

S1 File. Supporting Analyses, Results and Null models

Do Emotions Expressed Online Correlate with Actual Changes in Decision-Making and Judgment?: The Case of Stock Day Traders

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MEASUREMENT AND ROBUSTNESS CHECKS

Emotional Activation

To code words in texts we prepped each text by (i) reducing each word to its stem word (Porter 1980) (e.g., connecting or connection = connect); (ii) converting abbreviations to words (e.g., lov and luv to love); (iii) coding words in the text for activation using the ANEW dictionary's standard word scale of 0.0 to 9.0. The Affective Norms for English Words (ANEW) dictionary contains English words, which, when used in conversation, provides a proxy for a person's level of emotional activation. The ANEW was validated using autonomic physiological responses (pulse, conductance, etc.) and is used extensively across research domains (e.g., the search term "The Affective Norms for English Words" generates more than 100,000 Google hits). Following prior work on establishing a level at which activation is considered to occur for an individual, we followed prior work (e.g., Kassam et al. 2013) and defined a person as being in an activated state (1=yes; 0=otherwise) if their average activation level exceeded a threshold level of activation based on the activation words appearing in the text. Because there is no a priori theory specifying an exact threshold, we addressed the issue empirically and used three thresholds. The three thresholds were 4.5, 5.0, or 5.5.

Null Models

To test that activation effects are not due to chance, we constructed null models that randomized the ordering of texts over the hour, day, week, or month. These tests verified that chance did not explain observed periods of activation ($p < .0001$).

Sensitivity Tests for Different Thresholds of Activation

To test that activation effects are robust to a chosen threshold and length of duration of activation, we used three threshold values 4.5, 5.0, and 5.5 and 7 durations 30, 35, 40, 45, 50, 55, and 60 minutes. All three thresholds produced a similar pattern of effects as noted above. According to a binomial test, the likelihood that 448/735 (=3*7*35) pass the two-tail binomial test has a p -value<.00001 as shown above in the regression analyses.

Counts of the Top 200 Activation Words used by All Traders

The S1A and S2B Figures show the frequency count of the appearance of ANEW activation words in traders' texts. In cases where traders use abbreviations and intentional misspelled words in their texts, e.g., plai for play or comput for compute, we report native spellings.

