

What Is Love? A Factor Analysis of Established Frameworks and a Semantic Analysis of Individual Western Beliefs¹

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ABSTRACT

The assessment of the construct of love has been attempted with various self-reporting questionnaires but there is no evidence that these measures are assessing the same construct. This research is attempting to develop a culturally sensitive definition for the construct of love. This research is a two-part study. The first part of the research sets out to validate eight of the widely used love (or related area) self-reporting measures. We hypothesized that there would be high collinearity between the various measures and that they would be related to the individual's perception of love. 565 adults were surveyed and were given each of the love measures, demographic questions, an overall rating of love (0-100), as well as an open-ended question to explain their definition of love. Factor analysis revealed that several of the measures had more factors than they reported, the items were plagued with high collinearity, or they had items that did not meet the minimum threshold for model inclusion. The second study addressed the attitudes toward love in Western society using an Implicit Association Test (IAT). We hypothesized that cognitive load would vary by the categorizations of love words. 1102 individuals in the United States and Europe were given a list of 158 words and asked if the word was associated to *love* or *not love* while cognitive load, measured as latency, was recorded. The results indicated that *love* words are identified faster than *not love* words. Conclusions are consistent with Prospect Theory and the Theory of Constructed Emotions.

1. Introduction

In the *Nicomachean Ethics*, Aristotle (translated by Peters, 1884) differentiated the “quality of the soul” as either being an emotion, or rather something innate, as opposed to a faculty, defined more like a trait, or a habit that we train. He saw love as the first category of emotion or passion.

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He explained the difference between love and friendship was that the former was a feeling, and the latter was a habit. Saint Thomas Aquinas (1948) explained that love is part of one of the “concupiscible passions” (i.e. Emotions that bring people to good or evil where love is the other side of hate). St. Aquinas also mentioned that love is not necessarily a positive emotion since it can wound and corrupt an individual.

Modern neuroscience has given gravitas to some of these ancient and foundational concepts of love and emotions. There is evidence that neurotransmitters are involved in the process creating a “cocktail” of chemicals that make the individual feel good or even rewarded by their connections (i.e. arginine vasopressin, dopamine, oxytocin) (Seshadri, 2016). Emotions can be seen as a two-dimensional system consisting of core affect (i.e. valenced states) and activation (i.e. arousal) (Russell & Barrett, 1999). However, in the end, there are no clear markers for emotions in the brain. Unlike the amygdala and limbic system, which serve the functions of fear, there is no place in the brain that we can point to the “love spot.” The evidence points to a predictive brain model rather than simply reactive to stimuli. The brain’s function is allostasis where it predicts needs and triggers processes to satiate those needs. Using Bayesian logic, the brain simulates predictions that are accepted or rejected based on success. In this paradigm, emotions are constructed simulations that were an acceptable prediction/response in society (Feldman, 2017). Thus, love would be an allostatic response that is beneficial and meets the needs of the individual.

This protective aspect of love would fit with some of the theoretical frameworks for emotions. Psychologists have seen love as an emotion and have shown that individuals consider it to be the most prototypical of emotions (Fehr & Russell, 1984). The benefit of the prototypical theory of emotion is that it fits in other paradigms of evidence laden sciences like cognitive psychology (Clore & Ortony, 1991)- we think emotions are, therefore they are. However, Plutchik (1980) proposed his Psychoevolutionary Theory of Emotions where emotions, in both humans and animals, serve not only as a basis for behavior but also personality and pathological processes. The theory posits 8 basic emotions that form the basis of all other emotions- where love is a byproduct of joy and trust. In contrast, Ekman (1992), stated that there are 6 universal emotions and love is not one of those. His theory explains emotion as an appraisal mechanism that is both evolutionary and personal with both psychological and physiological components. Ultimately, the argument boils down to whether the theory sides with the mechanistic or the organismic view (Mason & Capitanio, 2012). Are we born with it or is it just another cog in the holistic presentation of human “beingness”?

Theoreticians have tried to tackle this elusive construct of love (Hatfield et al., 2011; Graham & Christianson, 2009). Many researchers have proposed their theories and created measures to evaluate their constructs. The first notable among them was Zick Rubin (1970) who attempted to separate liking from loving distinguishing compassionate from erotic love. Despite studies showing the validity of these measures (Sternberg, 1997; Sprecher & Regan, 1998; Hendrick & Hendrick, 1989; Rubin, 1970; Sprecher & Metts, 1989), these constructs were created with an assumption of validity without questioning whether they defined love at all. Also, the theories tend to differentiate between several types of love (e.g., passionate love v the love of a parent).

