

A BASE INDEX OF ITERATIVE AND RECURSIVE TRICHOTOMOUS RELATIONS FOR THE REPEATED MEASUREMENT OF THE DIGITAL APPLICATION, CONSTRUCTION, AND DISSEMINATION OF THE TRI-SQUARED TEST

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ABSTRACT

This monograph provides a Trichotomous Base Index for the transformative process of qualitative data into quantitative outcomes through the Tri-Squared Test introduced in the Journal on Mathematics, and further detailed in the Journal of Educational Technology, Journal on School Educational Technology, and in Journal on Educational Psychology articles. Advanced statistical measures of internal research instrument Trichotomous Repeated Measures and Trichotomous Variation of significant Transformative Trichotomy-Squared [Tri-Squared] research variables are analyzed. This narrative follows the article published in the October-December paper published in the Journal on Mathematics entitled, "Advanced Tri-Analytic Trichotomous Post Hoc Repeated Measures for Tri-Squared Test Inventive Investigative Instrument Items using Trichotomous Variation Analysis [Trivariate Analysis]". As an additional in-depth and novel approach to advanced Tri-Squared data analysis, "The Base Index of Recursive Trichotomous Relations" adds additional value to the mixed methods approach of research design that involves the holistic combination and comparison of qualitative and quantitative data outcomes. In this paper, multiple sequential mathematical models are provided that illustrate the entire process of advanced Tri-Analytic inquiry.

Keywords: Analytics, Instrument, Investigation, Iteration, Recursion, Repeated Measures, Research, Static Test, Statistics, Trichotomous Relations, Trichotomous Categorical Variables, Trichotomous Outcome Variables, Trichotomy, Tri-Squared, Tri-Squared Tests, Variables.

INTRODUCTION

A "Base Index for the Trichotomous Categorization of Nature" is provided in this narrative to illustrate the multiplicity of natural trichotomy that is commonplace throughout nature and all of reality. The trichotomy found in the vast majority of all things can be explained by using the "mathematical law of trichotomy" (Apostol, 1967). This "natural trichotomy" can also be measured statistically by using the "Tri-Squared Test" (which is specifically designed to analyze trichotomy using a trichotomous methodology).

"Tri-Square" or Tri-Squared comprehensively stands for "The Total Transformative Trichotomous-Squared Test" (or "Trichotomy-Squared"). The Total Transformative Trichotomous-Squared Test provides a methodology for the transformation of the outcomes from qualitative research into measurable quantitative values that are used to test the validity of hypotheses. It is based on the mathematical "Law of Trichotomy". In terms of mathematics, Apostol in his book on calculus defined "The Law of Trichotomy" as: Every real number is negative, 0, or positive. The law is sometimes stated as "For arbitrary real numbers a and b , exactly one of the relations: (1) $a < b$; (2) $a = b$; and (3) $a > b$ holds" (Apostol, 1967).

It is important to note that in mathematics, the law (or axiom) of trichotomy is most commonly the statement that for any

(real) numbers x and y , exactly one of the following relations holds. Until the end of the 19th century, the law of trichotomy was tacitly assumed true without having been thoroughly examined (Singh, 1997). A proof was sought by Logicians and the law was indeed proved to be true. If applied to cardinal numbers, the law of trichotomy is equivalent to the axiom of choice. More generally, a binary relation R on X is trichotomous if for all x and y in X exactly one of xRy , yRx or $x = y$ holds. If such a relation is also transitive it is a strict total order; this is a special case of a strict weak order. For example, in the case of three elements the relation R given by aRb , aRc , bRc is a strict total order, while the relation R given by the cyclic: 1) aRb ; 2) bRc ; and 3) cRa is a non-transitive trichotomous relation.

In the definition of an ordered integral domain or ordered field, the law of trichotomy is usually taken as more foundational than the law of total order, with $y = 0$, where 0 is the zero of the integral domain or field. In set theory, trichotomy is most commonly defined as a property that a binary relation $<$ has when all its members $\langle x, y \rangle$ satisfy exactly one of the relations listed above. Strict inequality is an example of a trichotomous relation in this sense. Trichotomous relations in this sense are irreflexive and antisymmetric (Sensagent, 2012).