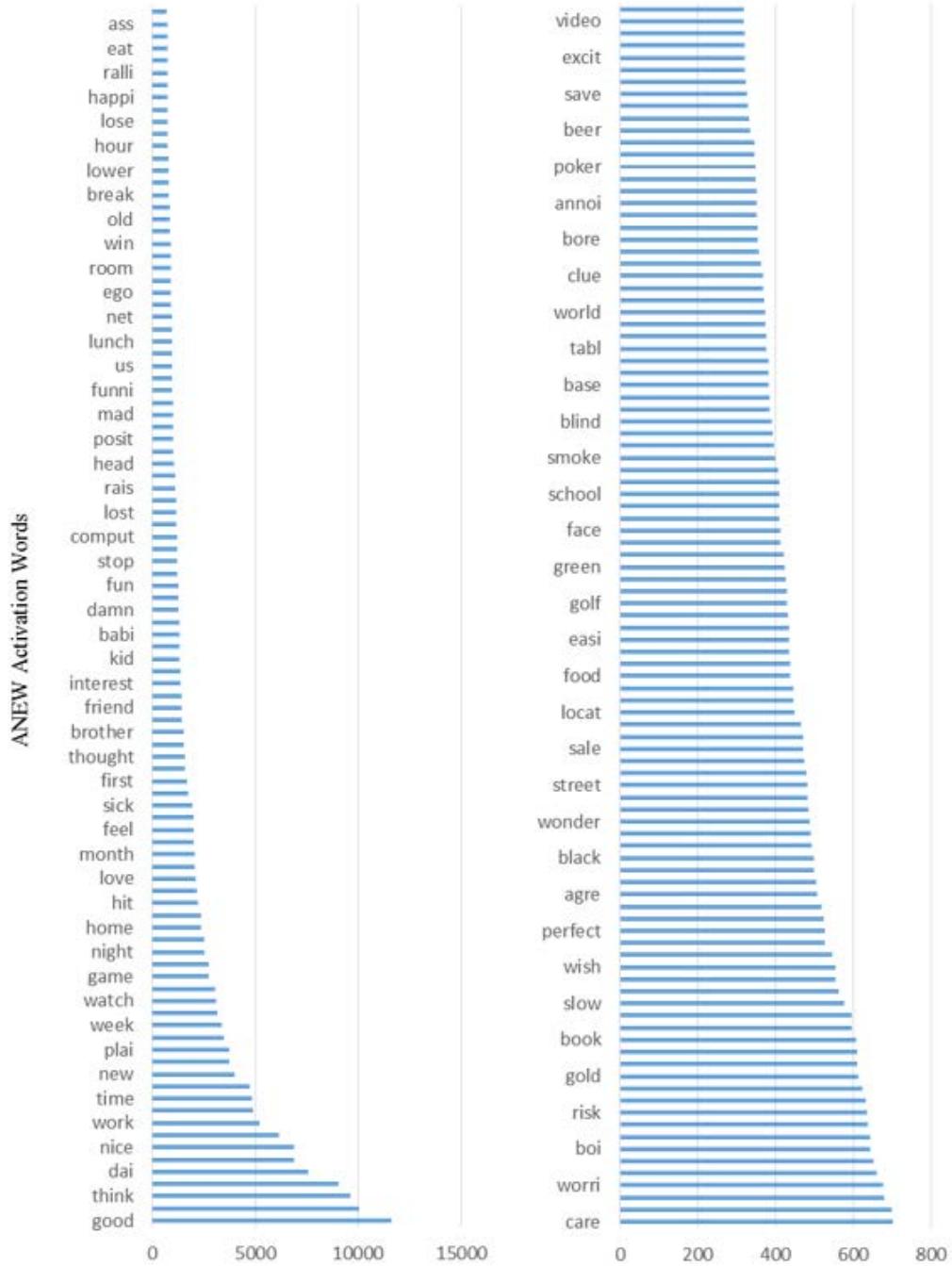


Figure A in S1 File. Counts of the Top 1-100 (left panel) and 101-200 (right panel) Activation Words Appearing in Traders' Instant Messages

Decision Error

The *relevant unit of analysis* for measuring decision error is the quality of trading decisions at the level of the day for several reasons. *First*, maximizing performance at the level of the day, not at the level of a trade, is the objective function of a trader. Traders are evaluated at the level of the day by managers and analysts. *Second*, traders make up to hundreds of decisions a day. Thus, a trade-by-trade analysis is not as informative as the average daily decision acumen. *Third*, prior research specifically on stock traders has validated this measure (Lo and Rapin 2002; Saavedra et al. 2011; Steenbarger 2002; Lo et al. 2005). Consistent with this logic, we analyzed the relationship between decision error and activation at the day level.

Decision Error is measured as the difference between the trade price and the hypothetical best price for that trade, scaled by the number of shares traded in that trading decision and averaged over a day to give the average deviation over decisions in a day. For example, suppose a subject bought Google stock at \$266.88 per share at 10:31 and Google stock prices at 10:30 ~ 10:35 were between \$265.11 and \$268.99 a share. The subject's deviation is the actual price (\$266.88) and "best" price (\$265.11) multiplied by the number of shares and vice versa for sell decisions.

Null models of Random Decision Error

We randomly sampled 1,000 prices from each 5-minute window around a trading decision verified that chance could not explain the observed decision error ($p < 0.00001$).

Face Validity

Measure has *face validity*: decision error per trade is correlated with a trader's daily profit ($p = 0.005$).

Agreement among Alternative Measures of Decision Error

Different measures of Decision Error produced similar patterns of findings. The (1) median, (2) arithmetic mean, (3) harmonic mean, (4) geometric mean, (5) grand mean-arithmetic mean, (6) grand mean – harmonic mean, (7) grand mean – geometric mean, and (8) z-score all produced similar results. To do these tests, we ran regressions that consisted of the 8 different measures of Decision Error and our 21 different threshold conditions for being activated times our 35 subjects. The threshold conditions used were: three threshold values 4.5, 5.0, and 5.5 for level activation and 7 emotional activation durations of 30, 35, 40, 45, 50, 55, and 60 minutes (explained in detail above in the section on emotional activation). This produced $8*3*7*35 = 5,880$ regression coefficients for our 35 subjects. We found that 61.79% of the regressions coefficients were significant and in the predicted direction ($p < .00001$) (i.e., we ran separate a regression for each subject). This pattern of results is unlikely to occur by chance (binomial test, $p < .00001$). A fixed-effect regression pooling all the individual traders and dummy coding each trader separately in the regression confirmed the within-subject effects across the 8 different measures.

