions, were redacted. It makes me wonder why. This paper was unclassified and approved for release by the NSA with a transparency case#63852. So why hide the conclusions? I would love to know what they are, but the FOIA request would take several years.

Quoting from DOCID: 4019712-

≫ Page 6 (1st paragraph), "One feature of Morse is that accurate copy is much easier if (and when) the student learns to stay behind the character being sent. Three to five characters behind is what the average high-speed operator manages, but

accuracy is nearly impossible if the operator is working right on top of the character being sent."

EFFECTS OF COMMUNICATION LOAD, AFFECT AND ANXIETY ON THE PERFORMANCE OF INFORMATION TASKS

Quoting Supporting Document 1-

≫ Page 74 (1st paragraph), "Discrepant claims have been advanced regarding the impact of communication load on information processing. Recent research and theory suggest an increase in speed results in decreased response accuracy during comprehensive listening. However, despite indicated relationships between cognitive and affective learning, few investigators have explored the impact of communication load on affective responses. In the present study, the communication load on affect, state anxiety, and several types of information processing performance is demonstrated. Moreover, a significant relationship was found between task-directed affect and three modes of processing. Practical and theoretical implications of these findings are discussed."

≫ Page 74 (2nd paragraph), "Plato contended that all learning possesses an emotional base."

≫ Page 75 (2nd paragraph), "The present study is to explore the impact of increased levels of communication load on both judgments of affect and cognitive learning for a variety of information processing tasks."

≫ Page 75 (3rd paragraph), "Since the development of mechanical and electronic methods of increasing speech rate without altering pitch (i.e. time compression), the view that humans can process information at a higher than normal rates without suffering little or no comprehension loss has been promulgated. However, many of the studies investigating the relationship between speed and comprehension utilize dependent measures of comprehension developed for the specific application involved, leading to a lack of standardization in accessing comprehension…"

≫ Page 75 (4th paragraph), "For example, researchers suggest that information is most effectively learned when people have time to think about the meaning of that information and assimilate it with known facts (Guenter, 1998; Koriat & Melkman, 1987). Faster presentation of the information forces learner to rely more on rote memorization and less on assimilation."

≫ Page 75 (5th paragraph), "Because long-term memory is semantically organized, loss of processing time retards the ability to create semantic links to prior knowledge (Goss, 1995). Any reduction in time available for the processing of stimuli, then, should lead to some loss of comprehension."

≫ Page 76 (2nd paragraph), "In summary, it is generally understood that there is a tradeoff between presentation speed and accuracy in information processing. However, it is not known

whether all information processing tasks are equally affected by this tradeoff."

≫ Page 76 (4th paragraph), "Another reason to suspect that communication load may be negatively correlated with levels of affect is the potential impact of state anxiety. The following analysis argues that the increased load associated with more complex processing tasks produces negative arousal (anxiety), which is subsequently interpreted as dislike or negative affect."

≫ Page 76 (5th paragraph), "Sanbonmastsu and Kardes (1988) suggest that affective arousal differentially effects information processing and, because it influences processing efficiency, has the most apparent effect on subjects executing complex tasks. Moreover, according to Revelle (1989) and Benzoly (1985), increased communication load is often accompanied by a disruption of memory processes required for comprehension. This disruption and the subsequent task of memory resource allocation produce specific affective responses to the material being processed."

≫ Page 76 (6th paragraph), If, as Sanbonmatsu and Kardes suggest, the completion of more complex tasks produces greater arousal, then subjects can label such arousal as dislike or negative affect. Schacter (1966) speaks about arousal that produces "evaluative needs", that is to say, a special pressure to understand and label bodily feelings. Specifically, high levels of communication load may produce increased anxiety that is labeled as negative affect."

≫ Page 77 (1st paragraph), "Katayama and Howard (1994) also argue that the ensuing amplification of attentive processing of nontarget code further impairs cognitive performance by overwhelming the mind with less relevant information. This impeding effect is called affective impairment."

≫ Page 77 (2nd paragraph), "High levels of time compression may represent an impoverished condition with respect to attention to and perception of target stimuli, leading to affective impairment. In other words, listeners may be more easily distracted by non-essential message features (nontarget code) such as vocal mannerisms or sound quality when processing at high levels of communication load (impoverished condition) and may not become as interested in the message (loss of affect)."

≫ Page 78 (1st paragraph), "Kentucky Comprehensive Listening Test (KCLT) has been established as a valid indicator of several distinct types of listening (Bostrom & Waldhart, 1980 and 1988). While recent questions have emerged regarding the KCLT's ability to distinguish outward manifestations of listening behaviors such as gaze, nod, and backchannels (Thomas & Levine 1994 and 1996), it remains a valid indicator of the cognitive process associated with effective listening (Balstrom, 1996; Balstrom and Waldhart 1980). Finally, while other common instruments are based upon task and context, the KCLT is rooted

in differences in information processing functions (e.g., long- vs. short-term memory, processing of verbal vs. nonverbal stimuli)."

