



# **Relationship Panoramic<sup>®</sup> Inventory Technical Manual**

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**Disclaimer:**

Please note that relationship panoramic<sup>®</sup> inventory is not a screening, prognostic or diagnostic test. It does not assess a couple's mental health status. Although it is scientifically validated to help increase self-awareness as it relates to a primary relationship, the insights provided in this manual are generic by nature and do not replace professional advice given by a licensed counselor, therapist or accredited coach. Relationship Panoramic and the result of this test does not hold any legal bearing and cannot be used as such. While we have made every attempt to ensure that the information contained in this technical manual and in the assessments has been obtained from reliable sources, relationship panoramic is not responsible for any errors or omissions, or for the results obtained from the use of this information.

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# Introduction

## Definition of Emergent Love

Emergent Love is the capacity of a relationship to become thriving and mutually satisfying as a result of a couple's intention to choose compassion, love, commitment, respect, trust and physical attraction toward each another on an ongoing basis. Emergent Love can exist as long as the interpersonal dynamics that makes it possible perpetuates in a relationship. It is a mutually empowering, sustainable and liberating experience in contrast to “submergent”, enmeshed, codependent, misconstrued, fleeting and abstract types of love. Emergent Love offers a fresh and hopeful framework. A way of experiencing long term relationships which is based on the thinking that one plus one equals three, not that two parties will become one or two parties become intertwined.

## Background on the Relationship Panoramic® Inventory (RPI)

### A Brief History of the Development of the RPI

The RPI is a 360-degree tool designed to assess the outcomes, interpersonal dynamics and dyadic and individual fundamentals of couples in long-term relationships. It is constructed when Dr. Sara Nasserzadeh's Emergent Love Model developed through her grounded theory research over 15 years in combination with Dr. Pejman Azarmina's Pyramid of Self-Awareness Scale (PSAS) with scales such as Thinking Style, Connection Style, Personal Values and Thinking Content. Their collaboration led to the conceptualization and addition of a multitude of items, measures and scales to ensure this instrument is comprehensive and holistic in its assessment of a dyadic relationship.

The seeds of Emergent Love Model were initially planted by Dr. Nasserzadeh in 2007 when she proposed that Love is an emergent phenomenon that can “emerge” when other qualities such as mutual respect, shared vision, compatibility, compassion, empathy and physical attraction exist in a relationship. About a decade later, these themes were developed through a grounded theory research<sup>1</sup> conducted on her clients' records to determine what makes a relationship thriving and fulfilling over a long period of time. These themes were turned into items and were tested over a few years and on hundreds of clients globally to be distilled and refined into the model that you see here in Emergent Love Scale.

Pyramid of Self-Awareness Scale (PSAS) was developed by Dr. Azarmina in year 2012 when he developed and validated an instrument to holistically assess 5 domains that could help leaders in their self-development journeys. These domains were personal values, thinking content, thinking style, connection style and modus operandi. When Dr. Azarmina started collaborating with Dr. Nasserzadeh, they felt that there is a direct implication of utilizing scales such as personal values, thinking styles, connection styles and thinking content in working with couples. That led to a series of refinements and rewording of certain items that customized them for RPI.

To further enhance the 360-degree nature of RPI, Drs. Nasserzadeh and Azarmina collaborated to add items, scales and measures to address the following areas of a couple's relationship:

- Sexual and Relationship Orientations
- General, religious and political interests
- Temperaments and circadian energy levels
- Sexual health and wellbeing
- Healthy living and lifestyle
- Positive and negative emotions

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<sup>1</sup> Presented at San Francisco Psychological Association in 2018 and International Association for Relationship Research 2021 Conference in London.

- Healthy financial attitude
- Conflict and crisis management style
- Negative self-talk and feeling about the future of a relationship
- Adopted dyadic roles
- Relationship stressors
- Relationship trend and model
- Adverse childhood experiences
- Construct of individual identity

The earlier iterations of RPI were piloted with 48 couples and individuals (data on file) and resulted in elimination of items that didn't offer any clinical or statistical value. Factor analysis also led to formation of subscales and elimination of additional items.

In 2019, a US study using Mechanical Turks was conducted to establish the validity and reliability of the inventory using 159 couples and 345 individuals in committed relationships. This technical manual is written to highlight the results of that study.

### **The Need for the RPI**

There were a number of psychometric properties of the PSAS and the earlier versions of the RPI that could be improved: (1) there was a desire to reduce the number of items based on the feedback from clients; (2) we wanted to integrate the two into one coherent instrument; (3) we hadn't explored the validity of Emergent Love Scale against other instruments such as CSI, R-DAS and LAS; and (4) current instruments in the market were originally developed several decades ago and we felt most of them did not consider the needs of modern relationships in the context of new gender roles, sexual orientations, relationship orientations and gender identities. The validation process for the RPI was done in a manner to address all of the above-mentioned concerns.

This process was done in the following steps:

- 1) An inventory of all items inclusive of pre-existing scales and measures was compiled and reviewed by the creators of the RPI. The wording of questions and responses was examined to ensure they are aligned with the essence of each concept being examined. Also, an algorithm was devised to score each scale and a preliminary framework for subscales based on the literature was determined.
- 2) The initial inventory was tested in 2018 on 48 individuals and couples including subject matter experts and psychologists. We analyzed their responses and recorded their qualitative feedback on the scales and measures included in the instrument. Based on their feedback, we eliminated more items, edited the wording of some questions or answers and included additional ones to ensure the comprehensiveness of the assessment.
- 3) In mid 2019, the US validation study was conducted (protocol available in Appendix 1), which led to the current version of the RPI. In this process, we conducted a full range of psychometric tests including factor analysis to further refine the inventory, change the naming and structure of the subscales and revised the framework that provided a holistic view of one's relationship.

### **Relationship Panoramic Framework**

The Relationship Panoramic Inventory (RPI) measures 20 dimensions of coupledom organized into four domains: Relationship Outcomes, Interpersonal Dynamics, Dyadic Fundamentals and Individual Fundamentals.

**Relationship Outcomes** concerns how the health of a relationship manifests itself in a given couple. It consists of the following 5 dimensions:

- **Core Outcomes:** The following three dimensions are called core outcomes because by definition they are the key positive outcomes a person may wish to experience in a healthy relationship. As seen, the longevity of a relationship in this framework is not regarded as a core outcome and this choice was made intentionally by the creators of RPI.
  - o **Sense of Fit:** sense of fit felt by each member of a dyad.
  - o **Sense of Thriving:** sense of thriving and growth felt by a member of a dyad and affirmed by the partner.
  - o **Global Satisfaction:** sense of satisfaction about the relationship felt by a member of a dyad and affirmed by the partner.
- **Oscillatory Outcomes:** The following two dimensions are regarded oscillatory because sometimes they are the *effect* or desired outcome of a healthy relationship and sometimes, they are the *cause* for a healthy relationship.
  - o **Sexual Health & Satisfaction:** a composite index indicating an individual's frequency of sex, their satisfaction with the frequency and quality of sex, the consensual nature of their sex and whether their partner has sufficient sexual desire for them.
  - o **Healthy Living & Lifestyle:** a composite index indicating an individual's physical, mental and emotional health as well as their healthy lifestyle.

**Interpersonal Dynamics** refers to how the two members of a dyad behave toward one another on a daily basis. This is by far the strongest predictor of how positive outcomes are felt in a relationship. Interpersonal dynamics are either expressed or received by each member of a couple and in the report, there are two different charts for interpersonal dynamics, one for *expressed* dynamics and one for *received*.

- **Respect:** could be defined in two ways, how much someone shows respect toward the other person and how much that same person receives respect from their partner.
- **Compassion:** similar to respect the two sides of compassion are either being compassionate toward a partner as well as feeling compassion from a partner.
- **Commitment:** in this case it is either being committed toward a partner and seeing commitment in one's partner.
- **Love:** for the purpose of this test, we allow each individual in a couple relationship define and interpret the meaning of love and determine if they love their partner or they feel loved by their partner.
- **Trust:** this dimension is also defined in two ways, trusting one's partner as well as being trusted by a partner.

**Dyadic Fundamentals** are five dimensions that matter to a relationship outcome only if they are shared by the couple. In other words, mutuality, reciprocity, degree of commonness and alignment in these four areas determine how impactful they could be to the outcome of a relationship.

- **Mutual Physical Attraction:** similar to interpersonal dynamics, it is assessed based on how much a person is attracted to a partner as well as how much he or she feels that their partner is attracted to them. In other words, it is the combination of being attracted and feeling attractive. To calculate mutual physical attraction, we subtracted physical attraction scores of a person in a dyad from the other. The lower the difference, the more their physical attraction is mutual.
- **Shared Vision:** each individual has a vision or a mental image of an ideal state for their relationship. This might include love, having a lifelong companion, having children and being in an exclusive sexual relationship. Shared vision is defined as having a smaller difference on average for the 10 components of a vision they could have for a relationship. As reported in this manual, shared vision was found to have predictive properties for a more positive relationship outcome.

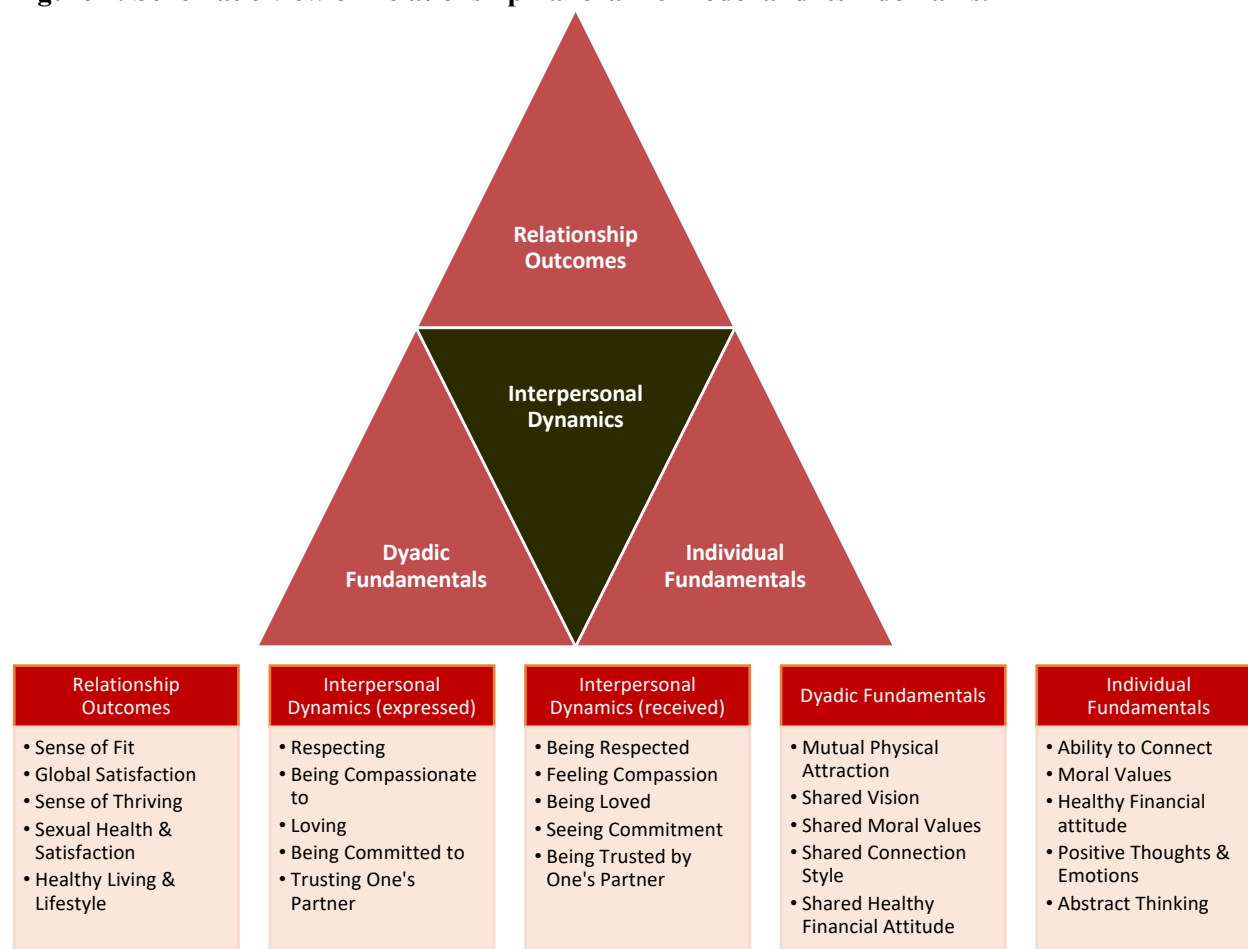


- **Shared Moral Values:** Placing importance and mental values to concepts such as honesty, fairness, integrity and doing the right thing is defined as moral values. It is different from moral behavior, which is based on the *act* of being honest as well as *demonstrating* integrity and fairness. Shared moral values is about the similarity of a dyad in their moral compass, which in turn leads to better relationship outcomes.
- **Shared Connection Style:** is regarded as the similarity of two individuals in a dyadic relationship in the way in which they connect and relate to one another and to the world. The four modes of our connection style are: respect & manners, dress & look, touch & affection, and mood & tone.
- **Shared Healthy Financial Attitude:** healthy financial attitude refers to a set of attitudes that could lead to financial security and better outcomes. This includes concepts such as saving for the future, paying credit card debts and working with a budget. In dyadic relationships, similarity in healthy financial attitude was shown to be associated with better relationship outcomes.

