









What It Is

A U.S.-Patented, 2-Sided Laminated, 8-inch x 3-inch "Bookmark"-Size **Card**, Which Fits into a Shirt Pocket, Purse, Under the Car Visor, On the Refrigerator Door, In/On The Night Table, On A Desk at Work, or <u>Anywhere/Everywhere In And Around the Places You Live & Work.</u>

A Complete Ready-To-Use Process
Plus Life-Long Training Course In
The Brain Science of Civilized Survival™.

What Users Have Accomplished With It Over The Past 13 Years, <u>In Just One</u> of Interperson, Inc.'s Naturalistic Decision-Making Testing Locations Is Recorded In This "Proof Of Concept" White Paper On The Pages Following.

It Is Available For Licensing By Qualifying Organizations And Individuals. For More Information On Licensing, Please Call **917-612-2932** Or Email interperson1@gmail.com.

Thank You.

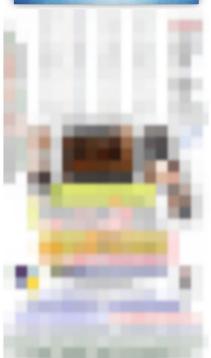
The Board of Directors Interperson, Inc.



Protected by U.S. Patent

White Paper: Proof of
Concept: 13 Year
Study & Report of Results









Copyright © Interperson, Inc. 2019. All Rights Reserved.



Background

In America, a Dental Office is a very good example of a Natural Setting in which decisions are made and behavior is initiated within a stressful venue. The Study Of Interpersonal Relationships within this environment and the Development Of Real-life Solutions To Problems within this environment is a qualifying example of Translational Research.

Observing the results when a single change such as introducing The TRUSTCard® into this stressful setting using "Reports of Results" which are Personal Narrative Reports (Stories) of those individuals involved, is, to reiterate, a qualifying example of the Study of Naturalistic Decision Making.



Translational Research

Def. Translational Research ... applies findings from basic research to enhance human health and well-being. Interperson, Inc.'s purpose was to "Translate" findings from fundamental neuroscience research into easily understood practical applications leading to unique individual and interpersonal outcomes.



Naturalistic Decision-Making (NDM)

Naturalistic Decision-Making is a method of conducting research, developed originally by Author Gary A. Klein, which is a Research Approach that **investigates EXPERIENCED DECISION MAKERS performing realistic tasks, rather than novices performing artificial tasks in a laboratory.** Researchers have subsequently applied this naturalistic strategy to other processes besides decision making such as problem detection and planning. Now there are Hundreds Of Researchers In Research Centers Around The World Engaging In Naturalistic Decision-making Projects and participating in regular meetings in the U.S. and in Europe.



The TRUSTCard® in a Natural Setting (An American Dental Office)

My name is Thomas J. Karas, DDS. I have used the U.S.-Patented TRUSTCard® in my Michigan Dental Office to assist my patients to manage their stress, to think more clearly and to make Better Decisions About Dentistry continuously over the last 13 years.

Experiencing the positive benefits in my Dental Office, my patients, unsolicited, took the TRUSTCard® and started using it outside my office embedding it in their everyday life to improve Happiness, Mood, Attention, Focus and Behavior.





(Naturalistic) Test Conditions ...

Patients were given The TRUSTCard® (12 TRUSTCards® in an envelope) at various times **before**, **during**, **and after various dental procedures** and were instructed to use The TRUSTCard® as directed in the two sections (on opposite sides on the card) entitled:

When To Use The TRUSTCard®... and

How To Use The TRUSTCard®...



(Naturalistic) Stories - Reports of Results (RORs)

After use of The TRUSTCard® in everyday situations;

Users generally reported that <u>in as little as 30 seconds, rarely longer than 3 minutes</u> they felt a decrease or elimination in the physiologic changes brought on during stress such as increased heart rate, muscle tension and irregular breathing.

Users often reported that they used The TRUSTCard® (both directly and in a Enhanced Application Format), to control and alleviate much of both acute and chronic pain.

Users generally reported a very noticeable **decrease** of repeating, persistent, **negative thoughts**, a noticeable decrease or erasure of **feelings of anxiety** and a noticeable **improvement** in happiness, mood, attention, focus and behavior.

Users generally reported positive results in a wide range of situations from medical/dental-treatment anxiety, preacademic testing anxiety, anxiety related to athletic performance, public speaking anxiety, sleep difficulties, smoking cessation, compulsive eating and addiction recovery.



Upon first receiving The TRUSTCard®, **Users strongly expressed** a desire to share The TRUSTCard® with their loved ones. "My Mom could use this card...", "My daughter is at State University and she could use this card...", "My husband could use this card..." were very typical statements.