≫ Page 79 (1st paragraph), "The first research question, addressed the manner in which the variations in communication load impacts levels of affect toward the task."

≫ Page 79 (1st paragraph), "Significant variation in affect between the four time compression levels when listening to the selection of poetry $F(3.110) = 13.68$, $p < .0001$, was found as a result of the first analysis. The means indicate a clear downward trend in affect score reflecting increased level of communication load, ranging from a high of 17.53 in the normal rate group to a low of 11.2 in the group listening at the 60% compression level."

≫ Page 79 (4th paragraph), "The second research question was focused on the impact of communication load on state anxiety level for four listening tasks. For the poetry selection, significant differences in anxiety across compression levels were found…"

≫ Page 79 (5th paragraph), "For short-term memory, anxiety level was not affected by compression level, $F(3,110) = 2.5$, ns. For interpretive listening, significant differences in variance were found…"

≫ Page 80 (2nd paragraph), "Scheffé tests detected significant differences between anxiety levels in the normal- and

low-compression groups and anxiety levels in the moderate- and high-compression groups."

≫ Page 80 (3rd paragraph), "The third research question addressed the relationship between affective response toward the listening task and cognitive performance. Correlations were calculated to examine the relationships among listening performance, affect, and anxiety for each type of listening investigated. Significant relationships were found between affect scores and short-term listening, interpretive listening and comprehensive listening scores."

≫ Page 80 (4th paragraph), "Significant relationships also emerged between anxiety and interpretive listening performance, but not for anxiety and performance on the short-term or the comprehensive listening measures"

≫ Page 80 (5th paragraph), "The final, summary question was tested by entering affect scores and communication load into a series of three stepwise regression analyses with listening performance scores on short-term, interpretive and comprehensive listening serving as the dependent variables."

≫ Page 80 (6th paragraph), "However, communication load and affect combined to predict significant unique variance in listening performance for each of the remaining two types of listening. For short-term listening, communication load proved the best predictor and affect contributed a small, though

significant R2 addition (page 77 RQ2- How will variations in communication load impact anxiety levels associated with differing types of listening?)."

≫ Page 80 (7th paragraph), "The first and most obvious conclusion of the present research is that increased levels of communication load significantly attenuate listener affect. As should be expected, variance accounted for was greater for those types of listening with significant affective and relational components: interpretive listening (.385) and the selection of poetry (.272). This finding is important because it highlights an additional concern regarding the presentation of information at high rates of speed. The argument is often made that listening at faster rates improves learning efficiency (facts per unit of time) even if there is a comprehensive loss compared to normal listening rates. If such efficiencies are achieved at the cost of irritating listeners, particularly given the relationship between affective learning and continuing motivation… then the increases in load may not prove efficacious."

≫ Page 81 (2nd paragraph), "The results of the present study also indicate that listeners experience significant levels of anxiety for those listening tasks which involve understanding normal speech. Conversely, higher anxiety levels were not indicated for the short-term listening tasks which required listening to series of numbers and letters. More than the difficulty level of the task; increased anxiety levels may be expected under heavy load conditions, as listeners worry about

missing the main points of the message. Another explanation is that listeners develop expectations related to common listening experience that are violated when load conditions are high. These expectations may not exist for less typical tasks."

≫ Page 81 (3rd paragraph), "Higher levels of communication load were associated with lower levels of task performance. While this finding is consistent with related research findings, the intervening role of affect has received little attention. In the present study, significant correlations were found between affect toward the listening task and listening performance for each type of listening. Furthermore, affect and communication load combined in predicting performance levels for short-term and interpretive listening; however, affect fails to contribute unique variance in predicting comprehensive listening performance. In short, for comprehensive listening, communication load singularizes the predictive model."

≫ Page 81 (4th paragraph), "This finding is consistent with the theoretical position that comprehensive listening differs in kind from other types (King & Behnke, 1989) because it alone relies on long-, rather than short-term memory processes. For comprehensive listening, listeners may encounter a fire-wall effect where limited listening capacity overrides the possible additional contribution of motivation or anxiety, at least at higher levels of communication load."

≫ Page 81 (5th paragraph), "Theoretical models discussed earlier are informative in this regard. For example, both the accumulator and fast guess models support the notion that changes occur in information processing styles at higher load levels. Because forgetting is not a problem in activities which do not utilize long-term memory, the changes in information processing style that imply a less prominent role for affect may only occur for high load levels of comprehensive listening (e.g., where guessing strategies are likely to occur)."

≫ Page 81 (7th paragraph), "While it is generally accepted that communication load is a function of information divided by time, future research should examine the possible contribution of time on task, or test length, to communication load. As listening responsibilities accumulate, a cognitive backlog may occur that contributes to the deterioration of information processing capacity (Beatty 1981). In addition, future studies may find it useful to examine additional positive and negative consequences of varying communication load. For example, processing breakdown may be evident in linguistic, semantic, and strategic aspects of communication, not just in memory processes as evidenced through test performance."