**Individual Fundamentals** are five individual attributes that are associated with a more positive relationship outcome.

- **Multi-Modal Ability to Connect:** also known as “Connection Style” is the ability of an individual to connect naturally with other individuals using multiple modes of human connection as determined by our factor analysis. As mentioned above, these four modes are: respect & manners, dress & look, touch & affection, and mood & tone.
- **Positive Thoughts and Emotions:** These two dimensions are found to be associated with positive relationship outcomes. Positive thoughts in this inventory refers to an individual’s optimism, hope and focus on positive concepts and thoughts. Positive emotions in this inventory refers to 10 emotional states that have a positive connotation such as being hopeful, joyful, brave and confident.
- **Abstract Thinking Style:** refers to a way of thinking that includes pattern recognition, logic, conceptualization, visualization and fact checking. We measure abstract thinking style as a subscale of Thinking Style Scale, which measures our multi-modal ability to think.
- **Moral Values:** As mentioned earlier, placing importance and mental values to concepts such as honesty, fairness, integrity and doing the right thing is defined as moral values. In our conceptual framework, high moral values in an individual is associated with better relationship outcomes.
- **Healthy Financial Attitude:** As mentioned earlier, healthy financial attitude refers to a set of attitudes that could lead to financial security and better outcomes. We also found that healthy financial attitude in an individual is associated with better relationship outcomes.

**Figure 1: Schematic view of Relationship Panoramic Model and its 4 domains.**



### What else is included in the Relationship Panoramic Inventory?

In addition to the backbone of the RPI which is founded on the 4 domains and 20 dimensions listed and defined above, we also include the following information in the report, which might have clinical utility and applications.

#### Relationship Strengths

When a report is generated, a broad perspective is provided to demonstrate which domains (and subdomains) are regarded as a strength in that given relationship, which domains (and subdomains) are about average and which ones may require some intentional work. Our reference to define “Average” is the US representative sample studied in our validation research.

For domains 1, 2 and 4 (relationship outcomes, interpersonal dynamics and individual fundamentals), **strength** is defined as being above the 75<sup>th</sup> percentile of the validation sample. For domain 3 (dyadic fundamentals), strength is defined as being “not different” or “slightly different” in those four shared attributes (i.e., 25% or less different).

For domains 1, 2 and 4, being “**about the average**” is defined as being between the 25<sup>th</sup> and 75<sup>th</sup> percentiles of the validation sample. For domain 3, “being about the average” is defined as being “moderately different” in those shared attributes (i.e., 26-50% different).

For domains 1, 2 and 4, an “**area that needs attention**” is defined as being below the 25<sup>th</sup> percentile of the validation sample. For domain 3, an “area that needs attention” is defined as being “very different” or “extremely different” in those shared attributes (51% or more different).

### **Marital Status**

As this inventory is only recommended for people in a dyadic relationship, we only included the following 5 categories in their marital status: married, engaged, cohabiting, Single (in an exclusive relationship, but not cohabiting), In a domestic partnership or civil union, and lastly in an open relationship or marriage.

### **Relationship Orientation**

In this inventory, four different relationship orientations are identified: monogamy, monogamish, open relationship/marriage and polyamory. An open-ended option is offered to capture other relationship orientations not listed above. We recommend that couples in multiple partnerships take the RPI one relationship at a time for the most accurate reflection of their dyadic relationship.

### **Sexual Orientation**

In RPI, the following sexual orientations are included: heterosexual (straight), gay, lesbian, bisexual, pansexual and queer. An open-ended option is offered to capture other sexual orientations not listed above.

### **Sexual Health & Satisfaction**

A total of 18 items are used to assess one’s sexual health and satisfaction in the context of their relationship. Please note that only 6 of the following items are included in the Sexual Satisfaction dimension of Relationship Outcomes. All responses are captured using a Likert scale of 1 to 5.

**Table 1: Items included in Sexual Health & Satisfaction Measure**

<b>Sexual Health &amp; Satisfaction Items</b>
Frequency of sex*
Satisfaction with the frequency of sex*
Satisfaction with the quality of sex*
Consensual sex <ul style="list-style-type: none"> <li>- If I say no, my partner doesn't insist on having sex*</li> <li>- If my partner says no, I don't insist on having sex *</li> </ul>
My sexual interest/arousal is absent or reduced.
My partner's sexual interest/arousal is absent or reduced.*
Sexual intercourse is painful or difficult for me or my partner.
Sexual intercourse is mixed with fear or anxiety for me or my partner.
My partner and I have different sexual needs.
Intimate touch feels uncomfortable for me or my partner.
Foreplay is usually not part of our lovemaking.
We consistently practice safer sex (e.g. use condoms).
We consistently use an effective method of birth control.
For women: my orgasmic sensations are absent, delayed, less frequent or less intense.
For men: my ejaculations are markedly delayed, infrequent or absent.
For men: my ejaculations are markedly early or premature.
For men: I have difficulty obtaining and/or maintaining erections during sexual activity

\* Items included in the sexual health & satisfaction scale.

### **Negative Thoughts**

Negative thoughts refers to pessimistic thoughts or thoughts that focus on one's shortcomings, weaknesses, bad memories and worries about the future.

### **Negative Emotions**

Negative emotions in this inventory refers to 10 emotional states that have a negative connotation such as being anxious, sad, fearful and insecure.

### **Thinking Style**

Thinking Style or "Multi-modal Ability to Think" demonstrates our ability to use abstraction, information, organization and facilitation in varying degrees to think effectively. Definition of abstract thinking is mentioned above. *Information* refers to our need to access and process information to think more effectively. *Organization* means that someone may need to organize their physical or virtual surroundings or take a walk or talk to someone else in order to think more effectively. *Facilitation* means that our thinking needs to be facilitated by doing something else, typically listening to music or looking at images, arts, videos, etc.

### **Adverse Childhood Experiences (ACE)**

This question allows the test taker to record what adverse childhood experiences they had and to provide a window to their past that might have valuable therapeutic implications for their counselor or therapist.

### **Individual Identity**

This question provides an opportunity to the test taker to express the most important components of their personal identity. The options include one's gender, sexual orientation, ethnicity, career, education, family and so on.

### **General Interests**

After several iterations, the question on general interests and hobbies is designed to capture one's strong interests in various activities and/or hobbies. This list includes items such as books, movies and cultural events to gambling, guns and porn.

### **Political Interests**

This question tries to assess an individual's interest in a political thought or philosophy. Options include capitalism, environmentalism, socialism among several others.

### **Religious Interests**

The question on religious interests captures one's affiliation with or at least interest in a particular religion or spiritual path. Main world religions plus some branches of Christianity are included in this item.

### **Temperaments and circadian energy levels**

By temperaments, we refer to the following 3 dimensions: 1) preference to stay warm vs. cool, 2) preference for dry vs. humid climate, and 3) preference to live somewhere with 4 distinct seasons or to have nice weather all year round.

Circadian energy level refers to times of the day that a person feels more energy to focus and be productive. It seems that there is even a biological ground for being early birds vs. night owls.

### **Conflict and crisis management style**

This question addresses how an individual address conflict and crisis in a relationship. Some people may prefer to withdraw from the situation, while others might prefer to be more upfront and confrontational. This question identifies 8 possible reactions in situations like this.

### **Negative self-talk and feeling about the future of a relationship**

Negative self-talk is a proxy for how much a person feels resentment toward a relationship partner. We also included a question about how they feel about the future of a relationship, which captures 10 possible feelings such as optimism, security, indifference and insecurity.

### **Adopted Dyadic Roles (ADRs)**

Each person in a relationship has an archetypal view on how they relate to each other. We have identified the following 10 metaphors or archetypes that couples can adopt when they look at their relationship.

- Best friends
- Thinking partners
- Lovers
- Sex partners
- Parent and “adult child”
- Co-parents
- Teammates
- Roommates
- Mentor and Protégé
- Leader and follower

### **Relationship stressors**

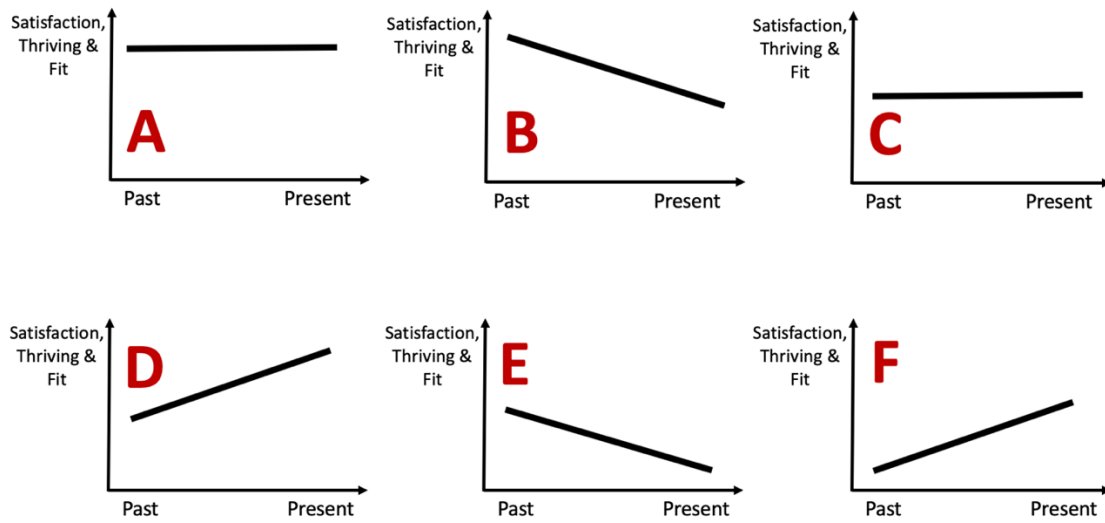
Another measure that might be helpful in the context of therapy or counseling is to identify a relationship’s key stressors. In RPI, we ask them about the following stressors that they could choose from:

- Birth of their child or children
- Major health issues
- Relocation or immigration
- Unemployment
- Job-related stress
- Affair
- Physical and/or emotional abuse
- Loss in the family
- Financial issues
- Legal issues
- COVID-19

### **Relationship trend and model**

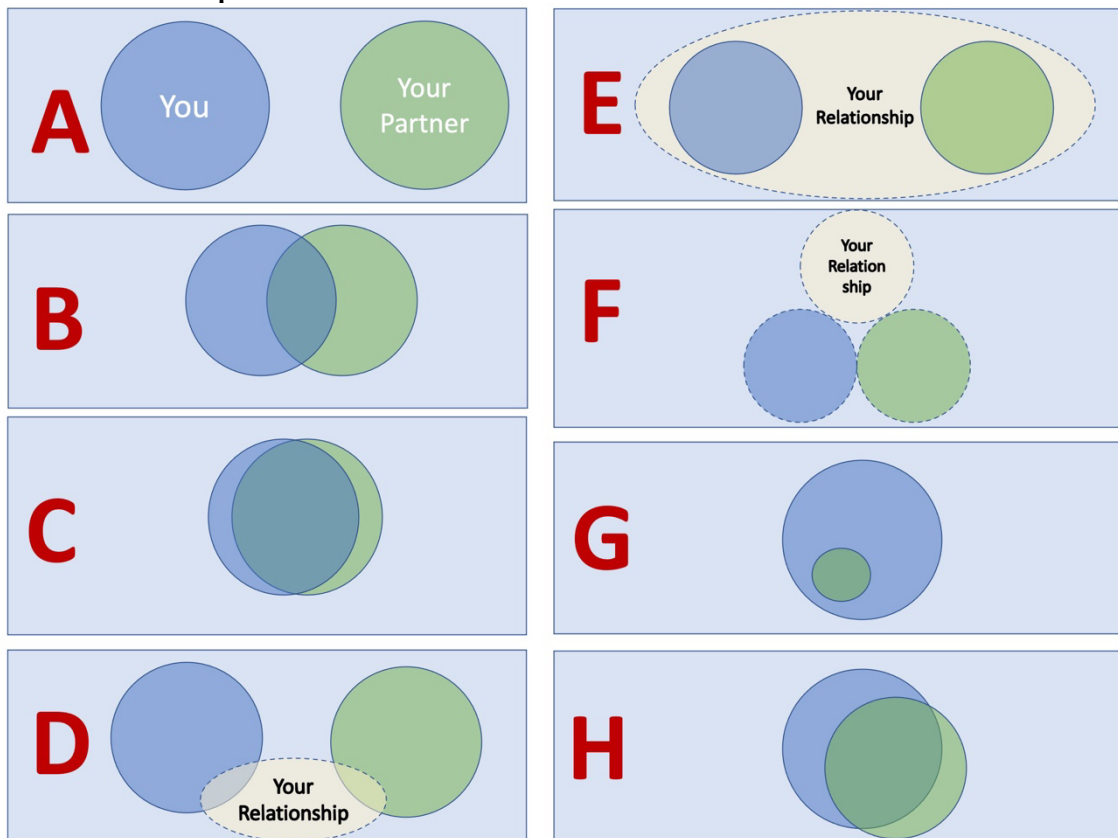
The question about relationship trend identifies how they view their starting point or baseline in their relationship and how they anticipate its future to be. Based on that, the following 6 charts are presented to them to pick from.