1. The Foundation of the Mathematical Law of Trichotomy

The foundational idea of a "Trichotomy" has a detailed long history that is based in discussions surrounding higher cognition, general thought, and descriptions of intellect. Philosopher Immanuel Kant adapted the Thomistic acts of intellect in his trichotomy of higher cognition - (a) understanding, (b) judgment, (c) reason - which he correlated with his adaptation in the soul's capacities - (a) cognitive faculties, (b) feeling of pleasure or displeasure, and (c) faculty of desire (Kant, 2007). The Total Transformative Trichotomous-Squared Test provides a methodology for the transformation of the outcomes from qualitative research into measurable quantitative values that are used to test the validity of hypotheses. The advantage of this research procedure is that it is a comprehensive holistic testing methodology that is designed to be static way of holistically measuring categorical variables directly applicable to educational and social behavioral environments where the established methods of pure experimental designs are easily violated. The unchanging base of the Tri-Squared Test is the 3×3 Table based on Trichotomous Categorical Variables and Trichotomous Outcome Variables. The emphasis of the three distinctive variables provide a thorough rigorous robustness to the test that yields enough outcomes to determine if differences truly exist in the environment in which the research takes place (Osler, 2013a).

2. The Tri-Squared Test "[Tri²]" : Statistical Mathematical Model

The Tri-Squared Test is grounded in the combination of the application of the research, two mathematical pioneers and the author's research in the basic two dimensional foundational approaches that ground further explorations into a three dimensional Instructional Design. The aforementioned research includes the original dissertation of optical pioneer Ernst Abbe who derived the distribution that would later become known as the chi square distribution and the original research of mathematician Auguste Bravais who pioneered the initial mathematical formula for correlation in his research on observational errors. The Tri-Squared research procedure uses an innovative series of mathematical formulae that do the following as a comprehensive whole: (1) Convert qualitative data into quantitative data; (2) Analyze inputted trichotomous qualitative outcomes; (3) Transform inputted trichotomous qualitative outcomes into outputted quantitative outcomes; and (4) Create a standalone distribution for the analysis possible outcomes and to establish an effective—research effect size and sample size with an associated alpha level to test the validity of an established research hypothesis. The process of designing instruments for the purposes of assessment and evaluation is called "Psychometrics". Psychometrics is broadly defined as the science of psychological assessment (Rust & Golombok, 1989). The Tri-Squared Test pioneered by the author, factors into the research design a unique event-based "Inventive Investigative Instrument". This is the core of the Trichotomous-Squared Test. The entire procedure is grounded in the qualitative outcomes that are inputted as Trichotomous Categorical Variables based on the Inventive Investigative Instrument (Osler, 2013c). Osler (2012a) initially defined the Tri-Squared mathematical formula in the Journal on Mathematics article entitled, "Trichotomy-Squared – A novel mixed

methods test and research procedure designed to analyze, transform, and compare qualitative and quantitative data for education scientists who are administrators, practitioners, teachers, and technologists" as follows:

$$Tri^2 = T_{sum}[(Tri_x - Tri_y)^2; Tri_x]$$

3. Explaining the Tri-Squared Distribution

The Tri-Squared distribution is a static mathematical extraction out of the Chi Square distribution. This test is not the only test based on the Chi Square distribution (as it is a mathematical distribution that is frequently used directly or indirectly in many tests of significance). Similar to the Chi Square distribution, the Tri-Squared distribution has the following characteristics: (1) It has only a single parameter (the distribution Degrees of Freedom written as "d.f."); (2) The entire distribution is positively skewed; and (3) The Degrees of Freedom are mathematically written, "[C- 1][R-1]" which is equal to the distribution mean. Unlike, the Chi Square distribution the Tri-Squared distribution has the following characteristics: (1) The distribution Degrees of Freedom never changes, therefore, it never approaches the Normal Gaussian Distribution (the bell curve); (2) As a static test, the Tri-Squared Degrees of Freedom is always $[C- 1][R-1] = [3 - 1][3 - 1] = [2][2] = 4 =$ the distribution mean; (3) The distribution mode is always $[d.f.- 2] = [4 - 2] = 2$; (3) The distribution median is always approximates $[d.f. - 0.7] = [4 - 0.7] = 3.3$; (4) Due to the static or unchanging nature of the distribution, the distribution skew is always positive with the d.f. always equaling 4; and (5) The distribution formulae uses brackets "[]" in its formulaic notations to emphasize "a concentration on" for purposes of clarity. The Tri-Squared distribution is the foundation for the Tri-Squared Test which comprehensively incorporates the following Tri-Squared formulae: The Calculated Column Standard Deviation, The Calculated Row Standard Deviation, and The Sample Effect Size. The Tri-Squared Test is designed to create a comprehensive holistic research methodology from calculations conducted on the Standard 3×3 Tri-Squared Table which produces the following: (1) A positive result; (2) No information on the variable relationship direction; and (3) Associated Effect Size, Sample Size, and Alpha Levels (Osler and Waden, 2012b). It is important to note that the research instrument used in Tri-Squared is an invariant (unchanging) fixed static Test.

4. Describing the Iteration and Recursive Process of Tri-Squared Repeated Measurement

There are two forms of Repeated Measures in Trichotomously-Squared Inventive Investigative Instruments. They are: 1) Iterative repetitive Trifold Trichotomous Categorical Variables (a_1 , a_2 , and a_3); and 2) Nested Trifold Recursive Trichotomous Outcome Variables (b_1 , b_2 , and b_3).

"Iteration" is generally defined as the act of process repetition with the aim of reaching a desired target, goal, and/or result. Sequentially each subsequent "iterate" (individual iteration) is a repetition of the process. The outcome of an individual iteration is used as the starting point for the iteration that immediately follows. In the case of Tri-Squared research instruments, the term "iteration" refers to breakdown of the overall overarching investigation research question into three specific Categorical Variables so that it can be accurately measured. The results of these variables will clearly statistically state whether or not the initial research question has merit.

"Recursion" is broadly defined as the process of repeating items in a self-similar way. For example of this process, consider an illustration that contains multiple or infinite smaller and smaller nested identical images that repetitively occur over and over (as an identical image within an image, etc.). The term is applicable to the Tri-Squared researcher designed instrument in that it describes the threefold repetition of the structure of the Trichotomous Categorical Variable sub-questions that are each extracted from the three Categorical Variables (this thereby provides an Inventive Investigative Instrument that has a grand total of nine Trichotomous Outcomes nested within three interrelated, but distinctively specific Trichotomous Categorical Variables. The tabulated results of which create the Standard 3×3 Tri-Squared Table).

The mathematical definition of Trichotomous Repeated Measures in terms of "Iteration" and "Recursion" is represented by the "Trichotomous Invariant Recursive Iterative Formula". The i

$$Tri_c^2[Tri_k^2] = 3[3] = 3 \times 3 = \begin{matrix} \square & \square & \square \\ \square & \square & \square \\ \square & \square & \square \end{matrix} = \text{The Standard } 3 \times 3 \text{ Tri-Squared Table}$$

$Tri_c^2[Tri_k^2]$ = Trichotomous-Squared Columns (Categories);

$Tri_c^2[Tri_k^2]$ = Nested Trichotomous-Squared Rows (Outcomes); and

$Tri_c^2[Tri_k^2]$ = Trichotomous Columns (Categories) with Nested Trichotomous Rows (Outcomes) within Trichotomous-Squared Columns.

The aforementioned formula literally means the following: "Trichotomous Outcome Variables in Rows are nested (contained) within Trichotomous Categorical Variable in Columns". Repeated Measures Design is an internal characteristic of the Tri-Squared Test Inventive Investigative Instrument in terms of Trichotomous Outcome variables. The Tri-Squared Test instrument is constructed using the Inventive Investigative Instrument Metric that is Trichotomously Invariant [or "Unchanging"]. The internal invariant repeated measures process that is inherent and integral characteristic of Trichotomous Squared Inventive Investigative Instruments is illustrated in the series of Tables that follows as the "Base Index of Trichotomous Categories" found throughout nature:

Table 1 presents the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the psychological arena of Cognition in the Affective Domain of Learning (in two examples) and the scientific discipline of Chemistry (in one example). The series of Trichotomous Outcome Variables provides, (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 2 follows and illustrates the next series of possible repeated measures in one single discipline.