The question remains, what is love? It is in this question that the gap in the literature lies. The measures used (see Study One below) make assumptions on the meaning of love yet they do not have a uniform definition of the construct. Instead, they depend on a universal understanding of love to validate the measure’s assumptions. This understanding of love has not been fully identified. Likewise, the definitions for love in the measures seem to vary. As for its universality, love may or may not be an emotion, albeit a complex one, or it may be a

cultural construct that we have subsumed and believe to be a physiological response to an object.

2. Method (Study One)

This study consists of two separate studies that seek to construct a sound theory for love based on previous research and participant experiences.

2.1. Participants

Participants (N=566) were recruited using social media (e.g. Twitter/X, Facebook) and Amazon Mechanical Turk using CloudResearch. The participants through Amazon Mechanical Turk using CloudResearch received .20 cents to complete the survey. Participant criteria for Amazon Mechanical Turk was limited to adults. This study was conducted in the summer of 2023. The survey was presented all at once and was completed anonymously online.

2.2. Instrument

We used Survey Monkey to present the survey. The survey consisted of demographic questions and validated love measures. The participants were asked about their love history ('Have you been in love?'), their experience of love (valenced responses from positive to negative), their current relationship/love status, and whether they believed that love is stable or changing. The participants were also provided with an area to provide their description of love and encouraged to find words that fit within their definitions.

The participants also were asked to complete several validated measures as detailed below.

Zick Rubin's Romantic Love Scale (ZRRLS) (1970): The measure consists of thirteen items answered with a 9-point scale with "not at all true" to "very true" as responses. The scale is supposed to be uni-factorial. Rubin's theory of love also comprised compassionate love which is closer to likely (i.e. friendship). He posited that there are three components to love (i.e. "affiliative and dependent need, a predisposition to help, and an orientation of exclusiveness and absorption" (p. 267-268)). The scale has good reliability ($\alpha = 0.88$) (Lund, 1985).

Sternberg's Triangular Love Theory (STLT) (1986): The measure consists of three factors (Intimacy (STLTI), Passion (STLTP), Commitment (STLTC) where each is measured with fifteen items for a total of 45 questions. The responses are determined on a 5-point scale ranging from "Disagree" to "Agree". The internal consistency of the measure is high ($\alpha = 0.97$) (Sternberg, 1997). There is evidence that there is high co-linearity between the scales (Hendrick & Hendrick, 1989).

Romantic Belief Scale (Sprecher & Metts, 1989): This scale proposed to measure several ideals of romance: (1) Love at first sight; (2) First and only; (3) Love conquers all; (4) Idealization; and (5) Following conscience (Sprecher & Metts, 1989). The scale has 15 items and a 7-point Likert Scale (Strongly disagree [1] to Strongly Agree [7]). The original article reported an internal consistency of .81. The results should represent that the higher the value, the more romantic ideals the individual has.

Love Attitude Scale- Short Scale (Hendricks et al., 1998): The LAS has 6 scales: Eros (LAS-E) (passionate love), Ludus (LAS-L) (game-playing love), Storge (LAS-S) (friendship love), Pragma (LAS-P) (practical love), Mania (LAS-M) (possessive, dependent love), Agape (LAS-A) (altruistic love). The scales were fashioned after "Color Wheel of Love" (Lee, 1973). The scales were not derived mathematically.

Passionate Love Scale (PLS) (Hatfield & Sprecher, 1986): The PLS is a measure consisting of 30 items answered on a 9 point scale that ranges from “not at all true” to “definitely true”. It was created to measure the level of love in an intimate relationship. The measure has several items that are focused on the cognitive processes of love- thinking of the individual and even “intrusive” thoughts regarding the object of affection. The measure is supposed to be unidimensional and measured continuously and has an internal consistency of .94. The measure is based on the idea that love between intimate partners is “A state of intense longing for union with another. Reciprocated love (union with the other) is associated with fulfillment and ecstasy; unrequited love (separation) is associated with emptiness, anxiety, or despair” (Hatfield & Sprecher, 1986, p. 9).