Document C

LONG-TERM MEMORY DAMAGE

After reviewing the three documents and following all threads of research to their logical conclusions, Long-Term Memory (LTM) was the first region of the brain damaged and was the direct result of learning and copying high-speed Morse code. Though I'll be quoting from these papers, please keep in mind that Supporting Document one is a research paper where most, if not all, of the words being used are already recorded and assigned a value in LTM. Morse code is a series of random clicks which were foreign to my nearly developed brain; I began training at age nineteen.

The argument for LTM damage can be found in the following quotes:

From Supporting Document 1:

≫ Page 74 (1st paragraph), "However, despite indicated relationships between cognitive and affective learning, few investigators have explored the impact of communication load on affective responses. In the present study, the impact of communication load on affect, state anxiety, and several types of information processing performance is demonstrated."

≫ Page 75 (2nd paragraph), "The present study is designed to explore the impact of increased levels of communication load on both judgments of affect and cognitive learning for a variety of information processing tasks."

-Cognitive learning is the mental process of acquiring knowledge and understanding through experiences, the senses,

thought or by being taught. Cognitive performance is the way in which a person learns and performs. The three types are 'task difficulty', 'neglecting practice' (exercise the brain or it deteriorates) and 'cognitive load'.

-Affective learning focuses on the learner's interest, emotions, perceptions and degree of accepting or denying instructional content. It's one of the three domains; affective (emotional), cognitive (thinking) and psycho-motor (physical).

-Affective response is an emotional response to a situation.

-On Page 74 (first paragraph), the sentence beginning with "In the present study" confirms that there was a direct impact of communication load on affect and state anxiety because of compressed speech. Since it impedes several types of information processing performances, compressed speech negatively affects LTM.

≫ Page 77 (2nd paragraph), "High levels of time compression may represent an impoverished condition with respect to attention to and perception of target stimuli, leading to affective impairment."

-Affective impairment is a mood disorder with the main symptoms being obsessive thought and difficulty sleeping (two of my symptoms). During a typical shift in Germany, I averaged around six hours a day (five days a week) copying high-speed Morse code messages. I would call that high levels of time compression over a period of years.

≫ Page 74 (2nd paragraph), "Plato contended that all learning possesses an emotional base."

-The Amygdala is the center for emotionally charged memories and negative thoughts. It sits beside the Hippocampus which serves LTM; both are found in the Limbic System. A neuronal circuit connecting the Amygdala and Hippocampus plays a critical role in associating emotion with memory.

-It's true that emotion plays a role during encoding and remembering information in LTM. It's stated that pleasant emotions are more likely to be recorded and then easily recovered. While trying to pass the plateau of 13-15 GPM, memories of the piercing pain in my head and lower intestines are seared into my memory banks and, unfortunately, too easily remembered.

From DOCID: 4019712

≫ Page 5 (3rd paragraph), "From this level, the student will progress rapidly, usually attaining 13-to-15 GPM after an additional sixty hours of work. At this point a plateau is reached, after which it will take another 150 hours of copy to progress to 18 GPM (and pass the training). By the term "plateau", we mean the level at which the student can copy at his highest speed accurately and with relatively little trouble. The next higher speed, on the other hand, seems to present the student with an inordinate amount of trouble."

≫ Page 5 (4th paragraph), "This plateau is apparently the transition point at which Morse code copying becomes a psycho-motor response rather than a cognitive translation of sound to symbols."

-Psycho-motor is the relationship between the psyche and muscle movement in an organic body. It occurs when a neural impulse is sent from the brain to activate the muscles; the completion of such an activity is a psycho-motor response. The meaning of cognitive relates to the mental processes of perception, memory, judgment and reasoning.

-The cognitive translation of sound (clicking noises) to symbols (letters, numbers and special characters on the mill I copied on) is the first step to conditioning LTM to accept Morse code as a language.

-As stated above, there's a plateau to overcome before copying Morse becomes a psycho-motor response. After three weeks of going on sick call (Exhibit 8 which is discussed on Document D pages 1-3), I finally passed my plateau and the pain subsided in my body as I then worked my way toward 18GPM.

-During the course of learning Morse code as a language, paragraphs 3 and 4 are very specific in identifying a mental process which could've only occurred in LTM.

-It makes logical sense that those who couldn't or didn't make it past their plateau, wouldn't have experienced noticeable damage to their brain. That would include amateur radio operators.

From Supporting Document 1:

≫ Page 80 (3rd paragraph), "Significant relationships were found between affect (have emotional impact) score and short-term listening, interpretive listening, and comprehensive scores."

≫ Page 80 (4th paragraph), "Significant relationships also emerged between anxiety and interpretive listening performance, but not for anxiety and performance on the short-term, or comprehensive listening measures."

-Interpretive listening would interact extensively with LTM so it would make sense that this would create significant anxiety. Also, that there would be minimal affect concerning anxiety and short-term memory.

≫ Page 80 (6th paragraph), "However, communication load and affect combined to predict significant unique variance in listening performance for each of the remaining two types of listening. For short-term, communication load proved the best predictor and affect contributed a small, though significant R2 addition."