Table 2 illustrates the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the academic discipline of Mathematics (in three examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 3 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 3 displays the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in all disciplines, the science of Engineering, and the Psychological Arena of Decision-Making (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 4 follows and illustrates the next series of possible repeated

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments

Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Cognition: Affective Domain	Discipline and Related Content Area: Cognition: Affective Domain	Discipline and Related Content Area: Chemistry: Atomic Particles
b_1	Yes	Affirmative	Proton
b_2	No	Negative	Electron
b_3	No Opinion	Neutral	Neutron

Table 1. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments

Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Mathematics: Number Theory	Discipline and Related Content Area: Mathematics: Number Theory	Discipline and Related Content Area: Mathematics: Volume
b_1	+	Positive	Full
b_2	-	Negative	Empty
b_3	\emptyset	Neutral	No Volume

Table 2. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

measures in a series of three different disciplines.

Table 4 shows the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in academic discipline of Health, the academic discipline of Mathematics, and the scientific discipline of Biology (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 5 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 5 expresses the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the psychological arena of Cognition in the Psychomotor Domain of Learning, the scientific discipline of Quantum Physics, and the spiritual discipline of Metaphysics (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 6 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 6 states the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the spiritual discipline of Metaphysics, the scientific discipline of Engineering, and the scientific

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Applicable to All Disciplines	Discipline and Related Content Area: Engineering: Electricity	Discipline and Related Content Area: Psychology: Decision-Making	
b_1	Positive	High	Agree	
b_2	Negative	Low	Disagree	
b_3	Neutral	Ground	No Opinion	

Table 3. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Health Emotional State	Discipline and Related Content Area: Mathematics: Cartesian Coordinates	Discipline and Related Content Area: Biology: Biometric Identification	
b_1	Happy	Length (x)	Organic	
b_2	Sad	Height (y)	Non-Organic	
b_3	Calm	Width (z)	No Opinion	

Table 4. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Learning Psychomotor Domain	Discipline and Related Content Area: Quantum Physics: Particle Motion	Discipline and Related Content Area: Metaphysics: Religion	
b_1	Active	Active	Mind	
b_2	Still	Inactive	Will	
b_3	Asleep	Stasis	Emotions	

Table 5. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Metaphysics: Religion	Discipline and Related Content Area: Engineering: Electricity	Discipline and Related Content Area: Physics: Material States	
b_1	Mind	On	Matter	
b_2	Body	Off	Energy	
b_3	Spirit	No Charge	Vacuum	

Table 6. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

discipline of Physics (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 7 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 7 confirms the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the scientific discipline of Chemistry, the scientific discipline of Engineering, and the dual scientific disciplines of Mathematics and Computer Science (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 8 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 8 ratifies the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the dual scientific disciplines of Geography and Mathematics (in terms of Geospatial Relations), the spiritual discipline of Metaphysics, and again in the scientific discipline of Mathematics (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 9 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 9 illustrates the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the scientific discipline of Mathematics, the scientific mathematical research-based discipline of Statistics, and in the global general discipline of Science (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Chemistry: States of Matter	Discipline and Related Content Area: Engineering: Electricity	Discipline and Related Content Area: Mathematics and Computer Science: Binary Logic	
b_1	Solid	Hard	1	
b_2	Liquid	Soft	0	
b_3	Gas	Flexible	-	

Table 7. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 – b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Geography and Mathematics: Geospatial Directions	Discipline and Related Content Area: Metaphysical: States of Being	Discipline and Related Content Area: Mathematics: Set Theory	
b_1	Vertical	Mental	{1, 2, 3... +...}	
b_2	Horizontal	Physical	{... -..., -3, -2, -1}	
b_3	Diagonal	Spiritual	{ }	

Table 8. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 – b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Mathematics: Cartesian Coordinates	Discipline and Related Content Area: Statistics: Accuracy of Research	Discipline and Related Content Area: Science: Structure	
b_1	x = Abscissa	Objective	Systemic	
b_2	y = Ordinate	Biased	Random	
b_3	z = Applicata	Indifferent	Non-Structured	

Table 9. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 – b_3] Examples of Repeated Measures Terminology

according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 10 follows and illustrates the next series of possible repeated measures in a series of two different disciplines.