Dispositional Positive Emotions Scale (DPES) –Compassion Sub scale and Love sub scale (Shiota et al., 2006): The DPES is a 38-item measure with seven subscales (joy, contentment, pride, love, compassion, amusement, and awe). For the purposes of this study, only the compassion (DPESC- 5 items) and love (DPESCL- 6 items) scales were used. The responses are given on a 7-point Likert Scale ranging from Strongly Disagree to Strongly Agree. For the results, the higher the total score for each scale, the higher the positive emotion associated with it. The measure when created had alphas of .8 for each of these scales.

Love Attitude Inventory (Knox, 1970): The Love Attitude Scale was created to measure romantic or realistic love. One being the prototypical love (e.g. euphoric feeling) and the other being practical. The measure has thirty items and is answered on a 5-point scale ranging from Strongly Agree to Strongly Disagree. The lower the score, the more romantic the individual is.

Functional Analytic Psychotherapy Intimacy Scale- FAP Intimacy Scale (Leonard et al., 2014): The FAPIS is a 14-item measure used in Functional Analytic Psychotherapy to assess the intimacy level of the individual. There are three factors, according to Leonard et al. (2014) consisting of “Hidden Thoughts and Feelings (5 items) [FAPISHTF], Expression of Positive Feelings (4 items) [FAPSEPF], and Honesty and Genuineness (5 items) [FAPISHG]” (p.650). The internal consistency of Hidden Thoughts and Feelings was .84, Expression of Positive Feelings was .85, and Honesty and Genuineness was .82. The overall internal consistency was .87. The measure is both used as a total score and separated factors.

3. Results (Study #1)

566 participants were surveyed (n=367 (female), n=164 (male), n=18 (non-binary), n=5 (trans male)). The participants ranged in age from 18 to 65+ (most participants reported being between the ages of 18-44) and identified as heterosexual (n=421). The participants reported a variety of relationship statuses with the majority being married (n=200). Most of the participants reported being in love at some point (n= 536) and that it was a positive experience (n=320). Table 1 gives the full demographics for the Study #1 participants.

Table 1.
Study 1 Demographics

Demographic	Frequency (N=566)	
Age	18-24	106
	25-34	184
	35-44	155
	45-54	73
	55-64	35
	65+	13
Gender	Female	377
	Male	164
	Non-binary	18

Demographic	Frequency (N=566)	
Orientation	T-male	5
	Other	2
	Heterosexual	421
	Homosexual	33
	Bisexual	73
	Pansexual	23
	Asexual	9
	Other	2
	Prefer not to answer	5
Have you been in love?	Yes	536
	No	29
What is your experience of love?	Positive	320
	Negative	32
	Too much pain	19
	Difficult but worth it	128
	Words are useless	59
Are you currently in love?	Yes	375
	No	190
Relationship Status	Married	200
	Widowed	10
	Divorced	20
	Separated	10
	Domestic Partner	88
	Polyamorous	6
	Single Cohabiting	41
	Single not open	42
	Single open	91
	Single Dating	39
	Other	4
	Prefer not to answer	15

3.1. Factorial Analysis of the Measures

We conducted principal component analyses and Cronbach alphas on each of the measures to validate their proposed scales. Table 2 shows the results of the factor analysis compared to the results given by the original authors of the measures. As the original authors of the measures do not report their factor analysis criteria, this analysis used Kaiser's criterion with varimax rotation to identify the factors. Of note was that some of these factors had high collinearity. For example, this study's analysis of factors for the Triangular Theory of Love had correlations between factors in excess of .78. Some of the results showed uneven loading with the factors loading strongly on one or more category. The Love Attitude Scale showed some questionable correlations between factors that rationally would not have correlations. Mania, characterized as possessive love, and Agape, characterized as altruistic love, had an $r=.26$, $p=.01$ for constructs that definitionally should be uncorrelated or negatively correlated.