-RQ2 is the question on variations in communication load impacting anxiety levels associated with differing types of listening. The anxiety for short-term memory was small so it wasn't heavily impacted by an increase in communication load.

≫ Page 81 (2nd paragraph), "Conversely, higher anxiety levels were not indicated for the short-term listening task which required listening to a series of numbers and letters"

≫ Page 81 (4th paragraph), "This finding is consistent with the theoretical position that comprehensive listening differs in kind from the other types (King & Behnke 1989) because it alone relies upon long-, rather than short-term memory processes. For… comprehensive listening, listeners may encounter

a fire-wall effect where limited listening capacity overrides the possible additional contribution of motivation or anxiety, at least at higher levels of communication load."

-The statement on paragraph 4 identifies LTM as the part of the brain to suffer from compressed speech. I believe the fire-wall effect they're describing, in reference to Morse code, would be the obstacle of overcoming the plateau of 13-15 GPM.

≫ Page 81 (5th paragraph), "Because forgetting is not a problem in activities which do not utilize long-term memory, the changes in information processing style that imply a less prominent role for affect may only occur for high load levels of comprehensive listening (e.g. where guessing strategies are likely to occur.)"

-There wasn't a guessing strategy when copying an encrypted enemy message because the Morse characters were randomized. Only the International 'Q' and 'Z' signals (Exhibit 17) were repetitive and identifiable.

≫ Page 82 (1st paragraph), "As listening responsibilities accumulate, a cognitive backlog may occur that contributes to the deterioration of information processing capacity."

-Cognitive backlog is a disruption of the mental processes of acquiring knowledge and understanding. A deterioration of information processing would most definitely cause some form of negative affect in LTM.

≫ Page 82 (1st paragraph), "For example, processing breakdown may be evident in linguistic, semantic (relating to

logic) and strategic aspects of communication, not just in memory processes as evidenced through test performance."

-They concluded that a breakdown in normal memory processes was established through the test they performed. That said… LTM would be prominent in those memory processes. They also deduce that other areas of the brain involved in communication could also have been damaged.

From DOCID 3928820:

≫ Page 46 (5th paragraph), "Therefore, the ability to comprehend time-compressed speech can be interpreted as "aptitude" related to the speed with which one can accurately process auditory stimuli."

-Even though my brain wasn't functioning normally, I could still copy high-speed Morse code and process it in LTM because of an uncanny aptitude in managing compressed speech.

≫ Page 46 (5th paragraph), "In speeding Morse code rate up to 20 GPM, the character sound is not changed, only the spacing between characters and groups is decreased to increase the rate."

-The faster code was sent, the more taxing it must've been on LTM to keep up with the increased speed and workload of an unconventional language.

≫ Page 52 (5th paragraph), "Individuals who are capable of processing auditory stimuli more rapidly (or have larger auditory channel capacity) may be more apt in carrying out the

cognitive functions of translating the second language back to their first while auditory input continues."

- This statement explains how to become a successful Morse Intercept Operator; instantly translating clicking noises into English characters being pounded on a mill while continuing to hear and record the next Morse character being sent in a message.

Supporting Document 1:

≫ Page 75 (5th paragraph), "Because long-term memory is semantically organized, loss of processing time retards the ability to create semantic links to prior knowledge (Goss 1995)."

-Semantic organization refers to the way in which a person organizes, inside their brain, everything they hear, see, touch, and smell in order to make sense of it. The brain then uses this information to expand and refine its knowledge of the world. The ability to create semantic links is an essential skill when developing a functional vocabulary store. Semantic refers to the meaning of words and phrases and how a level of meaning can be attached to one word.

-The above quote applies to normal brain function but is compounded when copying high-speed Morse code. Since LTM is semantically organized, there can't be normal links to memory when the Morse code being copied is based on random dits and dashes.

≫ Page 75 (4th paragraph), "Faster presentation of the information forces learners to rely more on rote memorization and less on assimilation."

-Rote Memorization is learning through repetition and assimilation refers to incorporating new information or experiences into existing data. There wasn't anything repetitive in random Morse code messages and no way to adapt LTM beyond knowing what each of the Morse code character was. This must've been very disruptive to LTM and other areas of my brain.

≫ Page 76 (4th paragraph), "Another reason to suspect that communication load may be negatively correlated with levels of affect is the potential impact of state anxiety. The following analysis argues that increased load associated with more complex processing tasks produces negative arousal (anxiety), which is subsequently interpreted as dislike or negative affect."

-Morse code definitely qualifies as a more complex processing task and LTM is central in performing them.

≫ Page 76 (5th paragraph), "Moreover, according to Revelle (1989) and Benzoly (1985), increased communication load is often accompanied by a disruption of memory processes required for comprehension. This disruption and the subsequent task of memory resource allocation produce specific affective responses to the material being processed."