Regression Specification

The fixed-effects regressions estimate the effect for the “average” subject using a fixed effect for each trader, frequency weights for number of trades, robust standard errors and standard errors clustered by trader.

Dependent Variable

Decision Error (defined above)

Independent Variable

Emotional Activation (defined above)

Control variables

1. *Daily Volatility* measured by the VIX to control for market uncertainty,
2. *End of Day profit of the Trader at t-1* to control for risk aversion,
3. *Daily Total IMs sent* by the trader to control for IM volume,
4. *Informational complexity of trader's IMs* to control for information in texts affecting decision making error,
5. *Informational complexity of news* to control for public information affecting decision making acumen,
6. *Sentiment of the trader's IMs* to control for sentiment toward information in texts,
7. *Sentiment of news* to control for sentiment in public information
8. *Crash*
9. *Day of Year Fixed Effect* to control for *Daily Number of Active Traders* at the firm to control for organizational effects, profits for the day, and all other values that are fixed for a single day but can vary between days
10. *Day-of-Week Fixed Effect* to control for the possibilities that Mondays differ from Tuesdays because the markets reopened after the weekend close, Friday traders may go home early, etc.),
11. *Trader Fixed Effect*

Null model tests of the regression coefficients show they cannot be explained by chance.

We compared all the regression models for each subject with the observed instant messages randomized at the *week, month and year* level against those obtained from randomization. 13,055 out of 17,640 regressions (recall we have in total 5,880 regressions for decision errors, so the three permutation granularities produce $5,880 \times 3 = 17,640$ cases for null models), had coefficients that were different than expected by chance ($z\text{-score} > 2$ for Activation², and $z\text{-score} < -2$ for Activation) using this formula: $Z\text{-score} = [\text{observed } \beta - \text{mean}(1,000 \text{ permuted } \beta\text{s})] \div [\text{std}(1,000 \text{ permuted } \beta\text{s})]$. The difference observed between the actual and null models was unlikely to occur by chance ($p < .00001$) according to a binomial test.

Sensitivity Tests in Regressions for Activation Levels

For the individual and fixed effects regressions we ran a large range of regressions. The regressions had the same dependent variables, same independent variables and same control variables as noted above. The change from regression to regression depended on *threshold of activation* chosen. As discussed in the text, we had three thresholds, 4.5, 5.0, and 5.5. 60% of regressions had significant negative coefficients for emotional activation and a significant positive coefficient for emotional activation squared (the hypothesized relationships). According to a binomial test, the likelihood that 448/735 pass two-tail binomial test has a p -value <.00001.

Functional Form Analysis

Residual plots

Residual plots indicated that the relationship between activation and decision error was non-linear. The best fitting model was of the form Decision error = Activation + Activation² and was confirmed. The BIC of the linear equation was somewhat higher than the quadratic equations, which also indicated that the quadratic was a better fit

Wald Test

A *Wald test* of the quadratic fit vs. a similar simple linear model confirmed the fit of the quadratic model ($p < .006$).

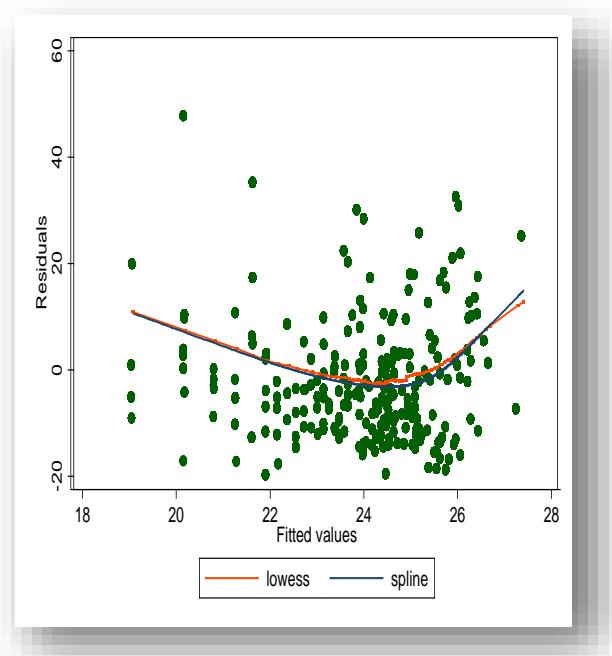


Figure B in S1 File. Residual Plot of the Residuals of a Regression of Decision Error on Activation.