Table 2.
Factor Analysis and Consistency Results

Name of Measure	Proposed	Internal Consistency (Cronbach Alpha)	Factor Analysis Results	Number of Rotations
Rubin's Love Scale	1	.934	1	1
Triangular Theory of Love	3	STTL-I=.969 STTL-P=.964 STTL C=.978	4 (high collinearity)	7

Name of Measure	Proposed	Internal Consistency (Cronbach Alpha)	Factor Analysis Results	Number of Rotations
Love Attitude Scale	6	LAS-E=.75 LAS-S=.923 LAS-P=.73 LAS-A=.770 LAS-L=.65 LAS-M=.661	6	5
Romantic Belief Scale	1 (Continuous)	.89	4 (uneven)	7
Passionate Love Scale	1 (Continuous)	.970	3 (uneven- most loaded on 1)	7
Dispositional Positive Emotion Scale	2 subscales	DPESC=.872 DPESL=.852	2	1
Love Attitude Scale (Knox)	1	.895	6	15
FAPIS	3	FAPISHTF=.92 FAPISEP=.91 FAPISHG=.854 FAPIS=.80	3	5

3.2. Participant Love Status as Compared to the Measures

The items of “Been in Love,” “Love Experience,” and “Currently in love” were weakly correlated to some of the measures (“Been in Love”, LAS-E; $r_{pb}=.264$, $p<.0001$ was the largest correlation to any of the scales. “Love Experience,” LAS-E ($r_{pb}=.129$, $p=.001$) was the largest correlation to any of the scales. “Currently in love,” LAS-E; ($r_{pb}=.391$, $p<.0001$) and LAS- A ($r_{pb}=.229$, $p<.0001$) were the largest positive correlations). An interesting finding were the amount of negative point biserial correlations between “Currently in love” and the love scales. Of the participants, 375 reported being currently in love and 190 reported not being in love. And yet, PLS ($r_{pb}=-.398$, $p<.0001$), STLSI ($r_{pb}=-.418$, $p<.0001$), STLSP ($r_{pb}=-.418$, $p<.0001$), STLSC ($r_{pb}=-.522$, $p<.0001$), ZRRLS ($r_{pb}=-.393$, $p<.0001$, and RBS ($r_{pb}=.189$, $p<.0001$) were all negatively correlated to current love status.

3.3. Validating Constructs

Despite the varying definitions of the constructs in each assessment (i.e., the construct is supposed to measure romance, passion, intimacy, or compassion), we found strong correlations between the scales, items, and totals. Table 3 shows the correlations between all of the scales of the measures. There were surprises specifically for scales and measures that should have been similar but were not. For example, LAS-EROS, which refers to passionate love, showed moderate, negative correlations with the PLS ($r=-.575$, $p<.001$), all three of Triangular Theory of Love scales (STTL-I, $r=-.46$, $p<.001$; STTL-P, $r=-.574$, $p<.001$, STTL-C, $r=-.492$, $p<.001$), RLS ($r=-.479$, $p<.001$). Whereas the PLS and STTL-P had strong correlations ($r=.837$, $p<.001$) as expected. Also, the correlations between scales of the STTL were strong (STTL-I to STTL-P, $r=.782$, $p<.001$; STTL-I to STTL-C, $r=.862$, $p<.001$; STTL-P to STTL-C, $r=.787$, $p<.001$) which was been previously predicted (Merino & Prevido, 2020).

Table 3.

Correlations of all scales from measures

	LAS-Eros	LAS-Ludos	LAS-Pragma	LAS-Storge	LAS-Mania	LAS-Agape	PLS	STTL-Intimacy	STTL-Passion	STTL-Compassion	ZRLS	RBS	DPESCT	DPESLT	LAS	FAPSHF	FAPSEP	FAPSHG
LAS-Eros	1																	
LAS-Ludos	-.229**	1																
LAS-Pragma	.027	.221**	1															
LAS-Storge	.309**	-.024	.140**	1														
LAS-Mania	.025	.266**	.257**	.015	1													
LAS-Agape	.316**	-.106**	.043	.163**	.258**	1												
PLSTOT	-.575**	.269**	.034	-.186**	-.172**	-.435**	1											
STTL-Intimacy	-.460**	.290**	.109**	-.229**	.137**	-.247**	.672**	1										
STTL-Passion	-.574**	.280**	-.003	-.228**	-.047	-.357**	.837**	.782**	1									
STTL-Compassion	-.492**	.303**	.069	-.233**	.073*	-.283**	.699**	.862**	.787**	1								
ZRLS	-.479**	.253**	.034	-.190**	-.103**	-.419**	.787**	.735**	.776**	.777**	1							
RBS	-.304**	.098**	-.118**	-.049	-.152**	-.261**	.462**	.315**	.500**	.379**	.489**	1						
DPESCT	-.163**	.232**	.026	-.074*	.027	-.188**	.319**	.349**	.298**	.318**	.381**	.324**	1					
DPESLT	-.145**	.019	-.094*	-.097*	.026	-.090*	.174**	.178**	.244**	.138**	.224**	.311**	.314**	1				
LAS	.169**	-.027	.176**	.053	.221**	.178**	-.217**	-.039	-.215**	-.069	-.182**	-.396**	-.105**	-.102**	1			
FAPSHF	-.118**	.194**	.042	-.090*	.089*	-.085*	.199**	.268**	.200**	.225**	.236**	.140**	.314**	.180**	-.013	1		
FAPSEP	-.122**	.174**	.023	-.084*	.069	-.102**	.200**	.265**	.209**	.221**	.205**	.174**	.296**	.126**	-.025	.748**	1	
FAPSHG	.037	-.133**	-.074*	-.060	-.113**	.005	-.035	-.039	.028	.003	-.014	.083*	-.068	.053	-.066	-.253**	-.099**	1