**Figure 2: Six relationship trends over time.**



The question about relationship models is based on the following 6 charts that depicts them as circles (or bubbles) in relation to each other as well as in relation to their relationship or coupledom. This chart is important in a sense that it not only asks them about what they regard as an ideal model, but also encourages them to think which model represents their current relationship.

**Figure 3: Six relationship models**



## Using the RPI Appropriately

The RPI can be used by licensed mental health providers for assessment and development as well as researchers for studying close relationships. There are a number of issues that must be understood about the instrument if it is to be used appropriately and effectively.

### Clinical vs. Research Uses

The RPI is not intended to be used as a screening, diagnostic or prognostic tool. The proper use of the RPI in a clinical setting is to holistically assess multiple dimensions of a couple's relationship and identify areas that might contribute to their presenting problem. Although the instrument is valid across a broad array of sexual and relationship orientations and has been found to be reliable, it is designed to be general in nature. Each dimension measured by the RPI may or may not be relevant to any specific relationship, thus using RPI as a self-help tool and without the guidance of a certified professional may offer less value.

RPI can also be used as a research tool and in academic settings. In that case, feedback is only to be given by certified users, thus, researchers should not give individual feedback to participants in their study unless they are accredited to do so. An overall summary of the study results without individual data is an appropriate level of feedback for unaccredited researchers to provide to participants.

### Scoring

When the RPI is scored by the Relationship Panoramic's Reporting and Analytics Department, feedback reports reflect a proprietary algorithm for combining couple scores. These scores are different from percentage scores that are generally compared against the 25<sup>th</sup> and 75<sup>th</sup> percentiles. In couple reports, both the scored and average-item norms are presented, therefore, be sure to use the appropriate ones for your purposes.

### Clustering of Dimensions and Formation of Domains

The Relationship Panoramic Model represents a set of dimensions clustered together in order to create cohesive constructs that could be categorized together. For example, moral values as a single measure in an individual is regarded as an individual fundamental. However, similarity of moral values in two individuals is called "shared moral values", which categorically belongs to dyadic fundamentals. Table below demonstrates how scales and subscales in RPI are related to our 4-domain model.

Understanding the following two concepts are core to understanding this model:

1. A panoramic assessment of a dyadic relationship inherently requires an assessment of the following 4 domains:
  - how a couple subjectively view and perceive the outcome of their relationship,
  - how they interact on a daily basis (interpersonal dynamics),
  - their compatibility as a dyad (e.g. having a shared vision), and
  - certain individual characteristics (e.g. moral values). This is the essence of the model, which is informed by our research as well.
2. Relationship Panoramic is primarily a strength-based model. It means that although the report contains areas that need to be addressed, but the main focus is going to be the understanding of the relationship's strengths and how to leverage them to sustain and promote a healthy and thriving partnership.

**Table 2: Twelve scales and four domains of Relationship Panoramic Inventory**

Scales	Subscales	Domains	
Sexual Health & Wellbeing Scale		Domain 1: Relationship Outcomes	
Healthy Living & Lifestyle Scale			
Emergent Love Scale	Items related to fit, thriving and satisfaction (core outcomes)	Domain 2: Interpersonal Dynamics	
	Items related to respect, love, commitment, compassion and trust		
	Items related to physical attraction	Domain 3: Dyadic Fundamentals	Domain 4: Individual Fundamentals
Relationship Vision Scale			
Personal Values Scale	Moral Values Subscale		
Connection Styles Scale			
Health Financial Attitude Scale			
Positive Thoughts Scale			
Position Emotions Scale			
Thinking Styles Scale	Abstract Thinking Subscale		
Negative Thoughts Scale		Not in any domains	
Negative Emotions Scale			
<b>Non-scale measures:</b> <ul style="list-style-type: none"> <li>- Construct of individual identity</li> <li>- General, religious and political interests</li> <li>- Temperaments and circadian energy levels</li> <li>- Conflict and crisis management style</li> <li>- Negative self-talk and feeling about the future of a relationship</li> <li>- Adopted dyadic roles</li> <li>- Relationship stressors</li> <li>- Relationship trend and model</li> <li>- Adverse childhood experiences</li> <li>- Sexual and relationship orientations</li> </ul>			

The implication of having these 4 domains is that it does not make sense, on a statistical and theoretical basis, to obtain an overall RPI score by simply adding the scores for all dimensions in all domains. A researcher or practitioner must not assume that one set of dimensions fits all situations. There are many ways to be equally effective. To use the RPI appropriately, a researcher should develop a hypothesis about how the dimensions work together in the specific context being studied and develop a means of combining dimension scores based on an algorithm.

For practitioners using the feedback report produced by the Relationship Panoramic company, we use a proprietary algorithm that allows practitioners and couples to visually see how their results compare to others and how they are related to their partner's scores. We have found this to be effective for couples in many situations and is appropriate for assessment and therapeutic purposes.

The following table shows the 25<sup>th</sup> percentile, 50<sup>th</sup> percentile and 75<sup>th</sup> percentile of all dimensions reported in Relationship Panoramic. Please note that for couples aspiring to thrive in their relationships, 75<sup>th</sup> percentile could be regarded as their target.



**Table 3: Means and percentiles for key domains measured in RPI.**

Domains		Means	Percentiles		
			25	50	75 or Target
Relationship Outcomes	Sense of Fit	88%	75%	100%	100%
	Sense of Thriving	82%	75%	88%	100%
	Global Satisfaction	84%	75%	88%	100%
	Sexual Satisfaction	66%	53%	67%	80%
	Healthy Living & Lifestyle	57%	45%	55%	71%
Interpersonal Dynamics (expressed)	Respecting	91%	75%	100%	100%
	Being Compassionate	92%	75%	100%	100%
	Loving	94%	100%	100%	100%
	Being Committed	93%	100%	100%	100%
	Trusting	87%	75%	100%	100%
Interpersonal Dynamics (received)	Being Respected	86%	75%	100%	100%
	Feeling Compassion	89%	75%	100%	100%
	Being Loved	91%	75%	100%	100%
	Seeing Commitment	91%	75%	100%	100%
	Being Trusted	84%	75%	100%	100%
Dyadic and Individual Fundamentals	Being Attracted	89%	75%	100%	100%
	Feeling Attractive	85%	75%	100%	100%
	Ability to Connect	79%	71%	80%	91%
	Moral Values	83%	75%	88%	94%
	Healthy Financial Attitude	69%	57%	68%	82%
	Positive Emotions	66%	55%	68%	78%
	Positive Thoughts	59%	48%	58%	71%
Abstract Thinking	61%	50%	63%	75%	

### Use of Self Ratings vs. Dyadic Ratings

The RPI is intended to be used in a dyadic mode. Self-ratings alone may be useful for providing developmental feedback to an individual in a dyadic relationship; however, it is impossible to determine dyadic fundamentals based on an individual response. The same can be argued for relationship outcomes and interpersonal dynamics because the opinion of both individuals is required to draw an accurate panoramic view of a relationship.

### What is Considered Valid Data

When collecting RPI data, it is important to recognize that all of the data collected may not be useable. When the instrument is scored by the Relationship Panoramic, we don't include the information from some items in constructing a dimension. For example, sexual health and satisfaction section has 18 items but only 6 of them are included in determining the score we use in the relationship outcomes domain (Table 1). The rest might have clinical values and we report them so the provider working with a couple could use them in their assessment and therapies.

Another point is that the test is primarily validated when taken as a couple. If a person takes the test as an individual in a dyadic relationship, the report on individual fundamentals would be valid and accurate but the other domains only demonstrate one person's perspective for that relationship.

RPI like most other self-administered tests is highly dependent on the responder's degree of self-awareness and honesty when answering the questions. Therefore, results that are too different from a partner's point of view or paint a truly perfect relationship need to be further assessed for potential bias.

## Summary of Reliability and Validity

This section of technical manual provides background information on the Relationship Panoramic Inventory (RPI), reliability and validity information, and norms.

### Reliability Overview

Internal consistency reliability (Cronbach's alpha) of the instrument in general has been found to be good with the following ranges for each scale used in the inventory:

**Table 4: Summary of RPI scales' internal consistency and reliability**

Scale	Number of items	Cronbach's Alpha	Internal Consistency Reliability
Emergent Love Scale	17	0.955	Excellent
Sexual Health & Satisfaction Scale	6	0.716	Acceptable
Healthy Living & Lifestyle Scale	11	0.783	Acceptable
Relationship Vision Scale	10	0.644	-
Ability to Connect Scale	14	0.906	Excellent
Personal Values Scale	32	0.891	Good
Thinking Styles Scale	12	0.807	Good
Positive Emotions Scale	10	0.891	Good
Negative Emotions Scale	10	0.869	Good
Positive Thoughts Scale	6	0.705	Acceptable
Negative Thoughts Scale	4	0.738	Acceptable
Healthy Financial Attitude Scale	7	0.670	-

Test-retest reliability studies are planned for in 2022.

### Validity Overview

A US validation study is presented in this manual that highlights the criterion and construct validity of the Instrument (see Appendix 1 for the study protocol). Research presented here shows that RPI is related to key outcomes such as couples' satisfaction and dyadic adjustment as measured by CSI-32<sup>2</sup> and R-DAS<sup>3</sup> validated measures, respectively. RPI, in particular *Emergent Love Scale*, is also related to Eros, Storge and Agape styles of love as measured by LAS<sup>4</sup>. Ability to Connect and Positive Emotions were negatively related to avoidant and anxious attachment styles as measured by ECR-R<sup>5</sup>.

The US validation study consisted of two sub-studies, one focusing on individualized outcomes and the other on dyadic outcomes. Emergent Love Scale with its three subscales, Sexual Health & Satisfaction Scale, Healthy Living & Lifestyle Scale, Ability to Connect Scale, Personal Values Scale and its Moral Values subscale, Abstract Thinking subscale of Thinking Styles Scale, Positive and Negative Emotions Scales, Positive Thinking Scale and Healthy Financial Attitudes Scale were found to be significantly correlated with CSI-32, R-DAS and Eros, Storge and Agape styles of love.

Shared vision, mutual physical attraction, shared moral values and shared ability to connect were also found to be significantly correlated with CSI-32, R-DAS and Eros and Agape styles of love. Shared healthy financial attitude was correlated only with R-DAS.

<sup>2</sup> CSI: Couples Satisfaction Index

<sup>3</sup> R-DAS: Revised Dyadic Adjustment Scale

<sup>4</sup> LAS: Love Attitudes Scale

<sup>5</sup> ECR-R: Experiences in Close Relationships - Revised

**Table 5: Criterion validity of RPI in the individuals' US study (N=345)**

Scale	CSI-32	R-DAS	LAS-EROS	LAS-AGAPE	LAS-STORGE
Emergent Love Scale	.804**	.739**	.657**	.434**	.199**
- Core Outcomes	.803**	.727**	.664**	.384**	.184**
- Interpersonal Dynamics	.752**	.699**	.601**	.466**	.190**
- Physical Attraction	.628**	.585**	.593**	.286**	.178**
Sexual Health & Satisfaction Scale	.441**	.420**	.447**	.126*	.118*
Healthy Living & Lifestyle Scale	.299**	.326**	.243**	.120*	.221**
Ability to Connect Scale	.527**	.551**	.446**	.343**	.224**
Personal Values Scale	.124*	.179**	.166**	.093	.227**
- Moral Values	.288**	.335**	.275**	.322**	.106
Thinking Styles Scale	.072	.119*	.078	.096	.173**
- Abstract Thinking	.148**	.152**	.119*	.130*	.121*
Positive Emotions Scale	.342**	.348**	.304**	.226**	.218**
Negative Emotions Scale	-.313**	-.354**	-.268**	-.212**	-.182**
Positive Thoughts Scale	.135*	.217**	.175**	.114*	.152**
Negative Thoughts Scale	-.034	-.028	-.009	.067	.008
Healthy Financial Attitude Scale	.299**	.308**	.180**	.139*	.104

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Table 6: Criterion validity of RPI in the Couples' US study (N=159 couples)**

Scale	CSI-32 Average	R-DAS Average	LAS-EROS Average	LAS-AGAPE Average	LAS-STORGE Average
Difference in Emergent Love Scale	-.488**	-.473**	-.391**	-.281**	-.048
- Difference in Core Outcomes	-.486**	-.481**	-.406**	-.207*	-.006
- Diff. in Interpersonal Dynamics	-.470**	-.479**	-.390**	-.296**	-.107
- Difference in Physical Attraction	-.415**	-.404**	-.398**	-.195*	-.168*
Difference in Sexual Health & Satisfaction	-.320**	-.392**	-.345**	-.02	-.061
Difference in Healthy Living & Lifestyle	-.170*	-.142	-.180*	-.049	-.061
Difference in Vision for the Relationship	-.266**	-.273**	-.249**	-.226**	-.121
Difference in Ability to Connect	-.194*	-.276**	-.218**	-.176*	-.142
Difference in Personal Values	-.118	-.088	-.059	.004	.041
- Difference in Moral Values	-.439**	-.405**	-.382**	-.326**	-.061
Difference in Thinking Styles	.003	.004	-.024	.004	-.034
- Difference in Abstract Thinking	.037	.004	.01	.12	-.085
Difference in Positive Emotions	-.038	-.113	-.083	-.025	-.016
Difference in Negative Emotions	-.031	-.095	-.083	.018	-.098
Difference in Positive Thoughts	.06	.023	.02	-.048	.016
Difference in Negative Thoughts	-.035	-.188*	-.107	-.062	-.092
Difference in Healthy Financial Attitude	-.176*	-.200*	-.126	-.146	.062

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

## RPI Descriptive Statistics and Norms

Based on the US study in 2019, the following descriptive statistics and norms are derived.