-This statement clarifies that a byproduct of communication load is a disruption of memory processes which would've occurred in LTM. The phrase 'memory resource allocation' means the distribution of reserve memory to correct the problem which then produces an emotional response. This is

another example of the different ways in which LTM and other regions of the brain were impacted by trying to assimilate random clicking noises into a language; one which the brain could interact with in a traditional fashion.

Document E
SPECIFIC HEALTH ISSUES RELATED TO LEARNING/COPYING HIGH-SPEED MORSE

In this document, I'll identify certain physical and psychological characteristics of the damage I've identified through a comparison of my health before and after learning/copying high-speed Morse code.

While growing up in Corning NY, I was constantly outdoors either climbing hills, biking 20-30 miles, fishing lakes and streams, camping out, or exploring the Finger Lakes of upstate New York. I had many friends and was popular enough. I graduated senior year with a C+ average; I never applied myself and would normally do any homework on the bus ride to school.

When I entered the Army, I was pretty much a normal eighteen-year-old. I passed a polygraph and FBI background investigation to receive my security clearance; any questions concerning any abnormal behavior would've been red-flagged at that time which, in turn, would've disqualified me.

After mustering out of the Army, I was out of control in many ways but was never in trouble with the law. Before 2014, I suspected but couldn't confirm that the effects of high-speed Morse code were having a profound effect on my mind and body.

In Document C, I explained how the damage, from copying high-speed Morse code, originated in Long-Term Memory (LTM). Now I'll explain how other areas of the brain were damaged through their connection with the Limbic System. The Limbic System is a complex set of structures in the brain which includes the Hypothalamus, Hippocampus (LTM), Amygdala, and Cingulate Cortex. It's largely responsible for how we interpret sensory input, how we code and remember sensory information and how we emotionally respond to it. The Limbic System also assigns emotional significance to everything we see, smell, hear, feel, and taste. It monitors both our internal and external environment.

The Limbic System is known as the seat of social and emotional intelligence and is the brains anxiety 'switch'. It's also responsible for the formation of memories. It regulates the functioning of the parasympathetic and sympathetic nervous systems; which means it controls things like pulse, blood pressure, breathing and arousal in response to emotional circumstances. It mediates all aspects of emotion and motivational operation such as: the desire for food, feelings of anger, fear, pain, pleasure and sexual desire.

The Limbic System can be significantly impaired by psychological trauma, emotional shock or accumulated stress.

Once it's compromised, it can cause cross-wiring of 'normal' neuronal circuits in the brain causing distorted unconscious reactions, sensory perceptions and protective responses. Over time, this pattern of distorted reaction becomes habitual (persistent) and can result in a range of neurological, immunological, and endocrine (hormonal) system abnormalities. Once a Limbic System impairment is established, it's not uncommon to develop additional Limbic System related illnesses. The Limbic System may also play a role in unconscious processes. For example, people who repeat damaging behavior patterns may be repeating patterns established by earlier experiences (in my case copying Morse code for three years) and solidified by the functions of the Limbic System.

The above sentences explain, in a nutshell, how the stress and psychological trauma from learning and copying high-speed Morse code has permanently damaged many areas of my brain… all of which are linked by the Limbic System.

Without placing importance on the sequence of maladies, I'll identify symptoms I've suffered and struggled with throughout the decades and the different areas of the brain affecting them.

≫ A CONTINUAL INFORMATION OVERLOAD

BEFORE: I didn't really use my brain that much; I was smart enough to be lazy and get by at school with a C+ average but not smart enough to get A's. As far as I can tell, mine was an average brain which functioned normally. The Army doctors concurred.

AFTER: Months after I mustered out in 1974, I was still experiencing a hyperactive brain which was always stuck in the "on" position. I first noticed the symptoms in Germany after I had copied the Russians for a while. Logically, I linked the onslaught of information or random thoughts with my gradual increase in GPM; I was copying three to four times faster than the cases I copied in Vietnam. Ever since, there's been a constant 24/7 influx of proportionately negative data/information entering my thoughts. At various times over the decades, I've felt beaten down, withdrawn, somewhat paranoid, hyper, slightly agitated, questioning my own reasoning and the ability to trust my own judgment on many occasions.

Besides the info overload, my brain constantly acts like an announcer who describes what I'm doing while I'm doing it. It explains my actions to me in real time. It also bombards me with false deadlines such as when I write; my brain estimates a timeframe for completion, but then pushes that estimate as a hard deadline by constantly reminding me of it. Then admonishes me if I fail.

Other times, it attacks me with a barrage of thoughts on numerous subjects; it then starts analyzing the data or playing out different scenarios to a conclusion (always disproportionately negative). Lastly, the corrupted areas of my brain are continually (24/7) trying to hijack what I'm thinking about or take precedence over bodily functions which has led to confusion and frustration in the past. It's almost as if the corrupted areas of my brain are trying to override data from the nonaffected regions. An example would be breathing. If I'm heavily focused on a

continual stream of consciousness, the region of my brain responsible for breathing doesn't operate properly. I unconsciously stop breathing for a short period before restarting from lack of oxygen.