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

4. Method (Study # 2)

4.1. Participants

Participants ($N=1101$) were recruited using Amazon Mechanical Turk (MTurk) using CloudResearch. The participants through MTurk using CloudResearch received .20 cents to complete the survey. Participant criteria for Amazon Mechanical Turk was limited to adults. This study was conducted in January of 2024. The survey was presented using the Qualtrics platform.

4.2. Instruments

Love words: From Study #1, each participant was given an open-ended question where they could write their definition of “love” as well as words they associate with love. The words from the love measure and the responses to the open-ended questions were combined to create a corpus to analyze. A word vector was created using this corpus. The LSA Similarity Cosine is a cognitive and linguistic measure of similarity of meaning in words or phrases within a corpus of work (Günther et al., 2016). High similarity scores indicate similarities to the theme of the corpus, in this case love. Using the r-studio package *lsa*, a similarity cosine matrix was developed (Wild, 2022). A score of zero indicates orthogonality in the vector and no similarity in meaning. A score of 1 is collinearity in the vector and exactly the same meaning in the vector space. We used a similarity score of .7 or greater, which indicates a strong similarity between words and phrases up to five words (5-gram), to create a list of 158 words with similarities to the theme (Guo, 2022).

Implicit Association Test (IAT): For this study, we used an implicit association test (IAT) to evaluate the participant’s attitudes towards “love words.” The IAT is usually used to measure “the differential association between two target concepts” (Greenwald et al., 1998). In this study, the participants were presented with “love words” and asked whether the word was a “love word” or “not love word”. The measurement is twofold- the attitude towards the word and the latency (i.e., time it takes for them to decide whether a word was or was not a love word). The words were not valenced prior to presentation in the IAT.

4.3. Procedure

The list of 158 words were used as the stimuli and were placed in categories labeled “Love Words” or “Not Love Words”. The participants were first given a practice block in which the target (is it love or not) stimuli was presented randomly on the right or left side of the screen. The practice block reduces participant error and allows for statistical analysis of validity. Following, the participant was given the associative block to measure the time (latency) to make the decision. The practice blocks are composed of twenty trials each, while the associative test blocks are composed of forty trials each. The test collects both response and latency (measured in ms) to respond to the stimuli. Figure 1 shows a sample of the stimulus prompt for the word *Adore*.

Love Word

Not Love Word

Adore

Press the E key for the choice
on the left.

Press the I key for the choice on
the right.

Figure 1. Sample Stimulus Prompt

5. Results

5.1. Demographics

This study had an international sample consisting of 1102 participants from North American and the European Union. The participants ranged in age from 18-65+ (18-24, $n=55$; 25-34, $n=201$; 35-44, $n=213$; 45-54, $n=248$; 55-64, $n=175$, 65+, $n=127$; over 18 (those who declined to state their age range but affirmed they were over 18), $n=3$). Primarily, the language the participants spoke was English ($n=976$) and Caucasian ($n=761$). Most of the participants identified as male ($n=684$), heterosexual ($n=825$), and currently separated ($n=451$).

Table 4 gives the full demographics for Study 2.