### Basic Characteristics

**Gender:** 51% were female, 48% were male and less than 1% (n=2) had a non-binary gender in our sample.

**Age:** Average age was 36.5 (S.D. = 11) with a range from 19 to 78 years. Age was not found to be correlated with relationship outcome and Emergent Love in particular. It was also not correlated with CSI, R-DAS and various types of love according to LAS, except for Mania and Pragma, which were weakly correlated with younger age (Pearson correlation 0.159 and 0.245, respectively,  $p < 0.005$ ).

**Table 7: Highest Level of Education**

Highest Level of Education	Validation Sample <sup>1</sup>	Comparable group from US census with at least a high school diploma <sup>2</sup>
Less than high school	1.7%	0%
High school diploma or equivalent	25.8%	32.8%
Some college or some post-secondary, no degree	20.6%	21.6%
Associate degree	12.5%	10.8%
Bachelor's degree	25.5%	22.1%
Master's degree	10.7%	9.3%
Doctoral or professional degree	3.2%	3.3%

1. Please note that in the validation research, only individuals with a high school diploma or above were included. The reason we have 1.7% below high school is that we didn't exclude the spouses of individuals who met the inclusion and exclusion criteria for this research.
2. According to the US census, 11.7% of US adults have less than high school education. They were not included in the denominator of the third column percentages.

Years of education was not correlated with CSI-32 and most types of love according to LAS. It had a weak positive correlation with R-DAS ( $r = 0.122$ ,  $p < 0.05$ ) and Pragma ( $r = 0.129$ ,  $p < 0.05$ ).

**Table 8: Marital Status**

Marital Status	Validation Sample
Married	62.3%
Cohabiting	19.4%
Engaged	9.6%
Single, in an exclusive relationship, but not cohabiting	4.3%
In a domestic partnership or civil union	3.8%
In an open relationship or marriage	0.6%

**Duration of Relationship:** Average relationship length in this sample was 10.2 years (S.D. = 8.4) with a range from 0.9 to 42.5 years. Length of a relationship was not found to be correlated with relationship outcome and Emergent Love in particular. It was also not correlated with CSI, R-DAS and various types of love according to LAS, except for Mania and Pragma, which were weakly correlated with shorter relationships (Pearson correlation 0.139 and 0.204, respectively,  $p < 0.05$ ).

**Table 9: Sexual Orientation**

<b>Sexual Orientation</b>	<b>Validation Sample</b>
Heterosexual (straight)	85.2%
Bisexual	8.1%
Lesbian	3.8%
Gay	1.7%
Pansexual	0.6%
Queer	0.3%

**Table 10: Relationship Orientation**

<b>Relationship Orientation</b>	<b>Validation Sample</b>
Monogamy	92.8%
Monogamish	4.9%
Open relationship, open marriage	1.7%
Polyamory	0.6%

## Domain 1: Relationship Outcomes

Five dimensions of relationship outcomes are presented below: sense of fit and thriving, global and sexual satisfactions, as well as their perceived sense of health and wellbeing. Please note that sense of fit, thriving and global satisfaction represent Core Outcome of a relationship.

**Table 11: Descriptive analysis of five relationship outcomes**

Relationship Outcomes	Means (Std. Dev.)	Percentiles		
		25	50	75
Core Outcomes	0.84 (0.18)	0.75	0.90	1.00
- Sense of Fit	0.88 (0.19)	0.75	1.00	1.00
- Sense of Thriving	0.82 (0.20)	0.75	0.88	1.00
- Global Satisfaction	0.84 (0.19)	0.75	0.88	1.00
Sexual Health and Satisfaction	0.66 (0.21)	0.53	0.67	0.80
Healthy Living and Lifestyle	0.57 (0.19)	0.45	0.55	0.71

In the following tables, we look at the criterion validity of the 5 relationship outcomes in the US individual and couple's studies using Pearson Correlation.

**Table 12: Criterion validity of 5 relationship outcomes (individuals' study).**

Relationship Outcomes	Couple Satisfaction	Dyadic Adjustment
Core Outcomes	.803**	.727**
- Sense of Fit	.762**	.691**
- Global Satisfaction	.738**	.681**
- Sense of Thriving	.724**	.643**
Sexual Health and Satisfaction	.435**	.410**
Healthy Living and Lifestyle	.321**	.347**

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 13: Criterion validity of 5 relationship outcomes (couples' study).**

Relationship Outcomes	Couple Satisfaction (average in a couple)	Dyadic Adjustment (average in a couple)
Core Outcomes		
- Mutual Sense of Fit	.832**	.755**
- Mutual Global Satisfaction	.813**	.733**
- Mutual Sense of Thriving	.796**	.698**
Mutual Sexual Health and Satisfaction	.460**	.451**
Mutual Healthy Living and Lifestyle	.332**	.391**

\*\* Correlation is significant at the 0.01 level (2-tailed).

## Factor Analysis

Factor analysis of Core Relationship Outcomes (Tables 14) demonstrated that the three dimensions identified in Core Outcomes are all part of the same factor.

**Table 14: Factor analysis of core relationship outcomes.**

Factor	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.760	75.202	75.202	3.451	69.011	69.011
2	.450	9.007	84.209			
3	.341	6.818	91.027			

4	.270	5.402	96.429		
5	.179	3.571	100.000		

Extraction Method: Principal Axis Factoring.

### Factor Matrix<sup>a</sup>

Factor 1:  
core outcomes

Being Satisfied	.831
Thriving	.822
Partner Thriving	.851
Partner Being Satisfied	.819
Sense of Fit	.829

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 5 iterations required.

**Table 15: Descriptive analysis of Sexual Health & Satisfaction**

Sexual Health & Satisfaction	Validation Sample
My partner's consent matters	69.3%
My consent matters	64.6%
We use contraceptives	39.1%
My partner has low sexual desire	24.6%
I have low sexual desire	23.2%
We have different sexual needs	20.0%
We use condoms	15.1%
Sex is painful	8.7%

**Table 16: Descriptive analysis of frequency of sex**

Frequency of Sex	Validation Sample
Once a day or more	4%
A few times a week	40%
A few times a month	36%
A few times a year	8%
Very rarely	7%
Declined to share	5%

**Table 17: Satisfaction with the frequency and quality of sex**

Rating	Satisfaction with the Frequency of Sex	Satisfaction with the Quality of Sex
Very satisfied	21%	31%
Satisfied	39%	46%
Neither satisfied nor dissatisfied	17%	10%
Dissatisfied	16%	8%
Very Dissatisfied	7%	5%

### Factor Analysis

Factor analysis of Sexual Health & Satisfaction Outcome (Table 18) demonstrated that there are two distinct factors explaining 55% of the variance. Factor 1 is related to the quality and quantity of sex in a dyad and factor 2 is about the presence of consensual sex in couple.



**Table 18: Factor analysis of Sexual Health & Satisfaction Scale**  
**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup> Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	2.609	43.490	43.490	2.184	36.399	36.399	2.169
2	1.546	25.764	69.254	1.126	18.759	55.158	1.174
3	.661	11.011	80.266				
4	.439	7.317	87.583				
5	.411	6.856	94.439				
6	.334	5.561	100.000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Pattern Matrix<sup>a</sup>**

	Factor	
	1	2
Frequency of Sex	.747	-.046
Satisfaction with Frequency of Sex	.844	-.037
Satisfaction with Quality of Sex	.748	.163
My Consent for Sex Matters	.103	.677
My Partner's Consent for Matters	-.110	.814
My Partner has Low Sexual Desire	-.549	.037

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 3 iterations.

**Table 19: Descriptive analysis of Healthy Living and Lifestyle Scale**

Healthy Living and Lifestyle	Validation Sample
Exercising routinely	52.3%
Having a healthy diet	58.3%
Sleeping well	54.5%
Having low stress	42.8%
Feeling physically fit	53.0%
Feeling emotionally fit	61.3%
Feeling mentally fit	62.3%
Lifestyle choices	
- Drinks no alcohol	35%
- Smokes no cigarettes	69%
- Doesn't use marijuana	69%
- Doesn't use any other drugs	91%

### Factor Analysis

Factor analysis of healthy living and lifestyle outcome (Table 20) demonstrated that there are two distinct factors explaining 43% of the variance. Factor 1 is related to an individual's health behaviors and subjective assessment of their health, while factor 2 is about their use of cigarettes, marijuana and other drugs.

**Table 20: Factor analysis of Healthy Living and Lifestyle Scale**  
**Total Variance Explained**

Factor	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total
1	2.846	31.623	31.623	2.840
2	1.088	12.090	43.712	1.124

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Pattern Matrix<sup>a</sup>**

	Factor	
	1	2
Having Healthy Diet	.457	-.011
Having Quality Sleep	.603	.018
Having Low Stress	.656	-.018
Feeling Physically Fit	.647	.010
Feeling Emotionally Fit	.839	.019
Feeling Mentally Fit	.838	-.011
Not Smoking	-.028	.530
Not Using Marijuana	.035	.622
Not Using Other Drugs	.000	.658

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 3 iterations.

## Domain 2: Interpersonal Dynamics

Interpersonal dynamics are 5 actions that are either expressed or received on a day-to-day basis. All these five qualities are independently and strongly associated with positive or negative outcomes of a relationship. Means and quartiles for interpersonal dynamics are presented in the previous chapter of this manual. In order to assess criterion validity of interpersonal dynamics, we measured its correlation with 6 types of love and relationship outcomes through CSI-32 and R-DAS.

### Correlation of Interpersonal Dynamics with 6 Types of Love

As seen in the table below, interpersonal dynamics is strongly correlated with Eros and Agape, is reversely correlated with Ludus and is weakly correlated with Storge. Mania and Pragma don't seem to be correlated with the way in which Emergent Love Scale assesses interpersonal dynamics.

**Table 21: Criterion validity of Interpersonal Dynamics against six types of love.**

	Dimension	Eros	Ludus	Storge	Pragma	Mania	Agape
Expressed	Respecting	.513**	-.239**	.126*	0.044	-0.02	.329**
	Being Compassionate	.484**	-.289**	.125*	-0.065	0.058	.428**
	Loving	.478**	-.323**	0.086	-0.051	0.068	.393**
	Being Committed	.410**	-.329**	0.069	-0.078	0.049	.357**
	Trusting	.473**	-.191**	.165**	0.057	-0.08	.390**
Received	Being Respected	.519**	-.218**	.191**	.111*	-.169**	.346**
	Feeling Compassion	.504**	-.157**	.153**	0.091	-0.08	.319**
	Being Loved	.451**	-.199**	.122*	0.026	-0.012	.377**
	Seeing Commitment	.453**	-.228**	.155**	-0.017	-0.086	.364**
	Being Trusted	.340**	-.233**	.235**	0.071	-.158**	.307**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

### Correlation of Interpersonal Dynamics with Relationship Outcomes

All five dimensions of Interpersonal Dynamics (whether expressed or received) are significantly correlated with relationship outcome measures. In the couples' study, the correlation between mutual respect, compassion, love, commitment and trust was even stronger with couple's satisfaction and dyadic adjustment.

**Table 22: Criterion validity of Interpersonal Dynamics against CSI-32 and R-DAS (individuals' study).**

	Individual Dimensions	Couple Satisfaction	Dyadic Adjustment
Expressed	Respecting	.606**	.513**
	Being Compassionate	.542**	.484**
	Loving	.599**	.478**
	Being Committed	.584**	.410**
	Trusting	.569**	.473**
Received	Being Respected	.612**	.519**
	Feeling Compassion	.614**	.504**
	Being Loved	.551**	.451**
	Seeing Commitment	.594**	.453**
	Being Trusted	.496**	.340**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 22: Criterion validity of Interpersonal Dynamics against CSI-32 and R-DAS (couples' study).**

Couple Dimensions	Couple Satisfaction (average in a couple)	Dyadic Adjustment (average in a couple)
Mutual Respect	.768**	.747**
Mutual Compassion	.765**	.681**
Mutual Love	.703**	.569**
Mutual Commitment	.738**	.600**
Mutual Trust	.685**	.650**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Factor Analysis: Interpersonal Dynamics**

Factor analysis of Interpersonal Dynamics (Table 23) demonstrated that they are all part of the same factor explaining 56% of the variance.

**Table 23: Factor analysis of interpersonal dynamics**

Factor	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.069	60.695	60.695	5.643	56.430	56.430
2	.869	8.689	69.384			
3	.661	6.614	75.997			
4	.548	5.479	81.476			
5	.469	4.687	86.163			
6	.382	3.817	89.980			
7	.303	3.035	93.014			
8	.285	2.854	95.868			
9	.253	2.526	98.394			
10	.161	1.606	100.000			

Extraction Method: Principal Axis Factoring.

**Factor Matrix<sup>a</sup>**

	Factor 1
Being Committed	.753
Respecting	.782
Trusting	.734
Being Compassionate	.728
Loving	.781
Being Loved	.745
Feeling Compassion	.795
Being Trusted	.611
Being Respected	.754
Seeing Commitment	.812

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 4 iterations required.