Table 10 displays the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the legal discipline of the Judiciary, and in the scientific mathematical research-based discipline of Statistics (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 11 follows and illustrates the next series of possible repeated measures in a series of one single discipline.

Table 11 explains the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the global general discipline of Science (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the three fold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 12 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 12 clarifies the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the dual scientific disciplines of Physics and Art, the scientific discipline of Mathematics, and in the academic discipline of History (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 13 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 13 elucidates the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the artistic discipline of Perspective, the academic discipline of Art, and in the specific

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Judicial: Judgment	Discipline and Related Content Area: Statistics: Accuracy of Research	Discipline and Related Content Area: Statistics: Accuracy of Research
b_1	Partiality	Valid	Consistent
b_2	Impartiality	Invalid	Random
b_3	Indifferent	Non-Relevant	Unmethodical

Table 10. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Science: Structure of Experiments	Discipline and Related Content Area: Science: Structure of Experiments	Discipline and Related Content Area: Science: Structure of Experiments
b_1	Contingent	Treatment	Predictable
b_2	Unconditional	Outcome	Unpredictable
b_3	Non-Existent	Control	Static

Table 11. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Physics and Art: Color and Light Values	Discipline and Related Content Area: Mathematics: Cartesian Coordinates	Discipline and Related Content Area: History: Human Affairs
b_1	Black	Horizontal	Peace
b_2	White	Vertical	War
b_3	Gray	Diagonal	Negotiation

Table 12. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

scientific discipline of general Mechanics (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 14 follows and illustrates the next series of possible repeated measures in a series of one single discipline.

Table 14 exemplifies the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the scientific discipline of Mathematics (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 15 follows and illustrates the next series of possible repeated measures in a series of two different disciplines.

Table 15 presents the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the scientific thermodynamic discipline of Temperature, and in the scientific discipline of Physics (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 16 follows and illustrates the next series of possible repeated measures in a series of two different disciplines.

Table 16 shows the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the academic and scientific discipline of Psychology (twice), and in the general global discipline of Science (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 17 follows and illustrates the next series of possible repeated measures in a series of three disciplines.

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area:	Discipline and Related Content Area:	Discipline and Related Content Area:	Discipline and Related Content Area:
	Perspective: Line of Vision	Art: Principles of Design	Mechanics: Component Connections	
b_1	High	Balanced		Tight
b_2	Low	Unbalanced		Loose
b_3	Horizon	Off Scale		Unharnessed

Table 13. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area:	Discipline and Related Content Area:	Discipline and Related Content Area:	Discipline and Related Content Area:
	Mathematics: Geometric Shapes	Mathematics: Primary Operations	Mathematics: Primary Operations	
b_1	Circle	Addition		Multiplication
b_2	Square	Subtraction		Division
b_3	Rhombus	Exponent		Absolute Value

Table 14. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area:	Discipline and Related Content Area:	Discipline and Related Content Area:	Discipline and Related Content Area:
	Temperature: Amount of Heat	Physics: States of Matter	Physics: States of Matter	
b_1	Hot	Hard		Porous
b_2	Cold	Soft		Non-Porous
b_3	Lukewarm	Flexible		Pliable

Table 15. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

Table 17 clarifies the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the psychometric discipline of Attainment, the community-based discipline of Service, and in the scientific discipline of Geography (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 18 follows and illustrates the next series of possible repeated measures in a series of two different disciplines.

Table 18 shows the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the spiritual discipline of Metaphysics, and in the academic and scientific discipline of Archaeology (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 19 follows and illustrates the next series of possible repeated measures in a series of three disciplines.