Table 4.
Study 2 Demographics

Demographic	Frequency (N=1102)	
Age	18-24	55
	25-34	201
	35-44	213
	45-54	248
	55-64	175
	65+	127
	over 18	3
	Gender	
Gender	Female	316
	Male	684
	Non-binary	10
	T-Female	1
	Gender Fluid	1
	Other	5
	Orientation	
Orientation	Heterosexual	825
	Homosexual	36
	Bisexual	92
	Pansexual	15
	Asexual	26
	Other	9
	Prefer not to answer	15
Primary Language	English	976
Race/Ethnicity	Caucasian	761
	Black or African American	93

Demographic	Frequency (N=1102)	
Relationship Status	Latino	31
	Native American	3
	Asian	34
	Hawaiian or Pacific Islander	1
	Other	5
	Prefer not to answer	5
	Mixed	84
	Married	258
	Widowed	183
	Divorced	10
	Separated	451
	Domestic Partnership	73
	Polyamorous	35
	Single Cohabiting	10

5.2. Identification of Love Words

This analysis focused on the dataset, defining the words as either love or not love. This block consists of 158 words. A word may be presented multiple times with the latency between the stimuli (Love/Not Love) measured each time. With the iterations over all the participants, there were 9600 latency values in this dataset ($n=9600$).

Table 5 gives the words as a percentage of participant's score as either Love or Not Love. The identification of Love words had lower uniformity as a percentage compared to Not Love words. Only *Agape* and *Concupiscence* had frequencies of love word identification over 60%. *Current*, *Heartstrings*, *Indifference* and *Sexual Practice* were identified as not love words over 75% of the time.

An independent sample t-test was performed to show the differences in latency between participant's categorization of Love words versus Not Love words. A significant difference was indicated with Love words ($M=1006.54$, $SD=1176.11$) being identified faster than Not Love words ($M=1383.97$, $SD=1730.71$, $t(9598)=-11.96$, $p=.004$, two-tailed). Likewise, there was a significant difference in the latency between those that believed that love is an emotion ($M=1229.79$, $SD=1572.69$) and love is not an emotion ($M=1447.09$, $SD=914.23$, $t(9518)=-2.60$, $p=.001$, two-tailed) which a small effect size (*Cohen's d* = .14).

A one-way between group analysis of variance was conducted to examine the effects of relationship status on latency. There was a significant difference between the groups ($F(6, 9553)=28.69$, $p<.001$). It may be noted that the groups associated with loss or "non-traditional" relationship status [Widowed ($M=1368.47$, $SD=2506.50$), Divorced ($M=1498.64$, $SD=1534.84$), Separated ($M=1302.10$, $SD=1279.70$), Domestic Partnership ($M=1593.91$, $SD=1435.60$)] had higher means than those with those in "traditional" relationships [Married ($M=898.63$, $SD=1009.36$), Polyamorous ($M=997.47$, $SD=811.39$), Single ($M=839.85$, $SD=1432.90$)].

A one-way between group analysis of variance showed significant results of latency between groups of sexual orientation ($F(6, 9593)=12.21$, $p<.001$) with the greatest mean difference between homosexual ($M=788.77$, $SD=901.23$) and heterosexual ($M=1263.71$, $SD=1594.62$) using Tukey HSD ($p<.001$).

An independent sample t-test between identified genders showed a difference in latency between females ($M=961.96$, $SD=2264.33$) and males ($M=1325.73$, $SD=1248.27$, $t(9478)=-9.71$, $p<.001$, two-tailed).

Table 5.