### Domain 3: Dyadic Fundamentals

In this section, we look at 5 dimensions that need to be shared or compatible in order to be associated with better relationship outcomes and types of love. The degree of compatibility in these 5 dimensions is measured by looking at the difference between the two individuals in a dyad. The lower the difference, the higher the degree of compatibility is.

As seen in tables below, all 5 dyadic fundamentals are correlated with couple satisfaction and dyadic adjustment (more so with mutual physical attraction and shared moral values) as well as with Eros and Agape styles of love.

**Table 24: Criterion validity of dyadic fundamentals against CSI-32 and R-DAS.**

Dyadic Fundamentals	Couple Satisfaction (average in a couple)	Dyadic Adjustment (average in a couple)
Mutual Physical Attraction	.415**	.404**
Shared Vision	.266**	.273**
Shared Connection Style	.194*	.276**
Shared Moral Values	.439**	.405**
Shared Healthy Financial Attitude	.176*	.200*

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Table 25: Criterion validity of dyadic fundamentals against Eros, Agape and Storge types of love.**

Dyadic Fundamentals	EROS	AGAPE	STORGE
Mutual Physical Attraction	.398**	.195*	.168*
Shared Vision	.249**	.226**	.121
Shared Connection Style	.218**	.176*	.142
Shared Moral Values	.382**	.326**	.061
Shared Healthy Financial Attitude	.126	.146	-.062

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Connection style, moral values and healthy financial attitudes will be discussed in the Individual Fundamentals' section. In this section, we provide further details on relationship vision and mutual physical attraction.

### Vision for the Relationship

In table 26, you can see the norms in our sample for what individuals look for in their relationships. Love and having a lifelong companion seem to be the top two reasons why individuals enter a committed relationship.

**Table 26: Descriptive analysis of relationship vision**

Vision for the relationship	Population Norms
Love	92%
Having a lifelong companion	89%
Having children	41%
Exclusive sexual relationship	61%
Living with a like-minded person	57%
Personal growth and thriving	70%
Settling down	54%
Financial stability and benefits	69%

Legal rights and benefits	20%
Longevity and health benefits	41%

In table 27, we explored what dimensions of a shared vision is specifically correlated with couple’s satisfaction and dyadic adjustment. The only shared vision related to both satisfaction and adjustment was “having a lifelong compassion”. Sharing a vision for love, settling down and health benefits was only correlated with couple satisfaction, while sharing a vision for legal benefits was only correlated with dyadic adjustment.

**Table 27: Criterion validity of shared vision against CSI and R-DAS (couples’ study).**

Dimensions of a couple’s shared vision	Couple Satisfaction (average in a couple)	Dyadic Adjustment (average in a couple)
Love	.182*	0.105
Having a lifelong companion	.293**	.234**
Having children	0.138	0.075
Exclusive sexual relationship	0.167	0.157
Living with a like-minded person	0.034	0.076
Personal growth and thriving	0.123	0.114
Settling down	.185*	0.133
Financial stability and benefits	0.035	0.015
Legal rights and benefits	0.15	.219*
Longevity and health benefits	.190*	0.134

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

We also explored what dimensions of an individual’s vision for their relationship is specifically correlated with couple’s satisfaction and dyadic adjustment. The two visions correlated with both satisfaction and adjustment were “having a lifelong compassion” and settling down. Having a vision for children and health benefits was only correlated with couple satisfaction, while having a vision for exclusive sexual relationship was only correlated with dyadic adjustment.

**Table 28: Criterion validity of shared vision against CSI and R-DAS (individuals’ study).**

Dimensions of an individual’s vision for a relationship	Couple Satisfaction	Dyadic Adjustment
Love	.109	.097
Having a lifelong companion	.218**	.164**
Having children	.147*	.072
Exclusive sexual relationship	.068	.115*
Living with a like-minded person	-.032	.046
Personal growth and thriving	.047	.058
Settling down	.123*	.134*
Financial stability and benefits	.035	.036
Legal rights and benefits	-.049	-.003
Longevity and health benefits	.125*	.091

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

### Factor Analysis of Shared Vision

Factor analysis of shared vision and individualized vision for a relationship paint two slightly different pictures, one with 4 and the other one with 3 different factors, explaining somewhere between 25% to 30% of the variance observed. It seems that our ability to better conceptualize these 3 or 4 factors attributed to either an individualized or shared vision in a relationship may require further research.

**Table 29: Factor Analysis of Shared Vision for a Relationship**  
Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup> Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	2.173	21.730	21.730	1.541	15.407	15.407	1.206
2	1.265	12.654	34.384	.689	6.887	22.294	.798
3	1.196	11.962	46.346	.528	5.277	27.571	.549
4	1.024	10.244	56.590	.325	3.249	30.820	1.039
5	.926	9.264	65.854				
6	.800	7.999	73.853				
7	.767	7.673	81.526				
8	.695	6.949	88.475				
9	.634	6.341	94.815				
10	.518	5.185	100.000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

### Pattern Matrix<sup>a</sup>

	Factor			
	1	2	3	4
Love	.184	.218	.377	.189
Having a lifelong companion	.207	-.080	-.128	.206
Having children	-.071	-.105	.526	-.084
Exclusive sexual relationship	.242	.009	.233	.344
Living with a like-minded person	.429	.192	-.112	.023
Personal growth and thriving	.408	-.055	.041	.081
Settling down	.664	-.117	.047	-.128
Financial stability and benefits	.184	-.786	.051	.232
Legal rights and benefits	.041	-.024	-.149	.369
Longevity and health benefits	-.097	-.056	.080	.495

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 10 iterations.

**Table 30: Factor Analysis of Individualized Vision for a Relationship**  
Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup> Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	2.478	24.776	24.776	1.753	17.527	17.527	1.510
2	1.179	11.787	36.563	.428	4.285	21.811	.741
3	1.126	11.256	47.819	.371	3.708	25.519	.994
4	.940	9.404	57.224				
5	.815	8.146	65.370				
6	.812	8.115	73.485				
7	.737	7.371	80.856				

8	.695	6.955	87.811			
9	.643	6.426	94.238			
10	.576	5.762	100.000			

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Pattern Matrix<sup>a</sup>**

	Factor		
	1	2	3
Love	-.140	.458	-.224
Having a lifelong companion	.328	-.085	-.149
Having children	.113	.423	.180
Exclusive sexual relationship	.206	.166	-.260
Living with a like-minded person	.033	-.020	-.479
Personal growth and thriving	.119	.013	-.432
Settling down	.243	.269	-.166
Financial stability and benefits	.594	-.001	.043
Legal rights and benefits	.534	-.034	-.022
Longevity and health benefits	.528	.174	-.037

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 17 iterations.



## Domain 4: Individual Fundamentals

In this section, we looked at 5 dimensions that function as individual fundamentals associated with better relationship outcomes and types of love. As seen in tables below, all 5 individual fundamentals are correlated with couple satisfaction and adjustment (more so with Ability to Connect) as well as with Eros and Agape styles of love.

**Table 31: Criterion validity of Individual Fundamentals against CSI-32 and R-DAS.**

Individual Fundamentals	Couple Satisfaction	Dyadic Adjustment
Ability to Connect	.527**	.551**
Moral Values	.288**	.335**
Abstract Thinking	.148**	.152**
Positive Thoughts and Emotions	.281**	.335**
Healthy Financial Attitude	.299**	.308**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 31: Criterion validity of Individual Fundamentals against Eros, Agape and Storge types of love.**

Individual Fundamentals	EROS	AGAPE	STORGE
Ability to Connect	.446**	.343**	.224**
Moral Values	.275**	.322**	.106
Abstract Thinking	.119*	.130*	.121*
Positive Thoughts and Emotions	.286**	.201**	.217**
Healthy Financial Attitude	.180**	.139*	.104

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

To learn more about the scales used in Individual Fundamentals including their validity, reliability and factor analysis, please follow the next sections.

## Internal consistency of the scales used in the RPI

In the following table, the correlations of all scales and subscales that are used in the 4-domain model of relationship panoramic are presented. Emergent Love Scale, which informs the Core Outcomes of a relationship, the Interpersonal Dynamics as well as Mutual Physical Attraction is at the core of the model, with statistically significant correlations with all other scales and subscales in the model.

There are 3 other scales that are meaningfully correlated with all other scales and subscales:

- 1) Ability to connect, which has the highest degree of correlation with Emergent Love Index and Positive Emotions.
- 2) Positive Emotions, which has a strong correlation with Healthy Living and Lifestyle and a strong reverse correlation with Negative Emotions.
- 3) Negative Emotions, which is inversely correlated with all other scales and subscales, in particular with Healthy Living and Lifestyle as well as with Positive Emotions.

**Table 32: Internal consistency of scales used in RPI based on Pearson correlation coefficient.**

	Emergent Love Index	Sexual Health & Satisfaction	Healthy Living & Lifestyle	Ability to Connect	Abstract Thinking	Positive Thoughts	Positive Emotions	Negative Emotions	Moral Values
Sexual Health & Satisfaction	.402**								
Healthy Living & Lifestyle	.247**	.331**							
Ability to Connect	.573**	.315**	.283**						
Abstract Thinking	.117*	-0.01	.238**	.204**					
Positive Thoughts	.175**	0.107	.233**	.294**	.319**				
Positive Emotions	.414**	.295**	.519**	.435**	.231**	.467**			
Negative Emotions	-.332**	-.285**	-.532**	-.328**	-.173**	-.163**	-.673**		
Moral Values	.310**	0.085	0.106	.355**	.223**	.268**	.392**	-.247**	
Healthy Financial Attitude	.226**	.205**	.356**	.232**	.181**	.185**	.212**	-.283**	.189**

## Validity, Reliability and Norms of RPI Scales

### Emergent Love Scale<sup>6</sup>

Emergent Love Scale with 17 items informs core relationship outcomes, interpersonal dynamics and one of the dyadic fundamentals. As seen from tables below, the highest correlation was found between Emergent Love Scale and CSI-32, R-DAS and Eros type of love. This scale has an excellent reliability and factor analysis showed that 64% of the variance could be explained with only 2 factors in Emergent Love.

**Table 33: Emergent Love Subscales and Global Index**

	Means		Percentiles	
		25	50	75
Core Outcomes (Fit, Thriving, Satisfaction)	84%	75%	90%	100%
Interpersonal Dynamics (Respect, Compassion, Loving, Commitment, Trust)	90%	83%	95%	100%
Mutual Physical Attraction	87%	75%	88%	100%
<b>Emergent Love Index</b>	<b>88%</b>	<b>81%</b>	<b>93%</b>	<b>100%</b>

**Table 34: Criterion validity of Emergent Love Scale against CSI-32, R-DAS and LAS.**

	Correlation with Emergent Love Index		
	Pearson Correlation	Sig. (2-tailed)	N
CSI-32	.801**	.000	309
R-DAS	.724**	.000	312
Eros	.650**	.000	308
Ludus	-.305**	.000	308
Storge	.177**	.002	308
Pragma	.025	.661	308
Mania	-.055	.339	308
Agape	.443**	.000	308

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 35: Reliability of Emergent Love Scale**

Scale	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	% of valid cases
Emergent Love	.955	.957	17	95.7%

**Table 36: Factor analysis of Emergent Love Scale**

Factor	Total Variance Explained						Rotation Sums of Squared Loadings <sup>a</sup>
	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	10.158	59.753	59.753	9.793	57.608	57.608	9.181
2	1.158	6.810	66.564	.816	4.801	62.409	7.947
3	.814	4.787	71.351				

<sup>6</sup> To learn more please visit: <https://relationship-panoramic.com/2020/what-is-emergent-love/>

4	.702	4.130	75.481			
5	.595	3.501	78.982			
6	.472	2.779	81.761			
7	.447	2.629	84.390			
8	.415	2.443	86.833			
9	.386	2.270	89.103			
10	.326	1.915	91.018			
11	.286	1.682	92.700			
12	.271	1.593	94.292			
13	.257	1.512	95.804			
14	.218	1.285	97.089			
15	.187	1.100	98.189			
16	.165	.973	99.161			
17	.143	.839	100.000			

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Pattern Matrix<sup>a</sup>**

	Factor	
	1	2
Being Satisfied	.565	.303
Thriving	.627	.186
Being Committed	.045	.780
Being Attracted	.116	.593
Respecting	.272	.598
Trusting	.508	.244
Being Compassionate	.049	.729
Loving	-.040	.894
Being Loved	.584	.192
Feeling Compassion	.657	.185
Being Trusted	.662	-.010
Being Respected	.780	.029
Feeling Attractive	.642	.133
Seeing Commitment	.524	.338
Partner Thriving	.944	-.110
Partner Being Satisfied	1.036	-.230
Sense of Fit	.623	.271

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 9 iterations.

## Personal Values Scale

Personal Values Scale with 32 items not only shows how much one’s life is “value-driven”, it also provides a breakdown of personal values into 8 categories, determined by a factor analysis that explains 50% of the variance. This scale has very good reliability and factor 4 (moral values) was found to be an ‘individual fundamental’ as well as a “dyadic fundamental”.