The following includes affected areas of the brain working separately or in coordination to cause this phenomenon:

When the Limbic System (LS) was impaired, it in turn damaged other areas of the brain through the neural connection. Since LS is the brain's 'anxiety' switch, it would be the most likely culprit for switching my LTM (Hippocampus) into a permanent "on" position. With the Amygdala situated next to the Hippocampus, the likelihood that it was too was impacted is demonstrated by the overall imbalance of negative over positive.

Drilling down further, I discovered that the Ventromedial Prefrontal Cortex (VPC) is critical for the regulation of Amygdala activity; the VPC is extensively and reciprocally interconnected. It is implicated in processing risk and fear, inhibition of emotional responses and in the process of decision-making. It's believed to play a pivotal role in the origin and development of mood and anxiety disorders. A selective loss or decrease of VPC function would result in heightened Amygdala (negative) activity. Or, in other words, biochemically higher levels of negative affect in mood or anxiety disorders result from inadequate VPC-mediated inhibition of Amygdala activity.

Lastly, one of the symptoms of 'Affective Impairment' is obsessive thoughts.

≫ LIMITED RANGE OF NORMAL EMOTIONS

BEFORE: I was the typical eighteen-year-old kid who fell head-over-heels for girls on a weekly basis. Beginning when I was around thirteen, my family went camping in a travel trailer at campsites all summer long. I loved my family and had a normal relationship except for one thing- we were forced to go to church without a voice or the ability to oppose it. I had no problem feeling the normal range of emotions of a mentally healthy human being. If anything, I was too emotional on too many occasions during my childhood. Obviously, I wasn't too emotional for the Army Security Agency.

AFTER: There's a disconnect between those pre-Morse emotions and what I've felt since. I've lost the pathway to truly feel many of the normal emotions a person grows old with. Some of the positive emotions I've lost the ability to fully feel are maternal love, romantic love, serenity, happiness, awe, pride, joy, relief, euphoria, and contentment. The negative emotions I've lost the path to are disgust, anger, depression and hate. Finally, these are some of the negative emotions I <u>do</u> feel; guilt, shame, worry, concern, nervousness, anxiety, discouragement, fear and panic. When I do try to feel (let's say) happiness, I pull up a convergence of two ratings scales; I feel a combination of warm-to-cold and positive-to-negative. An example would be if I won the lottery for a Million dollars. I wouldn't feel proud, joyful, or euphoric… I would feel very warm and positive. And if someone swindled me of the whole amount later, I wouldn't feel

depressed, angry or mad… I'd feel very cold and negative toward both the thief and myself.

After I came home from the Army, I had lost touch with the familial love for my family. They loved me to a degree, and I tried hard to feel love for them but there wasn't a pathway to fully feel those emotions. I did feel loyalty to my family, but it was hard because my parents, brothers and sisters all thought of me as weird and the black-sheep of the family. I also don't feel the need to take pictures of my life or exhibit any photos of family or friends; any pictures I have were given to me. I'm not emotional about keeping mementos of the past but, then again, I led a nomadic life up until 1991.

It's been frustrating and, many times, I've felt like a freak of nature, but I've learned to adjust as best as possible. From 1973 in Germany, during my college years and, in Houston, up until the 1990's; I loved to go to rock concerts. Even though I was happy to be there, I never felt the overwhelming yearning to jump up and down while clapping my hands. The best I could offer was a huge smile on my face.

The following regions of the brain involved in showing and feeling emotions are:

As I stated before, the Ventromedial Prefrontal Cortex and Amygdala are substantially interconnected; when activity in both is inversely cross-wired, there's a loss of conditioned fear and suppression of negative emotion which are commonly disrupted in mood and anxiety disorders. VPC, on its own, is commonly associated with changes in personality and behavior (unable to

act in a relaxed and natural way because of mental restrain) that are notably distinct from those who typically are anxious or depressed. Furthermore, damage to VPC has shown to reduce the likelihood of developing PTSD and depression.

The Insular Cortex is the portion of the Cerebral Cortex involved in consciousness and plays a role in diverse functions usually linked to emotion. These functions include compassion, empathy, perception, pain, motor control, self-awareness, cognitive functioning and interpersonal experiences. It also has a strong connection with the Limbic System; the Anterior Insular Cortex (AIC) contains a population of neurons called 'Spindle Neurons'. The AIC receives a direct projection of a particularly large input from the central nucleus of the Amygdala. It must work with other brain regions and other parts of the body to function properly. This means damage to any area of the body that interacts with the AIC can impede the functions of the Insula.

Lastly, The Cingulate Cortex is part of the Limbic Lobe; an area of cortex associated with emotional responses, attention, learning a language and motor behavior (the last two speak directly to the psycho-motor plateau of 13-15 GMP which initially damaged LTM). It also serves a specific evaluative function detecting conflict and implementing strategic processes to reduce the conflict and maintain performance. The Anterior Cingulate Cortex is densely interconnected with the Amygdala and Hypothalamus. It's involved with many responsibilities related to emotion; regulation of overall effect, assigning emotions to internal and external stimuli, and pain perception.