Table 19 elucidates the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the scientific, ergonomic, and assurance discipline of Quality Control, the academic

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Psychology: Learning Domains	Discipline and Related Content Area: Science: Structure of Experiments	Discipline and Related Content Area: Psychology: Emotional State
b_1	Cognitive	Independent Variable	Happy
b_2	Affect	Dependent Variable	Sad
b_3	Psychomotor	Control Variable	Calm

Table 16. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Attainment: Compensation	Discipline and Related Content Area: Service: Relief and Support	Discipline and Related Content Area: Geography: Existing Habitat
b_1	Rewarded	Helpful	Native
b_2	Unrewarded	Needful	Non-Native
b_3	Non-Participant	Independent	Newcomer

Table 17. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Metaphysics: Nature of Existence	Discipline and Related Content Area: Archaeology: State of Findings	Discipline and Related Content Area: Archaeology: State of Findings
b_1	Unlimited	Novel	New
b_2	Limited	Ancient	Old
b_3	Undefined	Unknown	Unique

Table 18. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Quality Control: Level of Qualification	Discipline and Related Content Area: Credentialing: Level of Qualification	Discipline and Related Content Area: Modeling: Application Descriptors
b_1	Compliant	Accredited	Universal
b_2	Non-Compliant	Non-Accredited	Non-Universal
b_3	Non-Credentialed	Unrecognized	Limited

Table 19. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

and expertise discipline of Credentialing, and in the general scientific discipline of applied Modeling (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 20 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 20 reveals the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the academic and expertise discipline of Credentialing, the academic and scientific discipline of Psychology, and in the general scientific discipline of applied Modeling (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 21 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 21 expounds on the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the academic and scientific discipline of Physics, the academic and scientific discipline of Psychology, and in the spiritual discipline of Metaphysics (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 22 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 22 explains the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the general and global discipline of Experience, the academic and scientific discipline of Physics, and in the global and holistic discipline of Nature (in three different examples). The series of Trichotomous Outcome Variables

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Credentialing: Level of Qualification	Discipline and Related Content Area: Psychology: Emotional State	Discipline and Related Content Area: Modeling: Nature of Lemma
b_1	Qualified	Patient	Universal
b_2	Non-Qualified	Impatient	Non-Universal
b_3	Uninterested	Non-Present	Non-Seeking

Table 20. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Physics: State of Energy	Discipline and Related Content Area: Psychology: Concentration Level	Discipline and Related Content Area: Metaphysics: State of Being
b_1	Harnessed	Attentive	Delivered
b_2	Unharnessed	Distracted	Bound
b_3	Wild	Detached	Free

Table 21. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Experience: Level of Expertise	Discipline and Related Content Area: Physics: State of Existence	Discipline and Related Content Area: Nature: State of Existence
b_1	Basic	Unity	Occupy
b_2	Intermediate	Chaos	Unoccupied
b_3	Advanced	Nothing	Empty

Table 22. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 23 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 23 confirms the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the spiritual discipline of Metaphysics and in the general discipline of Science (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 24 follows and illustrates the next series of possible repeated measures in a series of three disciplines.

Table 24 illustrates the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the business and industry discipline of Negotiation, the academic and scientific discipline of Psychometrics, and in the organizational discipline of the Structure of Systems (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 25 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 25 verifies the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the holistic discipline of Awareness, the organizational discipline of the Structure of Systems, and in the general discipline of Science (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 26 follows and illustrates the next series of possible repeated measures in a series of two different disciplines.

Table 26 provides evidence of the series of Trichotomous Relations that can be used to qualitatively measure as a series of

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Metaphysics: State of Being	Discipline and Related Content Area: Science: Structure of a Substance	Discipline and Related Content Area: Science: Arrangement of a Substance
b_1	Harmony	Sequential	Systemic
b_2	Disharmony	Random	Unorganized
b_3	Quiet	Unknown	Vacant

Table 23. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Negotiation: Affairs of State	Discipline and Related Content Area: Psychometrics: Decision-Making Choices	Discipline and Related Content Area: Structure of Systems: Organizational Dynamics
b_1	Agreement	Agree	Meeting
b_2	Disagreement	Disagree	No Meeting
b_3	Inconclusive	No Decision	Unscheduled

Table 24. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Awareness: State of Existence	Discipline and Related Content Area: Structure of Systems: Organizational Dynamics	Discipline and Related Content Area: Science: Chronological States
b_1	Here	Group	Timed
b_2	There	Regroup	Paused
b_3	Nowhere	No Group	Unrecorded

Table 25. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

Trichotomous Categorical Variables in the universal scientific discipline of Analysis and in the general discipline of Science (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 27 follows and illustrates the next series of possible repeated measures in a series of a single individual discipline.