**Table 37: Personal Values Subscales and Value-Driven Living Index**

Dimensions of Personal Values	Means	Percentiles		
		25	50	75
Factor 1: Egoistic (accomplishments, power, material wealth)	42%	27%	40%	56%
Factor 2: Altruistic	66%	54%	65%	80%
Factor 3: Ideological	50%	31%	50%	69%
Factor 4: Moral	83%	75%	88%	94%
Factor 5: Independence-Oriented	76%	63%	75%	91%
Factor 6: Utility-Oriented	69%	58%	71%	79%
Factor 7: Social	59%	50%	58%	75%
Factor 8: Career-Oriented	51%	33%	50%	67%
<b>Value-Driven Living<sup>†</sup></b>	<b>57%</b>	<b>46%</b>	<b>55%</b>	<b>66%</b>

<sup>†</sup> How much one’s life in general is driven by their personal values

100% = Extremely Important, 75% = Very Important, 50% = Important, 25% = Somewhat Important, 0% = Not Important

**Table 38: Factor analysis of Personal Values Scale**

Factor	Initial Eigenvalues			Total Variance Explained			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.510	23.468	23.468	7.014	21.920	21.920	4.686	14.644	14.644
2	4.184	13.075	36.543	3.720	11.625	33.545	2.524	7.888	22.532
3	1.980	6.187	42.730	1.506	4.706	38.251	1.943	6.073	28.605
4	1.587	4.959	47.689	1.097	3.429	41.680	1.625	5.077	33.682
5	1.306	4.080	51.770	.786	2.457	44.137	1.580	4.938	38.620
6	1.193	3.729	55.499	.713	2.228	46.365	1.574	4.917	43.538
7	1.089	3.404	58.903	.609	1.904	48.269	1.034	3.230	46.767
8	1.009	3.154	62.057	.504	1.575	49.843	.984	3.076	49.843
9	.918	2.869	64.925						
10	.897	2.804	67.729						
11	.771	2.411	70.140						
12	.743	2.322	72.462						
13	.722	2.256	74.718						
14	.688	2.149	76.867						
15	.652	2.036	78.903						
16	.586	1.831	80.734						
17	.571	1.785	82.519						
18	.527	1.646	84.165						
19	.498	1.558	85.722						
20	.483	1.509	87.231						
21	.461	1.442	88.673						
22	.453	1.417	90.090						
23	.413	1.290	91.380						
24	.397	1.240	92.620						
25	.358	1.118	93.738						
26	.347	1.084	94.822						
27	.318	.994	95.816						

28	.312	.974	96.790					
29	.274	.855	97.645					
30	.269	.841	98.486					
31	.259	.808	99.294					
32	.226	.706	100.000					

Extraction Method: Principal Axis Factoring.

**Rotated Factor Matrix<sup>a</sup>**

	Factor							
	1	2	3	4	5	6	7	8
Being honest	.000	.102	.118	.673	.001	.151	.010	.110
Doing the right thing	-.016	.317	.121	.679	.171	.131	.064	.065
Serving others	.010	.749	.048	.180	.025	.089	.090	.134
Occupational prestige	.572	.101	.022	.091	.102	.015	.186	.542
The amount of my income	.426	-.056	.070	.099	.149	.078	-.172	.569
Personal achievement	.389	-.016	.095	.110	.330	.154	.152	.370
Independence	.173	.152	.059	.078	.680	.009	.056	.047
Friendships	.203	.292	.237	.118	.060	.108	.490	.035
Being fair	-.058	.462	.126	.362	.196	.133	.102	-.153
Defending my belief system	.198	.125	.550	.324	.120	-.036	.063	-.030
Benefiting mankind	.123	.589	.161	.108	.173	.135	.111	-.028
Having influence on people I know	.561	.166	.211	-.006	.131	.013	.189	.075
Being self-sufficient	.123	.114	.099	.117	.678	.145	-.095	.106
Winning	.622	-.196	.120	.014	.212	.093	-.081	.172
Having more money than I need	.558	-.218	.049	-.023	.155	.075	-.430	.185
Receiving a lot of attention from others	.744	.132	.074	-.063	-.079	-.062	.032	-.038
Defending my people	.209	.205	.496	.191	.015	.235	-.056	-.010
Being useful to others	.054	.529	.229	.085	.041	.480	-.008	-.035
Defending my faith	.054	.171	.735	.098	.015	.012	.090	.020
Certain people's approval	.241	.123	.094	-.020	-.124	.326	.022	.066
Having a luxurious lifestyle	.718	.039	.004	.033	.041	-.055	-.115	.111
Having integrity	-.038	.164	.108	.412	.267	.398	.049	-.077
Social interactions with other people	.316	.227	.150	.062	-.042	.380	.516	.024
Satisfaction with job or life in general	.145	.118	-.036	.159	.234	.520	.055	.075
Doing something perfectly	.500	.071	.092	.092	.225	.251	-.055	.055
Caring for people I know	-.043	.193	.094	.247	.078	.504	.112	.030
Being in control	.492	-.143	.179	-.058	.177	.137	.039	.002
Producing or creating something new	.424	.093	.055	.143	.198	.153	.169	-.014
Showing off my belongings to others	.682	.035	.111	-.038	.026	.011	.144	.037
Defending my country	.170	.107	.630	-.048	.096	.115	.084	.093
Helping people in need	.021	.670	.264	.103	.065	.191	.125	-.042
Recognition by peers or someone more senior	.634	.126	.056	-.024	-.137	.174	.200	.197

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 7 iterations.

**Table 39: Reliability of Personal Values Scale**

Scale	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	% of valid cases
Personal Values	.891	.892	32	96.8%

## Positive and Negative Thoughts and Emotions Scales

There are 30 items in these 4 scales. Tables below provides a summary of their **normative** scores based on the US validation study followed by their validity, reliability and factor analyses.

In this sample, it seems that individuals more often express positive emotions and occasionally express negative emotions. However, frequencies of positive and negative thoughts are about the same.

As expected, having more positive emotions is correlated with more satisfaction with one's relationship, dyadic adjustment, Eros type of love and in general more secure attachment style. Positive thoughts on the other hand is correlated more strongly with dyadic adjustment and pragma type of love. Negative emotions is more correlated with lack of couple's satisfaction and adjustment and can be seen in more individuals with anxious and avoidant attachment styles, as well as mania type of love. And lastly, Negative thoughts were correlated with anxious attachment style and mania type of love.

Positive and negative thoughts and emotions scales had a Cronbach's Alpha of greater than 0.7.

Factor analysis of these four scales demonstrated that all of them explained at least 50% of the variance. Positive and negative emotions each consisted of 2 factors, one was intrapersonal emotions (such as joy, sadness, courage, etc.) while the other was interpersonal emotions (degree of trustworthiness, warmth toward other people and sympathy vs. indifference in relation to others). Positive thoughts also consisted of two factors: positive thoughts about our inner self and positive thoughts about general concepts and our outer worlds. Negative thoughts only consisted of one factor, which highlighted our negative thoughts about ourselves.

**Table 40: Descriptive analysis of positive and negative thoughts and emotions.**

Positive and Negative Thoughts and Emotions	Means	Percentiles		
		25	50	75
Positive Emotions	66%	55%	68%	78%
Negative Emotions	38%	28%	38%	50%
Positive Thoughts	59%	48%	58%	71%
Negative Thoughts	60%	50%	56%	75%

100% = Always, 75% = Very often, 50% = Sometimes, 25% = Rarely, 0% = Never

**Table 41: Validity of Positive and Negative Thoughts and Emotions Scales against CSI-32, R-DAS, LAS and ECR-R**

	Positive Emotions	Positive Thoughts	Negative Emotions	Negative Thoughts
Satisfaction (CSI-32)	.342**	.135**	-.313**	-.034
Dyadic Adjustment (R-DAS)	.348**	.217**	-.354**	-.028
Eros	.304**	.175**	-.268**	-.009
Ludus	-.706	.014	.076	-.038
Storge	.218**	.152**	-.182**	-.008
Pragma	.192**	.283**	-.154**	.03
Mania	-.073	0.087	.289**	.193**
Agape	.226**	.114*	-.212**	.067
Anxious Attachment Style	-.424**	-0.056	.507**	.239**
Avoidant Attachment Style	-.403**	-.171**	.384**	.098

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 42: Reliability of Positive and Negative Thoughts and Emotions Scales**

Scale	Cronbach's Alpha	N of Items	% of valid cases
Positive Emotions	.891	10	98.8%
Positive Thoughts	.705	6	95.4%
Negative Emotions	.869	10	98.8%
Negative Thoughts	.738	4	95.4%

**Table 43: Factor Analyses of Positive Emotions Scale**

**Positive Emotions Scales: Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup> Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	5.124	51.241	51.241	5.124	51.241	51.241	4.738
2	1.253	12.533	63.774	1.253	12.533	63.774	2.946
3	.681	6.806	70.580				
4	.576	5.758	76.338				
5	.516	5.161	81.499				
6	.430	4.297	85.797				
7	.394	3.944	89.741				
8	.385	3.853	93.593				
9	.336	3.360	96.953				
10	.305	3.047	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Pattern Matrix<sup>a</sup>**

	Component	
	Intrapersonal	Interpersonal
Warm-toward-people	.229	.696
Trustful	.366	.527
Sympathetic	-.131	.903
Joyful	.621	.327
Peaceful	.627	.250
Brave	.912	-.237
Confident	.912	-.201
Hopeful	.655	.260
Fortunate	.641	.130
Proud	.750	.075

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 8 iterations.

**Table 44: Factor Analyses of Negative Emotions Scale**

**Negative Emotions Scale: Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup> Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	4.684	46.840	46.840	4.684	46.840	46.840	4.364
2	1.171	11.705	58.545	1.171	11.705	58.545	2.909
3	.827	8.265	66.810				
4	.686	6.858	73.668				
5	.652	6.522	80.190				



6	.512	5.120	85.310			
7	.433	4.329	89.639			
8	.403	4.031	93.670			
9	.353	3.525	97.195			
10	.280	2.805	100.000			

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

### Pattern Matrix<sup>a</sup>

	Component	
	Intrapersonal	Interpersonal
Cold-toward-people	.128	.755
Mistrustful	.182	.674
Indifferent	-.152	.817
Angry	.397	.358
Sad	.853	-.096
Anxious	.812	-.085
Helpless	.782	.000
Miserable	.665	.190
Hurt	.778	-.001
Stressed	.664	.100

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 5 iterations.

### Table 45: Factor Analyses of Positive Thoughts Scale

#### Positive Thoughts Scale: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup> Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	2.513	41.886	41.886	2.513	41.886	41.886	2.376
2	1.160	19.339	61.225	1.160	19.339	61.225	1.625
3	.778	12.968	74.193				
4	.609	10.157	84.350				
5	.533	8.885	93.235				
6	.406	6.765	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

### Pattern Matrix<sup>a</sup>

	Component	
	Individual	Non-Individual
My plans for the future	.746	.022
My past achievements and success	.689	.065
My abilities and strengths	.755	-.040
My hopes and dreams	.801	-.037
World peace	-.046	.869
The meaning of love	.055	.813

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 3 iterations.

### Table 46: Factor Analyses of Negative Thoughts Scale

#### Negative Thoughts Scale: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.262	56.538	56.538	2.262	56.538	56.538
2	.816	20.394	76.933			
3	.576	14.398	91.331			
4	.347	8.669	100.000			

Extraction Method: Principal Component Analysis.

### Component Matrix<sup>a</sup>

	Component 1
My memories from the past	.611
My past mistakes and failures	.840
My shortcomings and weaknesses	.844
My worries for the future	.685

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

## Connection Style Scale

Connection Style Scale is a 14-item scale that assesses one's multimodal ability to connect and provides a breakdown of 4 main channels of connection. In the following tables, population norms as well as its validity, reliability and factor analysis are presented.

Ability to connect is strongly correlated with couple satisfaction, dyadic adjustment and eros type of love. It is also reversely correlated with avoidant attachment style. It is also notable that Connection Style Scale has an excellent reliability based on a .907 alpha.

As seen in the tables below, 60% of the variance can be explained with the four factors (or channels of connection) identified in this factor analysis.

**Table 47: Connection Styles Subscales and Multi-Modal Ability to Connect Index**

What channels of connection are most natural in relation to a life partner?	Means		Percentiles	
			25	50
Factor 1: Respect & Manners	83%	75%	88%	100%
Factor 2: Dress & Looks	74%	63%	75%	100%
Factor 3: Touch & Affection	82%	75%	92%	100%
Factor 4: Mood & Tone	73%	58%	75%	92%
<b>Multi-Modal Ability to Connect</b>	<b>79%</b>	<b>71%</b>	<b>80%</b>	<b>91%</b>

100% = Very easy, 75% = Easy, 50% = Neither easy nor difficult, 25% = Difficult, 0% = Very difficult

**Table 48: Criterion validity of Connection Style Scale against CSI-32, R-DAS, LAS and ECR-R.**

	Ability to Connect
Couple Satisfaction (CSI-32)	.527**
Dyadic Adjustment (R-DAS)	.551**
Eros	.446**
Ludus	-.233**
Storge	.224**
Pragma	.022
Mania	-.070
Agape	.343**
Anxious Attachment Style	-.304**
Avoidant Attachment Style	-.535**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 49: Reliability of Connection Style Scale**

Scale	Cronbach's Alpha	N of Items	% of valid cases
Connection Style	.907	15	95.9%

**Table 50: Factor Analysis of Connection Style Scale**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup> Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	6.757	45.047	45.047	6.377	42.516	42.516	5.398
2	1.497	9.982	55.029	1.283	8.553	51.069	2.838
3	1.126	7.508	62.537	.849	5.659	56.728	4.590
4	1.026	6.837	69.374	.566	3.771	60.500	4.126

5	.772	5.146	74.519			
6	.755	5.032	79.551			
7	.577	3.843	83.395			
8	.520	3.467	86.862			
9	.432	2.882	89.744			
10	.365	2.433	92.178			
11	.329	2.192	94.370			
12	.281	1.872	96.241			
13	.260	1.732	97.974			
14	.172	1.147	99.120			
15	.132	.880	100.000			

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

### Pattern Matrix<sup>a</sup>

	Factor			
	1: Respect & Manners	2: Dress & Look	3: Touch & Affection	4: Mood & Tone
Dressing nicely and appropriately	.112	.849	.052	-.033
Looking as good as I can	-.117	.940	-.016	.061
Making good eye contact	.444	.105	-.173	.082
Smiling at him or her	.565	.145	-.219	-.085
Holding hands	.166	-.015	-.605	.065
Talking with my hands	.139	.101	-.081	.277
Carefully listening to what he or she says	.890	-.003	.048	-.031
Asking relevant questions	.673	.040	.095	.130
Empathizing with him or her	.649	-.107	-.016	.132
Being nice and complimentary	.734	.016	-.150	-.027
Carefully choosing my words	.034	-.028	.010	.652
Being as energetic as possible	.120	.183	-.140	.446
Commenting on the ambience	-.037	.004	-.029	.771
Gentle or loving touch	.061	.008	-.776	.114
Kissing or hugging	-.077	-.009	-1.027	-.018

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 6 iterations.