Individual Trader Plots

Below we present the scatter plot of each trader's emotional activation and decision error relationship.

Median Decision Error of Trade Decision (\$)

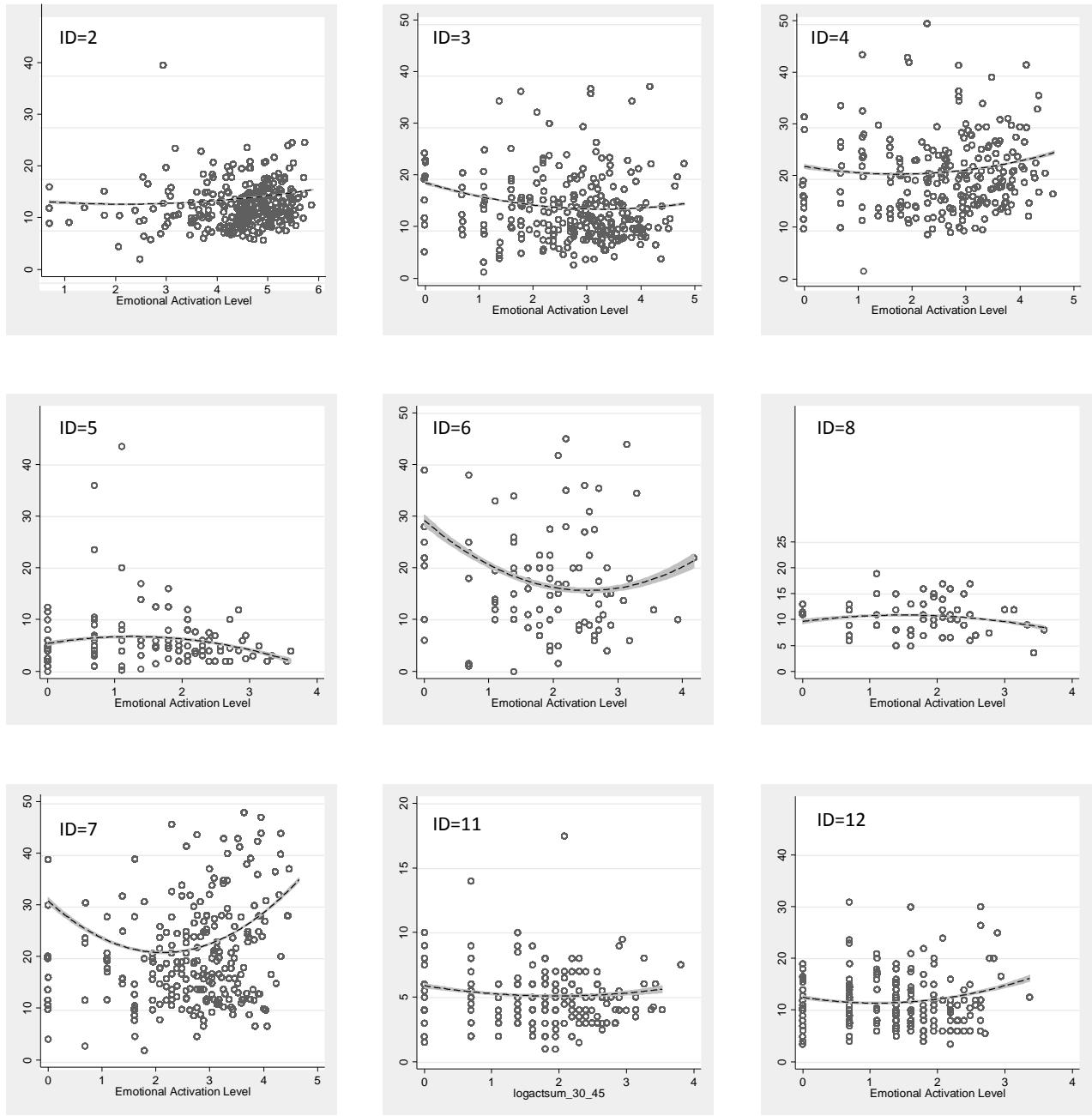


Figure C in S1 File. Scatter Plots of Each Trader's Decision Error and Emotional Activation Relationship. Below are the separate scatter plots for each trader in our study. Scatter plots bordered in red indicate that a U-shaped relationship between emotional activation and decision errors was statistically supported; the linear term was significant and negative ($p < .05$) and the quadratic term was significant and positive ($p < .05$). The ID number of each trader is indicated in the top left corner of each plot. A fixed-effects regression (Table 1) pooling all the traders together showed that the U-shaped relationship though not universal among traders holds on average for the traders net of control variables.