Senior citizen users along with other groups, have reported that consistent use of The TRUSTCard® had **improved** their **memory** and cognitive abilities during mildly stressful events which, prior to their use of The TRUSTCard® typically resulted in feelings of frustration.

Students, from **early grade school to professional schools** such as Nursing and Dentistry have consistently reported a decrease in test anxiety and very positive improvement in test scores.

To date, **Users generally** have given positive reports of the successful use of The TRUSTCard® with **zero** reports of **negative consequences** due to TRUSTCard® use.



Proof of Concept

The Naturalistic Study and the Reports of Results (ROR) above constitutes Proof of Concept.

Proof of Concept is defined as "an early phase in the development of a concept, method or theory used to demonstrate its feasibility or a demonstration in principle with the aim of verifying that some concept, method or theory has possible mechanisms of action and practical value. The Proof of Concept phase of development is typically small and may or may not be complete."

This study, utilizing in an informal manner, The Research Principles Of Naturalistic Decision Making leading to Proof of Concept is Proof Of The Potential Practical Value Of The TRUSTCard® if distributed and used in Everyday Life, Business, Relationships And Economic Matters, both Individual And Group.

In association with Interperson Inc; The Karas Research Group was formed to study all aspects of The TRUSTCard® utilizing a Systematic Review⁵ of Existing Neuroscientific Literature to determine possible mechanisms, actions and influences concerning the principles underlying the development of The TRUSTCard®.



Systematic Review of The TRUSTCard®

In association with Interperson Inc., The Karas Research Group was formed to study all aspects of The TRUSTCard® (first introduced in 2006), beginning with a Systematic Review of Existing Neuroscientific Literature (over 10,000 Studies) to determine all possible mechanisms, actions and influences concerning the foundational scientific principles underlying the development of The TRUSTCard®.

Systematic Review is defined as a "Summary Of The Clinical Literature". Further, a Systematic Review is an assessment and evaluation of all research studies that address a selected clinical issue. The researchers use an organized method of locating, assembling, and evaluating a body of literature on a topic using a set of specific criteria. A systematic review typically includes a description of the findings of the collection of research studies. Karas Research followed these guidelines precisely.



Reports of Results (ROR)

The results of this **Naturalistic Decision-Making** study leading to **Proof of Concept** and the subsequent **Systematic Review** of existing literature constitutes proof of the practical value of The TRUSTCard® to individuals and groups. A small by no means complete, sample of just 20 Individual ROR's follow below ...



- ➤ The TRUSTCard® was used by one man to quit smoking
- ➤ The TRUSTCard® helped a woman fall asleep more consistently and stopped her reliance on sleeping pills
- ➤ A "clean" young woman uses The TRUSTCard® to overcome urges to go back to a destructive drug habit, that would emerge in her thinking and emotions
- ➤ A salesman uses The TRUSTCard® **before presentations to customers** and feels much more relaxed and successful
- ➤ A woman used The TRUSTCard® to help with her anxiety during a series of MRIs which were needed for her medical treatment
- An older woman uses The TRUSTCard® when she gets nervous about not remembering things. The TRUSTCard® decreases her nervousness and she remembers more readily
- > A woman uses The TRUSTCard® for chronic knee pain



- A schoolgirl used The TRUSTCard® to get over her separation anxiety about her Mom and she is going to school now without anxiety
- ➤ A woman used The TRUSTCard® during required blood tests successfully.
 Prior to the use of the card she refused blood tests
- ➤ A woman uses The TRUSTCard® during the time of caring for her Mother with dementia. She says: "it saved my life."
- A teacher uses The TRUSTCard® for her students, adult students, to help them learn to read. She says it relaxes them so they can focus
- ➤ A young woman reported that she "uses The TRUSTCard® all the time" reporting that it has made her **feel happier and more in control**
- ➤ The TRUSTCard® helped a "dental phobic" get through her first dental appointment in 20 years and she has been using The TRUSTCard® continuously since then to keep going to the dentist on a regular basis



- ➤ A young lady used The TRUSTCard® **while studying** (and worrying) about taking her MCAT exams (the exam required to get into Medical School)
- ➤ A college **student** uses The TRUSTCard® "all the time" during study and work, he says it gives him the **confidence that he really can finish school**
- ➤ A father uses The TRUSTCard® consistently to **calm down his children** when they are "losing it"
- ➤ A mother of a high functioning autistic child uses The TRUSTCard® to calm her child down and regain focus
- > An older woman uses it to help control pain from rheumatoid arthritis
- ➤ A young woman used The TRUSTCard® for high anxiety regarding her driver's test, after using the card she finally rescheduled it and passed
- ➤ A schoolteacher uses The TRUSTCard® to calm her entire class and get them refocused when the class as a whole is becoming quite chaotic

In Summary, Users Reported That Their Own **Attitudes & Behavior**, Right After Use Of **The TRUSTCard®** Became and Remained More Trusting, Calm, Confident, and Trustworthy.