## Thinking Style Scale

There are 12 items in Thinking Style Scale that as a whole can assess an individual’s multi-modal ability to think and through factor analysis, we could assess four styles of thinking. Tables below summarize population norms as well as validity, reliability and factor analysis of this scale. Based on our model, we highlight “abstract thinking” as an individual fundamental that is associated with better relationship outcomes and dyadic adjustment.

From a validity perspective, multi-modal ability to think was correlated with dyadic adjustment, storge and pragma types of love. It was also reversely correlated with avoidant attachment style. However, ability for think abstractly was correlated with satisfaction, dyadic adjustment, eros, agape and storge. It was also reversely correlated with avoidant and anxious attachment styles, which implies that abstract thinking is correlated with secure attachment style.

Thinking style scale and abstract thinking subscale were both found to demonstrate good reliability with alpha greater than 0.8.

Factor analysis showed that 4 factors (i.e. styles of thinking) can explain 53% of the variance and appropriate names were selected to describe each of those factors.

**Table 51: Thinking Style Subscales and Multi-Modal Ability to Think Index**

What processes help us think more effectively in general?	Means	Percentiles		
		25	50	75
Factor 1: Abstraction	61%	50%	63%	75%
Factor 2: Facilitation	35%	13%	38%	50%
Factor 3: Information	39%	13%	50%	63%
Factor 4: Organization	51%	38%	50%	63%
<b>Multi-Modal Ability to Think</b>	<b>50%</b>	<b>39%</b>	<b>50%</b>	<b>63%</b>

100% = Always, 75% = Very often, 50% = Sometimes, 25% = Rarely, 0% = Never

**Table 52: Criterion validity of Thinking Style Scale against CSI-32, R-DAS, LAS and ECR-R.**

	Ability to Think	Abstract Thinking
Couple Satisfaction	.072	.148**
Dyadic Adjustment	.119*	.152**
Eros	.078	.119**
Ludus	.034	-.082
Storge	.173**	.121*
Pragma	.154**	.023
Mania	.052	-.018
Agape	.096	.130*
Anxious Attachment Style	-.054	-.132*
Avoidant Attachment Style	-.127*	-.164**

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Table 52: Reliability of Thinking Style Scale**

Scale or Subscale	Cronbach's Alpha	N of Items	% of valid cases
<b>Multi-modal Ability to Think</b>	.807	12	95.4%
<b>Abstract Thinking</b>	.836	4	95.4%

**Table 53: Factor analysis of Thinking Style Scale**  
**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup> Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	4.066	33.882	33.882	3.689	30.738	30.738	2.902
2	1.680	13.997	47.879	1.187	9.891	40.629	1.579
3	1.351	11.257	59.136	.945	7.877	48.506	2.219
4	1.085	9.038	68.174	.569	4.740	53.246	1.754
5	.711	5.924	74.098				
6	.673	5.607	79.705				
7	.588	4.898	84.603				
8	.539	4.491	89.094				
9	.476	3.967	93.061				
10	.364	3.036	96.097				
11	.310	2.584	98.681				
12	.158	1.319	100.000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Pattern Matrix<sup>a</sup>**

	Factor			
	1: Abstraction	2: Facilitation	3: Information	4: Organization
Organizing my desk or computer desktop	-.066	-.006	-.125	.497
Talking about it with someone else	.149	-.079	.194	.425
Drawing or scribbling on a paper or board	-.069	.177	-.153	.559
Listening to classical music	.051	.704	.038	-.031
Looking at arts, pictures or videos	-.019	.700	.002	.069
Looking at charts or diagrams	.111	.015	-.850	.086
Looking at numbers or tables	.198	-.044	-.844	.028
Writing about what I am thinking	.142	.187	.000	.502
Visualizing the connections between two concepts	.621	.021	-.080	.176
Getting the facts and details	.676	-.071	-.012	.018
Imagining the conceptual framework	.713	.141	-.091	.008
Seeing the logic or patterns	.873	.027	-.063	-.126

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 9 iterations.

## Healthy Financial Attitude Scale

Healthy Financial Attitude Scale with 7 items is correlated with a couple's satisfaction, their adjustment and Eros as well as Agape types of love. Its reliability is questionable and 42% of the variance could be explained with 3 factors outlined below.

**Table 54: Descriptive analysis of healthy financial attitude scale**

	Means		Percentiles	
		25	50	75
<b>Healthy Financial Attitude</b>	69%	57%	68%	82%

**Table 55: Criterion validity of Healthy Financial Attitude against CSI-32, R-DAS, and LAS.**

	Healthy Financial Attitude
Couple Satisfaction (CSI-32)	.299**
Dyadic Adjustment	.308**
Eros	.180**
Agape	.139*
Storge	.104

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 56: Reliability of Healthy Financial Attitude Scale**

Scale	Cronbach's Alpha	N of Items	% of valid cases
<b>Healthy Financial Attitude</b>	.670	7	95.7%

**Table 57: Factor analysis of Healthy Financial Attitude Scale**

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	2.510	35.859	35.859	2.003	28.617	28.617	1.927
2	1.104	15.771	51.630	.496	7.087	35.704	.693
3	1.070	15.283	66.913	.416	5.949	41.654	.682
4	.709	10.125	77.037				
5	.691	9.876	86.913				
6	.501	7.164	94.077				
7	.415	5.923	100.000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

### Pattern Matrix<sup>a</sup>

	Factor		
	1	2	3
I spend within a set budget and don't go over.	.466	-.126	-.095
I pay my credit card balance fully.	.686	-.381	.149
I save money by using available coupons, discounts, deals or sales.	.239	.184	-.379
I borrow money for vacations (e.g. using a credit card and pay back over time).	-.068	.586	.108
I pay my bills on time.	.603	.075	-.082
I save money for a long-term financial goal.	.818	.089	.055
I don't look at the price tags if I really want to buy something.	.055	.137	.537

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 7 iterations.

## Other Individual and Dyadic Attributes

### Construct of Individual Identity

As seen from table below, one's personality, family and interests are the top 3 areas that construct someone's identity. Posthoc analysis shows that in those who consider family as a component of their individual identity, there is a weak correlation with couple satisfaction, dyadic adjustment, Eros and Agape types of love (Pearson R is between 0.1 and 0.2 ( $p < 0.05$ )).

**Table 58: Personal Identity**

What constitutes my identity?	Validation Sample
My personality	76.5%
My family	65.5%
My interests and hobbies	54.5%
My uniqueness	35.9%
My profession & career	26.4%
My good name & reputation	25.8%
My accomplishments	21.2%
My gender	20.6%
My religion & spirituality	18.3%
My education & degrees	15.7%
My home & belongings	15.4%
My creative products	14.8%
My service to others	14.8%
My race & ethnic origin	12.5%
My culture	9.9%
My sexual orientation	9.0%
My national origin	6.4%
My income & wealth	5.5%

### General Interests

In the US study, family & friends, nature and watching movies were the top 3 interests people mentioned. Interest in fine cuisine was the only variable that had a positive but weak correlation with Eros and Agape. Interest in wellness and self-care was also weakly correlated with dyadic adjustment. On the other hand, interest in video games and guns was negatively correlated with storge. While interest in porn, nightclubs and gambling was negatively correlated with dyadic adjustment. Table below shows the norms based on our validation study.

**Table 59: General interests**

General Interests	Validation Sample
Family & Friends	56.2%
Nature	51.0%
Movies	44.3%
Cooking & Baking	35.1%
Video Games	30.7%
Books	29.6%



World Travel	28.1%
Adventure	27.2%
Sports	25.8%
Wellness & Self-care	24.1%
Shopping	24.1%
Arts (visual, performing, etc.)	23.8%
Fitness & Exercise	22.3%
Fine Cuisine	20.3%
Cultural Events & Sites	19.4%
Bars & Night Clubs	10.4%
Gambling & Betting	10.4%
Playing a Musical Instrument	9.6%
Guns	8.7%
Porn	7.0%

### Adverse Childhood Experiences (ACE)

This measure was not included in the US validation study, but it was included in the earlier versions. We included it in the current RPI as it offers significant clinical value and insight to providers.

### Political Ideologies

In the US validation study, environmentalism was not included. However, since we added it in the current version of RPI, it has received a lot of attention from respondents. Also, political interests were not found to be associated with relationship outcomes.

**Table 60: Political interests**

Political Interests	Validation Sample
Democracy	73.3%
Socialism	26.1%
Capitalism	25.8%
Liberalism	24.1%
Conservatism	21.7%
Nationalism	8.4%
Monarchy	5.8%
Egalitarianism	3.5%
Aristocracy	2.0%
Oligarchy	1.2%

### Religious Ideologies

Please note that individual could select more than one religious interests in their responses; therefore, the total is more than 100%. Also, religious interests were not found to be associated with relationship outcomes.

**Table 61: Religious interests**

Religious Interests	Validation Sample
Christianity: Protestantism	27.5%
Spiritual but not religious	25.8%
Christianity: Catholicism	24.1%
Christianity: Other	21.7%

Atheism	18.3%
Agnosticism	16.8%
Buddhism	6.7%
Unitarian Universalism	4.1%
Hinduism	3.5%
Judaism	3.2%
Islam	2.6%

## Productive Parts of the Day

As seen from table below, one's level of energy may differ significantly based on different times of the day. This finding in the report could provide a good ground for discussions and awareness development in a couple.

**Table 62: Productive parts of the day**

Which part of the day was found to be most productive?	Validation Sample
Early mornings	17%
Mornings	25%
Afternoons	21%
Evenings	17%
Late nights	10%
Doesn't matter	10%

## Temperaments

People have very different natural tendencies as whether they prefer warm vs. cool weather; dry vs. a humid climate and 4 distinct seasons vs. nice weather all year long. The only interesting finding was that a preference to cold weather was weakly associated with lower dyadic adjustment levels ( $r = -0.131$ ,  $p < 0.05$ ).

**Table 63: Temperaments**

Temperaments	Validation Sample
Prefer to Stay Warm	22.3%
Prefer to Stay Cool	42.6%
Prefer Dry Climate	15.1%
Prefer Humid Climate	3.5%
Prefer Four Seasons	22.9%
Prefer Nice Weather All Year Round	36.8%

## Relationship Stressors

The only stressor that had a negative impact on couple satisfaction and dyadic adjustment was having an affair. Financial stress and unemployment were found to have a weak but statistically significant correlation with dyadic adjustment. And out of all stressor probed in this study, immigration was the only stressor that has a weak but **positive** effect on dyadic adjustment. Table below shows the norms as well as degree of correlations between stressors and relationship outcomes.

**Table 64: Relationship stressors (descriptive analysis and criterion validity)**

Relationship Stressors	Validation Sample	Correlation with Couple Satisfaction	Correlation with Dyadic Adjustment
Financial	59.1%	NS	-.115*
Job-related Stress	58.6%	NS	NS
Unemployment	45.8%	NS	-.128*
Relocation	40.6%	NS	NS
Children	38.8%	NS	NS
Loss in the Family	38.3%	NS	NS
Health	35.7%	NS	NS
Renovation	15.1%	NS	NS
Affair	9.9%	-.232**	-.192**
Immigration	6.7%	NS	.134*

NS: Not Significant

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

### Adopted Dyadic Roles (ADRs)

First, we look at the frequency of adopted dyadic roles in our sample. Best friend, lovers and teammates were the top three archetypes selected by this representative sample.

**Table 65: Descriptive analysis of adopted dyadic roles**

Adopted Dyadic Roles (ADRs)	Validation Sample
Best Friends	77.3%
Lovers	71.8%
Teammates	36.0%
Thinking Partners	32.6%
Co-parents	29.1%
Sex Partners	25.6%
Roommates	9.9%
Parent Child	7.6%
Leader Follower	2.3%
Mentor-Student	0.0%

Then, we looked at the correlation of these ADRs and relationship outcomes and love types (including emergent love from the RPI). Best outcomes could be seen in couples who view each other as “best friends”, “lovers” and to some extent “teammates”. Worst outcomes were seen in couples who see each other as “roommates”, “co-parents” and “leader-followers”. Being each other’s “thinking partners” or “sex partners” didn’t affect the outcomes in any direction. Emergent love index followed the same trend as relationship Outcomes. From a love type perspective.