Table 27 attests to the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the holistic discipline of Awareness (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 28 follows and illustrates the next series of possible repeated measures in a series of a single individual discipline.

Table 28 substantiates the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the holistic discipline of Awareness (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 29 follows and illustrates the next series of possible repeated measures in a series of two different disciplines.

Table 29 validates the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the comprehensive scientific discipline of Measurement and the holistic discipline of Awareness (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 30 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Analysis: Process of Inquiry	Discipline and Related Content Area: Analysis: Process of Inquiry	Discipline and Related Content Area: Science: Chronological States
b_1	Who	How	Logic
b_2	What	Where	Confusion
b_3	When	Why	Placid

Table 26. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Awareness: State of Existence	Discipline and Related Content Area: Awareness: State of Perception	Discipline and Related Content Area: Awareness: State of Experience
b_1	Exist	Reality	Perspective
b_2	Dissipate	Non-Reality	No Experience
b_3	Non-Existence	Eternal	Indifferent

Table 27. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Awareness: State of Interaction	Discipline and Related Content Area: Awareness: State of Activity	Discipline and Related Content Area: Awareness: Elements of Being
b_1	Empathy	Powerful	Internal
b_2	Aversion	Powerless	External
b_3	Indifferent	Empowered	Aside

Table 28. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

Table 30 authenticates the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the holistic discipline of Existence, the universal and natural discipline of Maturation, and the academic discipline of Philosophy (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 31 follows and illustrates the next series of possible repeated measures in a series of three different disciplines.

Table 31 confirms the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the scientific and academic discipline of Psychology, the holistic discipline of Awareness, and the academic discipline of Philosophy (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 32 follows and illustrates the next series of possible repeated measures in a series of one individual discipline.

Table 32 supports the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the comprehensive scientific discipline of Measurement (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 33 follows and illustrates the next series of possible repeated measures in a series of a three different disciplines.

Table 33 determines the series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the comprehensive scientific discipline of Measurement (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the threefold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. Table 34 follows and illustrates the next series of possible repeated measures in a series of a three different disciplines.

Table 34 is the final Table in this comprehensive list that establishes the last series of Trichotomous Relations that can be used to qualitatively measure as a series of Trichotomous Categorical Variables in the comprehensive scientific discipline of Measurement (in three different examples). The series of Trichotomous Outcome Variables provides (in units of three) the three fold possible "Trichotomous selections" that are the differentiated responses according to the mathematical Law of

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Measurement: Process of Activity	Discipline and Related Content Area: Measurement: Process of Activity	Discipline and Related Content Area: Awareness: Ethical Awareness
b_1	Start	Begin	Give
b_2	Stop	End	Take
b_3	Pause	Apart	Receive

Table 29. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments			
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators		
	Discipline and Related Content Area: Existence: State of Functionality	Discipline and Related Content Area: Maturation: State of Growth	Discipline and Related Content Area: Philosophy: Moral Principles
b_1	Autonomy	Dependent	Earned
b_2	Dependence	Independent	Stolen
b_3	Emancipation	Self Sufficient	Given

Table 30. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Psychology: Structural Model of the Psyche	Discipline and Related Content Area: Awareness: State of Perception	Discipline and Related Content Area: Philosophy: Moral Principles	
b_1	Id	Committed	Conditions	
b_2	Ego	Non-Responsive	Disorder	
b_3	Superego	Distracted	Random	