Introducing the TRUSTCard® into any group

There are few if any at all, human resource & performance issues in any organization which are not about emotionally difficult situations.

The TRUSTCard® through its patented, proprietary deployment of single-digit math problems stunningly allows you to more readily learn how to thereafter and continuously think about complex emotional situations in different ways, and not get stuck in one way of thinking.

The following is just a partial list of potential benefits over time **after introducing**The U. S. Patented TRUSTCard® into any group:

- Best Interests Of The Group Always Pursued First But Never To The Detriment Of Any Individual's Fair Treatment And Decency
- No Seeking Of Individual Preference To The Detriment Of Any Other Team Member
- Leadership Loyalty To The Group Reciprocated back to that Leader by the Group
- Routinely And Non-Artificially-Present Happier Group Mood
- ➤ Greater Cooperation In Pursuing Ethical Purposes Of The Group



- Reduced To Near Zero Friction Between Individual Members
- Stable Prosperity
- Peaceful Personal Lives And Family Lives Influenced By The Group's Use Of The TRUSTCard®
- Willingness To Contribute Extra Effort, Time and Ideas to the Group: From both Employees & Management
- Little Or No Selfishness Between Or From Members (Employees & Management)
- Reduced Tendency Toward Destructive Drug Use Or Addiction by Individuals
- ➤ Interfamily Support When Issues Arise For Team Members
- No Effort To Reduce Another To Make Oneself Look Good
- ➤ No Outright Or Suppressed ("Passive-Aggressive") Conflicts
- No Rumor-mongering
- No Bullying
- A Sense Of Reasonable And Fair, Fact-Based Justice





The Neural Basis of The TRUSTCard®

"Neural" means of or relating to the Nervous System including the Brain. The TRUSTCard®, U.S. Patented in 2019, was originally introduced and developed in 2006 ten years prior to the "2016 Duke Study" which is excerpted below.

In the pages immediately following, you will learn what researchers at Duke University independently CONFIRMED Ten (10) Years After The TRUSTCard® was first introduced. Since that introduction in 2006, Hundreds Of Thousands of TRUSTCards® have been distributed throughout the United States and Internationally, showing individuals How To Command Their Emotions Immediately while also Helping Groups To Improve Their Performance Permanently.



The Duke University Study of 2016

The Following Excerpts are from the Press Release Published October 10, 2016 At Duke University.

"Could Mental Health Boost Emotional Health? New Study Could Inform Brain Training For Better Mental Health"

"Engaging A Specific Part of The Brain During **Mental Math** Exercises Is **Connected with Better Emotional Health**, According To A New Brain-Scanning Study Published By Duke Researchers In The Journal, Clinical Psychological Science."

"The Research Takes A Preliminary Step Toward Informing New Brain Training Strategies to **Stave Off Depression and Anxiety**." "Although the **Relationship Between Math and Emotion** Needs Further Study, The New Findings May Also Lead To New Tests Gauging The Effectiveness Of Psychological Therapies."



The Duke University 2016 Study (cont.)

"Our Work Provides The <u>First Direct Evidence</u> That The Ability To **Command Emotions** Like Fear And Anger Reflects The Brain's Ability **To Make Numerical Calculations In Real Time,**' Said **Matthew Scult**, A Neuroscience Graduate Student In The Lab Of The Study's Senior Investigator **Ahmad Hariri**, A Professor Of Psychology And Neuroscience At Duke."

"Although They May Seem Unrelated, Doing 'Cold' Calculations and Regulating 'Hot' Emotions Both Rely On Similar Mental Gymnastics: The Ability To Manipulate And Update Information. Researchers Have Long Speculated About the Link Between the Two."

"In the new study, Hariri's group analyzed Brain activity of 186 undergraduates -- using a type of non-invasive Brain scan called Functional Magnetic Resonance Imaging -- while they were doing math problems from memory."

"The students are participants in the ongoing Duke Neurogenetics Study, which is exploring relationships between genes, the Brain and mental health. In addition to the scans, participants completed questionnaires and interviews assessing their mental health status and emotional coping strategies."



The Duke University 2016 Study (cont.)