≫ PSYCHO-MOTOR RESPONSES IN MY BODY

BEFORE: As I stated earlier, psycho-motor is the relationship between the psyche and muscle movement in an organic body which occurs when the brain sends a neural impulse to activate the muscles. As an eighteen-year-old senior in high school and at Basic training, I exhibited normal psycho-motor responses during physical activity. Otherwise, I would've washed out of Basic.

AFTER: In many areas and ways, the normal neural pathways leading to several areas of my brain have been corrupted. Also, the cross-wiring of normal neuronal circuits in the Limbic System have negatively impacted those areas.

The following conditions have persisted since January 1971:

I still exhibit stomach cramps which originally plagued me in MOS school; after decades of problems, the abdominal convulsions have lessened considerably. Also, I reflexively and unconsciously tighten my shoulders whenever I'm being bombarded by a steady stream of thought or data. I work out in the gym five times a week (6 warm up exercises while holding five-pound weights, fifty-five bench sit-ups w/weights brought to my chest and 1.8 miles on the elliptical machine in 15 minutes), take 3000 MG's of muscle relaxer daily and still have tense/tight rock-hard shoulders. With a constant influx of information, the only downtime for my muscles is when I'm on sleeping pills.

Whenever I'm under a barrage of information, I subconsciously grind my teeth. Also, I tend to grate on them harder whenever it's a negative thought stream. Over several decades, I've lost a couple of teeth and filed a few down over this issue.

Sometimes, I've had trouble controlling normal motor functions such as walking because, suddenly, my thoughts are overthinking and analyzing the process of walking. While receiving a continual stream of information and, being forced to concentrate on it, my brain overrides the input from unaffected regions of the brain instructing the body to walk in a routine manner.

The following paragraphs explain which specific regions of the brain who, working together or alone, produced the above physical problems.

The Thalamus is a structure within the brain located between the Cerebral Cortex and midbrain and has extensive nerve connections to both. The main role is to relay motor and sensory signals to the proper areas of the brain where it can be processed. It also regulates sleep. If this part of the brain is damaged, all sensory information would not be processed and sensory confusion would result in a cross-wiring of information to other parts of the brain and body. This, in turn, would cause confusion and irregular brain functions.

The Cingulate Cortex (CI) has already been defined but it's relevant in contributing to the damage because of its dense connection to the Hypothalamus. The main role of the Hypothalamus is to keep the body healthy and balanced. When

different parts of the body signal the brain, they alert the Hypothalamus to any unbalanced factors which need addressing. It then releases hormones into the bloodstream to correct them. Through its connection to the CI, a cross-wiring of signals to the Hypothalamus would and should undoubtedly result in misapplications of hormones to different areas of the body. An outcrop of abnormal bodily functions is reasonable to expect.

Lastly, The Insular Cortex (IS) is included because it plays a role in motor control and pain; both of which apply here. I believe it plays a large role in creating my stomach cramps because IS is where the sensation of pain is judged to its degree. Those with Irritable Bowel Syndrome have an abnormal processing of visceral pain. Other internal sensations processed by the IS include stomach or abdominal enlargement.

≫ RETRIEVAL OF DATA FROM LONG-TERM MEMORY

BEFORE: As I've previously stated, I was an average student who didn't apply himself during senior high. I could blame being drafted on my eighteenth birthday (November 4, 1970) for being so lazy and disinterested or I just wasn't overly bright. As far as I can tell, my LTM was functioning properly when I entered the service. After being poked, prodded and quizzed by the Army, they too were satisfied with my LTM.

AFTER: At any given time, my ability to draw upon certain aspects of known data, being stored in LTM, is at question. As I stated before, the damage to different areas of my brain began

in LTM when it achieved what many others couldn't… passing 18GPM. As a writer, this one abnormality frustrates me to no end.

While I'm working on my laptop, reading or any other exercise which involves retrieving information from LTM, there are times when I draw a blank on individual words. I'll stare at a word waiting for some data on the meaning or if it's spelled correctly but the word is foreign to me. These are common words long ago inputted into LTM and as such there shouldn't be a retrieval problem. Later in the week, I'll recognize the same word and have no problem remembering all pertinent information on it. I didn't start making a list of these words until nearing the end of this claim; they include noise, sympathize, career, anterior, trauma, unconscious, being, separate, hammock, succeeded, deduce, extent, summon, taught, coil, teeth, sergeant and faucet.

≫ SLEEP PATTERNS

BEFORE: I never had a problem falling and staying asleep at any point before entering the Army.

AFTER: I can't sleep for more than two hours at a time without my brain waking me up. Once I open my eyes, I get up and go to the bathroom to reset it. I then fall back to sleep before once again waking up an hour or so later; after one or two more times I get up. I average six-to-eight hours of sleep a night while taking 250MG of Trazodone which is supposed to

help with healthy sleep patterns. I researched Trazodone; 75MG is prescribed for insomnia. When I get up in the middle of the night, I can't think of anything or even look at the clock because it will activate my brain and what follows will be a nonending barrage of information. By that point, I can only get up.