Table 31. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Measurement: State of Structure	Discipline and Related Content Area: Measurement: Evidence of Structure	Discipline and Related Content Area: Measurement: Type of Structure	
b_1	Organized	Place	Pattern	
b_2	At Random	Remove	Lack of Structure	
b_3	Empty	Elsewhere	Non-existence	

Table 32. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Measurement: Self-Assessment of Activity	Discipline and Related Content Area: Awareness: Compass of Involvement	Discipline and Related Content Area: Mathematics: Primary Geometric Shapes	
b_1	Purpose	Concerned	Square	
b_2	No Direction	Disinterested	Circle	
b_3	Not Involved	Indifferent	Triangle	

Table 33. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

A Taxonomy of Tri-Squared Test Terminology: For the Creation of Inventive Investigative Instruments				
Trichotomous Outcome Variables	Trichotomous Categorical Variables: As Indicators			
	Discipline and Related Content Area: Science: Components of Earth	Discipline and Related Content Area: Physics: Elements of Nature	Discipline and Related Content Area: Consumer Science: Taste Identification	
b_1	Vegetable	Matter	Flavor	
b_2	Mineral	Energy	Bland	
b_3	Gas	Space	No Taste	

Table 34. The Tri-Squared Test Taxonomy of Trichotomous Outcome Variables [b_1 — b_3] Examples of Repeated Measures Terminology

Trichotomy [as the set of Trichotomous Outcome Variables: b_1 ; b_2 ; or b_3]. The series of Tables 1 through 35 thus presented provide an all-inclusive set of examples Trichotomous repeated Measures data that can be used to create Tri-Squared Inventive Investigative Instruments for in-depth trichotomous inquiry. "A Differentiation of Three" is the key when it comes to the Law of Trichotomy and this is illustrated in the respective sets of Trichotomous Outcome Variables represented in each Table as: b_1 ; b_2 ; or b_3 .

Conclusion: A Summative Assessment of the Base Index of Trichotomous Repeated Measures

The purpose of this treatise is to provide an epistemological rationale for the Tri-Squared Test "Trichotomous Repeated Measures" methodology. During the discourse on Trichotomous Repeated Measures, this monograph presented an in-depth "Trichotomous Terminology" that can be used to create a variety of Tri-Squared investigative instruments. The narrative provided detailed examples of discipline specific tri fold terminology that could be qualitatively measured through the Tri-Squared Test via the application of the mathematical "Law of Trichotomy". The results of this in-depth dialog are reported in thirty-five distinctive tables. The results presented in the tables can be applied directly to the formulation of researcher-designed Tri-Squared Inventive Investigative Instruments. Thus, the application of the values on this list depends

greatly upon the scope of the research subject matter and how readily it is employed in the researcher's data analysis methodology. As a comprehensive and extensive catalog of Tri-Squared Trichotomous Categorical and Outcome Variables, this exposition is in fact, a universal utility that provides a source of readily available, detailed, and immediately applicable terms. The terms are written as ideal examples of Tri-Squared Trichotomous Variables. The Trichotomous Variables listed here are an index of terms that investigators can quickly refer to as they prepare to psychometrically design their researcher-designed Inventive Investigative Instruments.

Due to its nature as a "Trichotomous Fixed (or Static) Test" the Tri-Squared research design methodology is completely dependent upon the inflexible mathematical structure of the Tri-Squared Inventive Investigative Instrument (so much so that its associated outcomes are careful and critical reflections of the research instrument design). The thirty-five tables provide a clear set of Trichotomous researchable values that are presented in the Tri-Squared structure to ease in the design and creation of the Tri-Squared research instrument. Through the use of this wide-ranging resource, Trichotomous Inventive Investigative Instruments can be rapidly created with an assured level of validity, reliability, and objectivity. Accordingly, this exhaustive list of Tri-Squared Variables becomes a vital and critical component in the design of Tri-Squared research investigation tools. These selfsame Tri-Squared research investigation tools (through the use of the values presented here in the Trichotomous Tables) now that have the ability to conduct research in a broad range of disciplines and sciences. Such growth expands the use of the Tri-Squared Test as a statistically valid and approachable model, and comprehensively increases the value of the Tri-Squared Test research methodology as a whole.

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