From a love type perspective, Eros and Agape were correlated with “best friends” and “lovers” adopted dyadic roles. On the contrary, viewing each other as “co-parents”, “leader-follower” and “roommates” was reversely correlated with Eros and Agape. Seeing each other as “thinking partners”, “sex partners” and teammates wasn’t correlated with Eros or Agape.

Ludus was correlated with “parent-child” and “leader-follower” dyadic roles. Pragma was only correlated with “parent-child” model. Ludus was also correlated with “leader-follower” and “parent-child” dyadic roles.

**Table 65: Criterion validity of adopted dyadic roles**

Adopted Dyadic Roles	Couple Satisfaction	Dyadic Adjustment	Emergent Love	Eros	Agape	Storge	Ludus	Mania	Pragma
Best Friends	.353**	.321**	.363**	.289**	.211**	.186**	-.221**	0.064	-0.06
Lovers	.280**	.215**	.328**	.211**	.130*	0.016	-.179**	-0.022	0.011
Teammates	0.071	.147**	0.066	0.05	0.012	-0.053	-0.105	-0.036	-0.06
Thinking Partners	0.056	0.078	0.033	0.018	0.096	-0.027	-0.046	0.015	-0.07
Co-parents	-.169**	-.226**	-.170**	-.150**	-0.107	-0.029	0.092	-0.015	0.059
Sex Partners	-0.004	0	-0.025	0.039	-0.044	-0.032	0.082	-.124*	0.05
Roommates	-.336**	-.345**	-.327**	-.260**	-.128*	-0.101	0.068	0.04	-0.087
Parent Child	-0.047	-0.022	-0.051	-0.042	-0.01	.128*	.283**	.116*	.144**
Leader Follower	-.232**	-.213**	-.242**	-.221**	-.167**	-.134*	.173**	0.009	0.041
Mentor-Student	.b	.b	.b	.b	.b	.b	.b	.b	.b

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

b Cannot be computed because at least one of the variables is constant.

### Conflict and/or crisis management style

Based on our US validation study, staying calm and analyzing the situation as well as asking for help were the only two styles that were associated with couple satisfaction and dyadic adjustment.

Talking about the issues had a weak correlation with couple satisfaction but was not associated with dyadic adjustment.

Physical reactions, outbursts of anger and withdrawal from the situation were three strategies that had a negative association with couple satisfaction and dyadic adjustment. Crying was found to have no correlation with either of our targeted outcomes.

**Table 66: Conflict management styles (descriptive analysis and criterion validity)**

Conflict and/or Crisis Management Styles	Validation Sample	Couple Satisfaction	Dyadic Adjustment
By talking about it.	64%	.118*	-0.003
By staying calm and analyzing the situation	50%	.219**	.222**
By withdrawing from the situation	33%	-.228**	-.245**
By crying	23%	-0.097	-0.079
By an outburst of anger	21%	-.165**	-.210**
By asking for help	18%	.160**	.125*
By reacting through my body (e.g. hitting)	3%	-.186**	-.155**

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

### Frequency and Polarity of Self-Talk with or about a Partner

In this section, we looked at how frequently someone has a self-talk with or about a partner as well as the tone of that self-talk (positive or negative). If negative, this could be a proxy for the level of resentment felt toward a partner. Table below shows the connection between frequency and polarity of one’s self-talks with couple satisfaction, dyadic adjustment and emergent love.

As seen below, frequency of self-talk is not correlated with dyadic satisfaction and adjustment. However, a positive self-talk about a partner has a significant correlation with their satisfaction, dyadic adjustment and a sense of emergent love. And a negative self-talk is connected with lower satisfaction, less dyadic adjustment and a lower index for emergent love.

**Table 67: Criterion validity of self-talk with or about a partner against CSI-32, R-DAS and emergent love scale.**

	Couple Satisfaction	Dyadic Adjustment	Emergent Love
Frequency of Self-Talk	-0.042	0.019	-0.044
Polarity of Self-Talk	.481**	.429**	.514**
Self-Talk Index (frequency times polarity)	.434**	.393**	.487**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Feelings about the future of a relationship

Based on our study, the majority of respondents felt optimistic about the future of their relationships. And that was the only feeling correlated with couple satisfaction and dyadic adjustment. All other feelings such as being uncertain, unsure (i.e. “it depends”), indifferent and pessimistic were correlated with lower satisfaction and dyadic adjustment. The same trends were true when we look at the correlation of these outlook emotions with Emergent Love.

**Table 67: Descriptive analysis and criterion validity of Relationship Outlook against CSI-32 and R-DAS.**

Relationship Outlook	Validation Sample	Couple Satisfaction	Dyadic Adjustment
Optimistic	85%	.581**	.548**
Uncertain	8%	-.448**	-.430**
It Depends	3%	-.228**	-.188**
Indifferent	1%	-.383**	-.409**
Pessimistic	1%	-.336**	-.324**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

# Appendix 1: Protocol for the US Validation Study

**Title:** The development and validation of Relationship Panoramic, a multi-sectional inventory among US couples in long-term intimate relationships

Protocol Number and Date: RP-001, version 1.0, date: 2019-07-15

IRB approval: On August 2, 2019, Salus IRB designated reviewer, Charles F. Ryan, PhD determined the above referenced research to be exempt 45 CFR 46.104(d), per: Category 2

## Abstract

Measuring the determinants and predictors of a satisfying and thriving relationship has been the area of interest for relationship scientists as well as matching platforms. Turner developed the Relationship Quality Index (RQI) to assess the partner satisfaction within the relationship using a 6-item self-administered questionnaire with high internal consistency (Turner 1998). Collins and Read developed the Adult Attachment Scale that measures attachment in romantic relationships by 3 factors (closeness, dependency, and anxiety) (Collins 1990). Another well-established scale to assess attachment style in couples is the Experiences in Close Relationships-Revised (ECR-R) Questionnaire, in which two domains of avoidance and anxiety in a relationship is assessed (Farley 2000). More recently, Funk and Rogge developed and validated Couple Satisfaction Index with 32 items to measure one's satisfaction in a relationship (Funk 2007). And lastly, there is a Love Attitudes Scale (Hendrick 1986) with 6 subscales that measures one's attitude toward love in the context of an intimate long-term relationship.

These scales and measures offer a great value to clinicians in terms of better assessing their clients' needs and underlying issues. However, they have two main limitations that warrants development of new sets of scales and inventories:

1. Most of them were developed and validated 20-40 years ago reflecting the construct of intimate relationships and marriages in late 20<sup>th</sup> century. There is an urgent need to validate measures and scales that are constructed to address the complexities and unique issues of couples in our time.
2. All these scales were designed to assess a relationship from an angle of a single individual (i.e. one partner in a relationship). This highlights the need of creating and validating scales that are used in a dyadic format and assesses an intimate long-term relationship from the perspective of both partners.

With that context, this research project was designed to develop and validate a 200-item inventory that consists of a battery of smaller measures and scales that aims to assess "shared attributes" or compatibility of couples in long-term intimate relationships. We used validated scales such as Love Attitudes Scale (LAS), Couple Satisfaction Index (CSI), Revised Dyadic Adjustment Scale (RDAS) as well as Experiences in Close Relationships-Revised (ECR-R) as our basis to measure relationship satisfaction, consensus, cohesion, typology of love and attachment style. Then, we developed and validated the following scales and sub-scales based on responses we collect:

1. Personal Values and Shared Values (with the following subscales: egoistic, altruistic, moral, social, ideological, independence-oriented, utility-oriented and career-oriented)
2. Thinking Content and Shared Content of Thinking (with a focus on positive and negative thoughts)
3. Thinking Style and Shared Thinking Style (with a focus on abstract thinking).
4. Connection Style with the following domains of A) respect and manners, B) dress and looks, C) touch and affection, D) mood and tone
5. Shared Interests (with the following domains: general interests, political, religious and sexual)
6. Shared Emotions (based on positive vs. negative emotions)
7. Attitude toward Personal Finances and how it overlaps with a partner
8. Shared Lifestyle and Temperaments (e.g. healthy diet, exercise, sleep, use of alcohol, smoking, substance use, heat/cold tolerance, seasonal preferences)
9. Personal Identity and Shared Identity
10. Emergent Love Scale (based on thriving, fit and satisfaction as proxies for Relationship Outcomes and respect, compassion, love, commitment, trust as proxies for Interpersonal Dynamics)
11. Other research questions that will be addressed in this study are:

- a. What is the association between Satisfaction, Consensus and Cohesion (as measured by CSI and RDAS) and any areas of compatibility described above?
  - b. What is the association between Emergent Love Scale and any subscales of Love Attitude Scale?
12. What is the association between attachment style (measured by ECR-R) and Emergent Love Scale?

## Subject Population

345 adult participants (159 couples in intimate long-term relationship) were recruited through Amazon’s Mechanical Turk system to complete the Relationship Panoramic Inventory as well as the four validated scales. Each couple were reimbursed about \$20 for their participation in the study. The population was planned to be a US representative sample with no set criterion on age, sexual orientation and educational status.

### Inclusion Criteria:

- Age 18 and above
- Living in the USA
- Member of Amazon Prime’s Mechanical Turk with 98% HIT<sup>7</sup> approval rate and had had completed a minimum of 100 approved HITs in the past.
- In a long-term intimate relationship (married, cohabiting or living with a civil partner)

### Exclusion Criteria:

- None

## Research Methods and Design

Earlier phases of this study had focused on item generation and item reduction. In this phase, the focus was specifically on Final Item Selection as well as Convergent, Discriminant, and Criterion-Related Validity. Earlier work led to development of a nomological network of constructs around couple’s compatibility, emergent love and relationship fundamentals. This nomological network involves examining convergent validity, or the extent to which our measures relate to similar measures of the construct (i.e., other validated scales), and discriminant validity, or the extent to which our measures exhibit low or null correlations with dissimilar measures or constructs. Finally, analyses were conducted to provide criterion-related validity evidence (i.e., the extent to which our measures are related to theoretically relevant correlates/outcomes).

This study was conducted in compliance with the protocol, GCP and applicable regulatory requirements.

**Procedures for reporting deviations:** There were two plausible deviations that we can address in this study:

1. To abandon the questionnaires in the middle of completing them. In that case, the record was eliminated and not included in the analysis.
2. If the individual had answered all questions with the same answers (for example all questions in a 30-row matrix having the same answers), that record would be eliminated as well.

## Materials and Devices

Relationship Panoramic Inventory (with 200 items) plus 4 other validated scales were self-administered dyadically by couples in intimate long-term relationships.

1. Relationship Panoramic Inventory: consists of the following sections and questions:
  - a. Basic demographic and orientational questions: age, gender, sexual orientation, relationship orientation, relationship status, education, years in current relationship.
  - b. Personal values with 32 items
  - c. Thinking Content with 30 items
  - d. Thinking Style with 20 items
  - e. Connection Style with 20 items
  - f. Relationship Priority List with 12 items
  - g. Relationship Vision with 10 items
  - h. Emotional state with 20 items

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<sup>7</sup> HIT: Human Intelligence Tasks (e.g. a survey or questionnaire)

- i. Relationship and Sexual Satisfaction questions with 21 items
- j. Assessment of interests (general, sexual, political, religious)
- k. Conflict resolution competencies, attitude toward partner/relationship and relationship stressors have additional items

Most questions were batched as a matrix with similar Likert scale construct which allows the participant to complete that section with ease and efficiency. In our previous phases, a typical participant completes the inventory in 20-30 minutes. After the completion of the validation study, some items were eliminated and in some cases the number of items per scale changed.

## References

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## Glossary of Terms:

**Emergent Love:** Emergent Love is a form of intentional love that is created over time as a result of a couple's intention to choose to practice and cultivate compassion, love, commitment, respect, trust and physical attraction toward each other on an ongoing basis. Striving for Emergent Love creates a capacity for a relationship to become thriving and mutually satisfying.

**Submergent Love:** A state of infatuation that is known as being "in love". A status that if left unchecked could lead to an enmeshed and codependent type of relationship where the couple has a merged identity and becomes "one soul in two bodies".

**Eros:** passionate, sensual, sexual and erotic love.

**Storge:** familial, instinctual, natural love. Sometimes is used interchangeably as "philia".

**Agape:** pure, willful, sacrificial, and unconditional love. Sometimes it's used to describe love toward the Creator.

**Ludus:** playful and uncommitted love, involving teasing, flirting, and seducing.

**Pragma:** practical love founded on reason or duty.

**Mania:** obsessive and madly in love.

**Dyad:** pair, couple

**Monogamish:** A term coined by Dan Savage referring to two people who mutually agree that certain types of occasional sex outside of their relationship are okay and don't count as cheating.

**Polyamory:** the practice of engaging in multiple romantic (and typically sexual) relationships, with the consent of all the people involved.

**Queer:** an umbrella term for sexual and gender minorities who are not heterosexual or are not cisgender.

**Pansexual:** not limited in sexual choice with regard to biological sex, gender, or gender identity.

**Asexual:** the lack of sexual attraction to others, or low or absent interest in or desire for sexual activity.

**Bisexual:** sexually attracted not exclusively to people of one particular gender; attracted to both men and women.

**Open relationship:** a marriage or relationship in which both partners agree that each may have sexual relations with others.