A small number of brain cells are responsible for keeping us awake or asleep; some cells promote wakefulness and others promote sleep. The neurons that promote wakefulness inhibit those that promote sleep, and vice versa. This interaction normally leads to either a relatively stable period of wakefulness or sleep. Several areas in the brainstem and Hypothalamus promote wakefulness by sending arousal signals to the Cerebral Cortex. These signals come in the form of neurotransmitters. Another area of the Hypothalamus is responsible for shutting down the brain's arousal signals which causes sleep. The ability to remain in a stable period of sleep or wakefulness is a result of "mutual inhibition" between wake-promoting neurons and the sleep-promoting neurons. For example, the areas of the brain that maintain wakefulness by activating the cortex also inhibit the sleep neurons. Obviously, my neuron-based system of wakefulness and sleep is corrupted with the wake-promoting neurons impeding the sleep-promoting ones. Additionally, one of the negative symptoms of Affective impairment is difficulty sleeping.

≫ NEAR ISOLATION

BEFORE: By my senior year, I was particularly outgoing and looking for pretty much good clean fun. I lived in Corning NY but dated a cheerleader from Wellsboro PA; I was all over the place that last year. Why not? I'd just been drafted during wartime. It's not like I was being drafted by the Lakers.

AFTER: The three years during service and the five years after were the worst days of all as my brain and body learned to live with and then without copying high-speed Morse code. During this period, I was anything but sedate at my Army posts and afterward in my small town of Corning NY. My pre-Morse personality, which was extremely outgoing, became super-charged after becoming a Morse Intercept Operator. The best description I can offer of myself was a cross between the announcer at a WWE WrestleMania event and a comedian performing onstage. From 1974 until 1991, I escaped into near isolation at different times and stretches because I couldn't deal with too many interpersonal interactions at once; it overstimulated my brain. There were many times I didn't do my grocery shopping until midnight because I knew the place would be empty. I also stopped being sociable and started to have less and less friends.

≫ INTELLIGENCE

BEFORE: As I previously stated, I had a C+ average my senior year and, also, that the ability to forecast successful Morse Intercept Operators was nonexistent. It didn't depend on a

college degree or even a high school diploma; intelligence wasn't a factor.

AFTER: One of the semi-positive phenomena to develop is intelligence on a sliding scale. At times, I can draw upon my brain to perform exceptionally; accomplishing mental tasks and feats beyond what my background would suggest. I have a base intelligence which I can call upon at any time but, on many other occasions, I can understand complex ideas or equations without having significant prior knowledge of them nor even the avenue to achieve such tasks. The catalyst to significantly increasing my IQ is confidence; the more confident I feel, the easier it is to access and interact with higher levels of intelligence within my brain. You might say that can be true for most people but the level of confidence I'm talking about makes me feel invincible. When this happens, I can pull up very specific data on a myriad of subjects at a whim. To do this, I must've read or heard something, inputted the data into LTM and gave a value to it. That said, I'm much more confident when I'm in a safe semi-isolated existence… both in mind and body.

General intelligence depends on a remarkably limited neural system with, several regions of the brain and the connection between them, being most important. These structures are located within the Prefrontal Cortex. There's evidence that intelligence relies not on one brain region or even the brain as a whole but involves specific brain areas working together in a coordinated fashion. Also, that intelligence depends on the

brain's ability to integrate information from verbal, visual, three dimensional and executive processes. It depends not just on the efficiency or power of various brain regions but also on the strength of the connections which link them.

With a compromised neural system within the brain, it makes sense that my IQ would be on a sliding scale depending upon the connection at the time. During the late 1980's, when I was interviewing for a job at IBM Space Division Clear Lake, I had to take a comprehensive battery of tests at the University of Houston's Psychology department. Later, I was told by a recruiter that, on the math portion, I placed the highest score recorded to that date. She was impressed and I got the job. Now how could I do that when I barely passed Algebra in high school and again in community college?

Without a major college degree or any previous training, I've successfully worked at the following jobs; mainframe computer operator/supervisor, computer programmer (in 1981 when personal computers were in their infancy and too complex for the average person to even do the initial setup), research project at University of Texas Health Science Center (where I delivered computer-generated electrical stimulation to participants and in charge of data integrity), IT guy for a law firm (consultant for two other high-profile Houston law firms), NASA Property Manager IBM and business partner in a highly successful NASA area beauty salon for eleven years.

An example of my sliding IQ is this very claim. Since being in near isolation the past two years, I've been able to concentrate and relax as only one with brain abnormalities can.

All conclusions, observations and information within this claim were processed by me without input from anyone else.

The last subject involves my never wavering sense of humor which I've clung to like a life-preserver during the many dark days. Recent studies link humor and intelligence because it takes both cognitive and emotional ability to process and produce humor. A good sense of humor is linked to high emotional intelligence.