"Studies have found, for example, that **higher activity in this area** is associated with **fewer symptoms of anxiety and depression** ... the **dorsolateral prefrontal cortex.**"

"Memory-based math problems also stimulate the dorsolateral prefrontal cortex, which has already been linked to depression and anxiety."

"In the current study, the **more active** a person's **dorsolateral prefrontal cortex** was **while performing mental math**, the **more** likely he or she was to report being **able to adapt** their thoughts about **emotionally difficult situations**."

"We don't know for sure why that is, but it fit into our hypothesis that the ability to do these math problems might allow you to more readily learn how to think about complex emotional situations in different ways, Scult said. 'It is easy to get stuck in one way of thinking."

"Greater Activity In The Dorsolateral Prefrontal Cortex also was associated with Fewer Depression And Anxiety Symptoms. The difference was especially obvious in people who had been through recent life stressors, such as failing a class. Participants with higher dorsolateral prefrontal activity were also less likely to have a mental illness diagnosis."



The Duke University 2016 Study (cont.)

"We hope, with these and future studies, that we can inform new strategies to help people regulate their emotions, and to prevent symptoms of anxiety and depression from developing in the first place," Scult said.

Hariri is a member of the Duke Institute for Brain Sciences. The research was supported by the National Science Foundation Graduate Research Fellowship, the National Institutes of Health (P30DA023026, R01AG049789, R01DA033369, R01AG049789).

CITATION: "Thinking and Feeling: Individual Differences in Habitual Emotion Regulation and Stress-Related Mood are Associated with Prefrontal Executive Control" Matthew A. **Scult**, Annchen R. **Knodt**, Johnna R. **Swartz**, Bartholomew D. **Brigidi** and Ahmad R. **Hariri**. Clinical Psychol. Science, Online Oct. 6, 2016. DOI: 10.1177/2167702616654688



Overlapping Functions of Areas of the Brain

Scientific studies over the course of many years have conclusively demonstrated that many areas of the Brain have multiple functions and perform many different tasks. Studies have also demonstrated that the functions of various areas of the Brain and the tasks that various areas of the Brain perform, more often than not, overlap.

One example of the "overlapping" functions of the Brain, which is of utmost importance in the development of The TRUSTCard®, is the PROVEN FACT, determined through Brain-imaging studies, that one particular area of the Brain [The Dorsolateral Prefrontal Cortex] makes it possible for us to perform two very different tasks; Doing Mental Arithmetic and Commanding Our Emotions.

Both of these seemingly dissimilar functions, Doing Mental Arithmetic and Commanding Our Emotions Are carried out within the various subdivisions of an area located in the front of the Brain, the part of the Brain to which we have conscious access and can exert cognitive control, the Prefrontal Cortex. The Prefrontal Cortex is involved in "Executive Functions".



Executive Functions

Executive Functions Relate To Abilities:

- To Differentiate Among Conflicting Thoughts,
- > Determine Good And Bad, Better And Best, Same And Different,
 - Future Consequences Of Current Activities,
 - Working Toward A Defined Goal,
 - Prediction Of Outcomes,
 - Expectation Based On Actions,
- Social "Control" (The Ability To Suppress Urges That, If Not Suppressed, Could Lead To Socially Unacceptable Outcomes).



Executive Functions ... More About

There are 6 basic Executive Functions

- 1. Focus By Choice (What is focused on)
- 2. Multiple Factor Awareness (Multiple things considered in combination)
 - 3. Decision Making (Choices between options, goal prioritization)
 - 4. Voluntary Action (Self-generated actions)
- 5. Resolution of Conflicting Stimuli (Contradictions (Self or Other's) Resolved)
 - 6. Error Correction (Correction of (Self or Other's) behavioral mistakes)



Some Real-Life Benefits of the COORDINATED Executive Functions of the Prefrontal Cortex, especially The Dorsolateral Prefrontal Region include ... Noticeable and Continuously Increasing Personal Abilities With Respect To:

- 1. Problem solving
- 2. Ability to balance short-term rewards with long term goals
- 3. Forming strategies and planning
- 4. Inhibiting inappropriate behavior
- 5. Considering the future and making predictions
- 6. Focusing attention
- 7. Organizing thoughts
- 8. Initiating appropriate behavior
- 9. Foreseeing and weighing possible consequences of behavior
- 10. Shifting or adjusting behavior when situations change
- 11. Modulation of intense emotions
- 12. Simultaneously considering multiple factors when faced with complex information
- 13. Impulse control and delaying gratification



Your time and Attention in reviewing this White Paper is much appreciated. My Team and I would be more than happy to answer any of your questions.

Sincerely,

Thomas Kanas

CEO, The Karas Research Group, Inc.

April 2019

St. Clair Shores, MI, USA