Frequency of Identification of Word as Love or Not Love

Word	Love Words	Not Love Words	Word	Love Words	Not Love Words	Word	Love Words	Not Love Words	Word	Love Words	Not Love Words
ACQUIRE	35.38%	64.62%	DESPAIR	39.60%	60.40%	IGNORE	34.26%	65.74%	PREFER	43.75%	56.25%
ADORATION	39.62%	60.38%	DESTROY	35.20%	64.80%	ILL	43.09%	56.91%	PREVENT	40.40%	59.60%
ADORE	26.53%	73.47%	DEVOTEDNESS	27.45%	72.55%	IMAGINE	34.43%	65.57%	QUESTION	39.53%	60.47%
AFFECTION	35.00%	65.00%	DEVOTION	37.50%	62.50%	INDECISION	40.74%	59.26%	RATIONAL	38.46%	61.54%
AGAPE	65.31%	34.69%	DISCARD	40.18%	59.82%	INDIFFERENCE	20.00%	80.00%	REALIZE	42.61%	57.39%
ALL	35.85%	64.15%	DISCOURAGE	30.93%	69.07%	INFATUATION	47.37%	52.63%	REQUIRE	37.93%	62.07%
ALLOW	39.34%	60.66%	DISLIKE	29.91%	70.09%	INTENTION	42.62%	57.38%	RIGHT	36.59%	63.41%
AMOROUSNESS	40.00%	60.00%	DISREGARD	30.28%	69.72%	JUST	34.55%	65.45%	ROMANCE	34.00%	66.00%
APPRECIATE	35.90%	64.10%	DO	33.33%	66.67%	KEEP	55.32%	44.68%	RUIN	34.86%	65.14%
APPROACH	46.00%	54.00%	DON'T	52.00%	48.00%	KNOW	35.56%	64.44%	SATED	49.06%	50.94%
ARDOR	40.91%	59.09%	DOTE	48.15%	51.85%	LATER	41.18%	58.82%	SATISFIED	33.96%	66.04%
ATTEND	45.65%	54.35%	EMOTION	33.33%	66.67%	LEAVING	41.43%	58.57%	SAY	40.00%	60.00%
BABY	33.33%	66.67%	ENAMOREDNESS	32.20%	67.80%	LET	48.98%	51.02%	SEARCHING	40.00%	60.00%
BAD	37.50%	62.50%	END	45.28%	54.72%	LET GO	40.38%	59.62%	SEE	45.10%	54.90%
BEING	34.88%	65.12%	ENJOY	28.89%	71.11%	LIFE	49.15%	50.85%	SEX	42.31%	57.69%
BELOVED	31.82%	68.18%	EROS	37.50%	62.50%	LIKE	51.72%	48.28%	SEX ACTIVITY	33.33%	66.67%
BENEVOLENCE	40.00%	60.00%	EXISTENT	59.62%	40.38%	LONGING	58.72%	41.28%	SEXUAL ACTIVITY	29.79%	70.21%
BOY	45.12%	54.88%	EXPERIENCE	53.85%	46.15%	LOOKING	45.45%	54.55%	SEXUAL DESIRE	30.95%	69.05%
CAN	51.16%	48.84%	FEEL	31.48%	68.52%	LOSE	31.31%	68.69%	SEXUAL PRACTICE	23.68%	76.32%
CAN'T	56.25%	43.75%	FORGET	32.95%	67.05%	LOVINGNESS	19.51%	80.49%	SICK	29.25%	70.75%
CARE FOR	39.39%	60.61%	FOUND	47.27%	52.73%	LOYALTY	33.33%	66.67%	STEAL	28.68%	71.32%
CARING	25.49%	74.51%	FRIENDLY	42.86%	57.14%	MAD	35.78%	64.22%	SURRENDER	51.00%	49.00%
CAUSE	29.63%	70.37%	GET	39.29%	60.71%	MAKE	27.42%	72.58%	SWEET	25.53%	74.47%
CHANGE	37.50%	62.50%	GET OFF	63.33%	36.67%	MAN	40.82%	59.18%	TAKE	42.86%	57.14%
CHERISH	36.17%	63.83%	GIRL	45.83%	54.17%	MEAN	44.23%	55.77%	TENDERNESS	31.91%	68.09%
CHOOSE	43.48%	56.52%	GIVE	41.03%	58.97%	MOTIVATION	24.44%	75.56%	THINK	43.33%	56.67%
CONCUPISCENCE	62.16%	37.84%	GOT	44.68%	55.32%	NECESSITATE	36.17%	63.83%	TREASURE	32.73%	67.27%
CORRECT	36.84%	63.16%	GRAB	35.71%	64.29%	NEED	46.67%	53.33%	TRUE	50.00%	50.00%
CRAZY	50.00%	50.00%	HATE	28.46%	71.54%	NEGLECT	42.61%	57.39%	UNENTHUSIASTIC	41.18%	58.82%
CREATE	40.00%	60.00%	HAVE	37.70%	62.30%	NONE	29.55%	70.45%	UNINTERESTED	28.83%	71.17%
CRUSH	55.67%	44.33%	HEAD	26.67%	73.33%	NOW	60.87%	39.13%	UNPLEASANT	32.73%	67.27%
CURRENT	22.64%	77.36%	HEALTHY	35.42%	64.58%	NUMB	29.84%	70.16%	WANT	48.94%	51.06%
DEAR	32.69%	67.31%	HEART	28.89%	71.11%	ONE	46.00%	54.00%	WAY	34.48%	65.52%

Word	Love Words	Not Love Words	Word	Love Words	Not Love Words	Word	Love Words	Not Love Words	Word	Love Words	Not Love Words
DEAREST	27.78%	72.22%	HEARTSTRINGS	23.08%	76.92%	ONLY	40.82%	59.18%	WELL	42.31%	57.69%
DEATH	34.95%	65.05%	HOLD	42.22%	57.78%	PASSION	26.67%	73.33%	WILD	57.72%	42.28%
DECIDE	50.00%	50.00%	HOLD DEAR	29.79%	70.21%	PASSIONATE	43.24%	56.76%	WILL	54.76%	45.24%
DECLARE	48.94%	51.06%	HONEY	32.69%	67.31%	PAST	48.08%	51.92%	WOMAN	48.00%	52.00%
DEMAND	33.33%	66.67%	HOPE	37.78%	62.22%	PHYSICAL	30.00%	70.00%	WORSHIP	39.53%	60.47%
						ATTRACTION					
DESIRE	31.82%	68.18%	IGNORANCE	34.86%	65.14%	PLEASING	36.17%	63.83%	WRONG	33.91%	66.09%

6. Discussion

These studies set out to establish an understanding of the meaning of love. What we found was that the construct has several definitions but little consensus. Theoreticians have constructed definitions delineating love into categories that may not warrant such granularity. The results of the first study, where eight separate “Love” or love adjacent measures were compared, showed that even with face validity comparisons, the negative correlations between measures with similar terminology were surprising. When comparing passionate love, despite one measure having a high correlation to the actual participant experience (participants had a positive experience), between the measures, there was a negative relationship between their relationships and the results of those measures. Also, participants reporting that they are currently in love and the correlations of the measures showing a negative relationship to that response is an unexpected result. The most accurate of the measures was the Love Attitude Scale- Eros. Ultimately, the collective experiences of the participants are what provide validity to the constructs and for these scales, therefore, their validity should be questioned.

The latency data indicated a variety of differences across groups. As latency is an indicator of cognitive load or cognitive association, these differences may be associated with belief systems or experiences with the target being measured (Greenwald et al., 1998). Women were faster at identifying love words than men. Participants who had experienced divorce, widowed, separated, or domestic partnerships were found to take longer to categorize love words as opposed to other relationship statuses. The inferences here could be drawn that experiences determine the speed with which we categorize love or love words.

This latency in response is not unlike Kahnman and Tversky’s “Prospect Theory” (1977) where they posited that the brain had two speeds in decision making (i.e., fast, slow) based on risk aversion. We propose that this theory and that of the Theory of Constructed Emotions can explain this latency drawn from experiences. According to Barrett-Feldman (2017), emotions are not innate or universal but constructed. The brain is not reactive but processes stimuli in a Bayesian fashion. If we are to assume the previous experience of the individual as the a-priori of the equation, then the successful previous predictions would be the ones that rendered the least risk. Ultimately, they explanation of love can be described as a Heuristic Construction Prospect Theory. We experience things in our lives and those experiences create the foundations of our future predictions (i.e., a priori) where the results of the predictions (i.e., posterior) then reinforce or adds to the Bayes modeling for future experiences.

The experience of love and the benefits of that experiences fill journals, songs, poetry, and lives. The definition of love seems almost ephemeral when reading all the items of the measures used in this study and the very words of our participants. Nonetheless, understanding love and other emotions is key to assisting people to access these potentially positive experiences. Marriage and family therapists, counselors, and their patients use love, or its absence, as an impetus for change. Without a clear understand of the construct, there is no practical application of this experience. This and further research into the construct of love may allow mental health practitioners to teach the concept as an intrinsic motivator for change. Future studies need to consider a deeper dive into previous love experiences and presenting love, love words, or scenarios, in some fashion where identification will garner more meaningful data.

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