Median Decision Error of Trade Decision (\$)

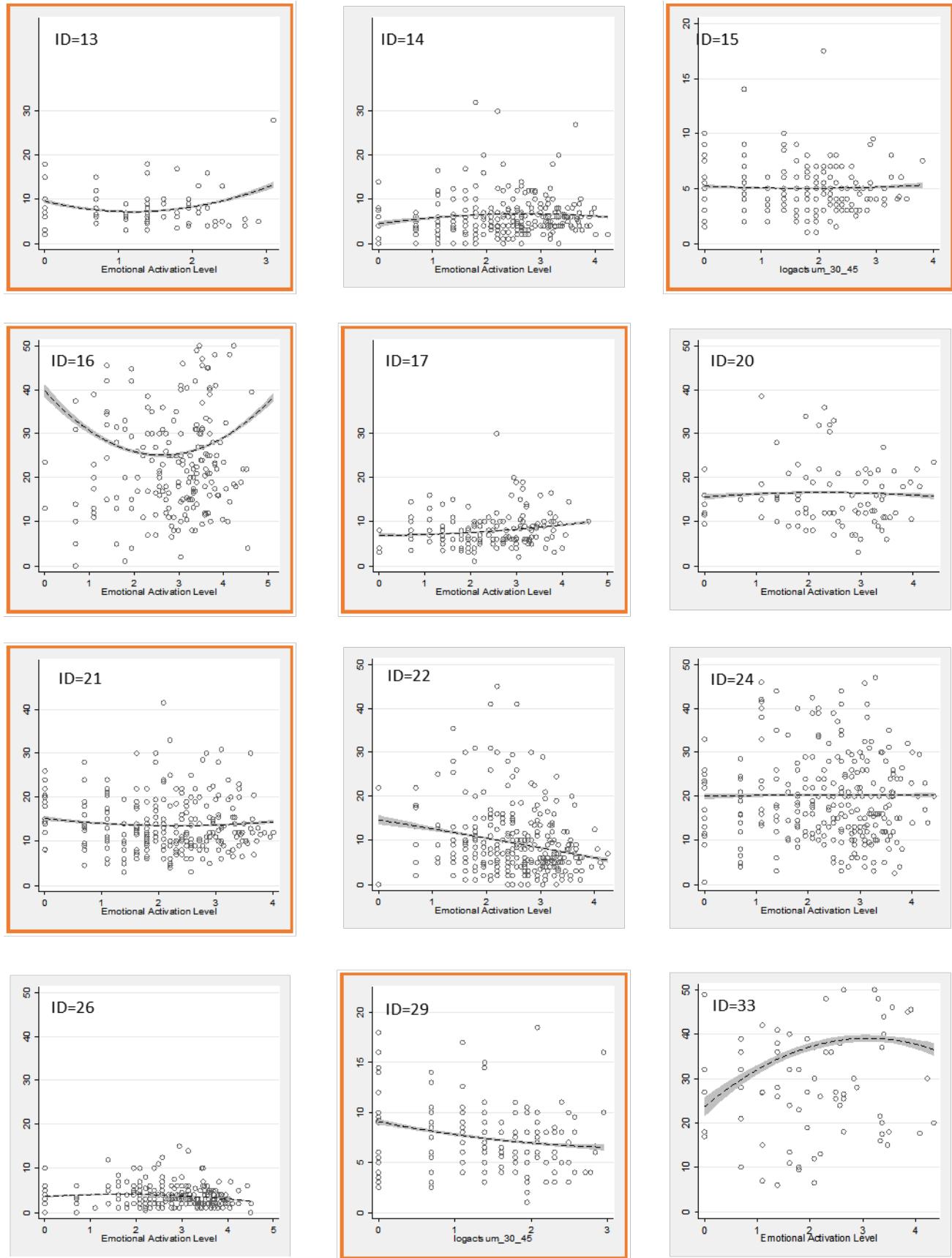


Figure D in S1 File. Scatter Plots of Each Trader's Decision Error and Emotional Activation Relationship.

Median Decision Error of Trade Decision (\$)

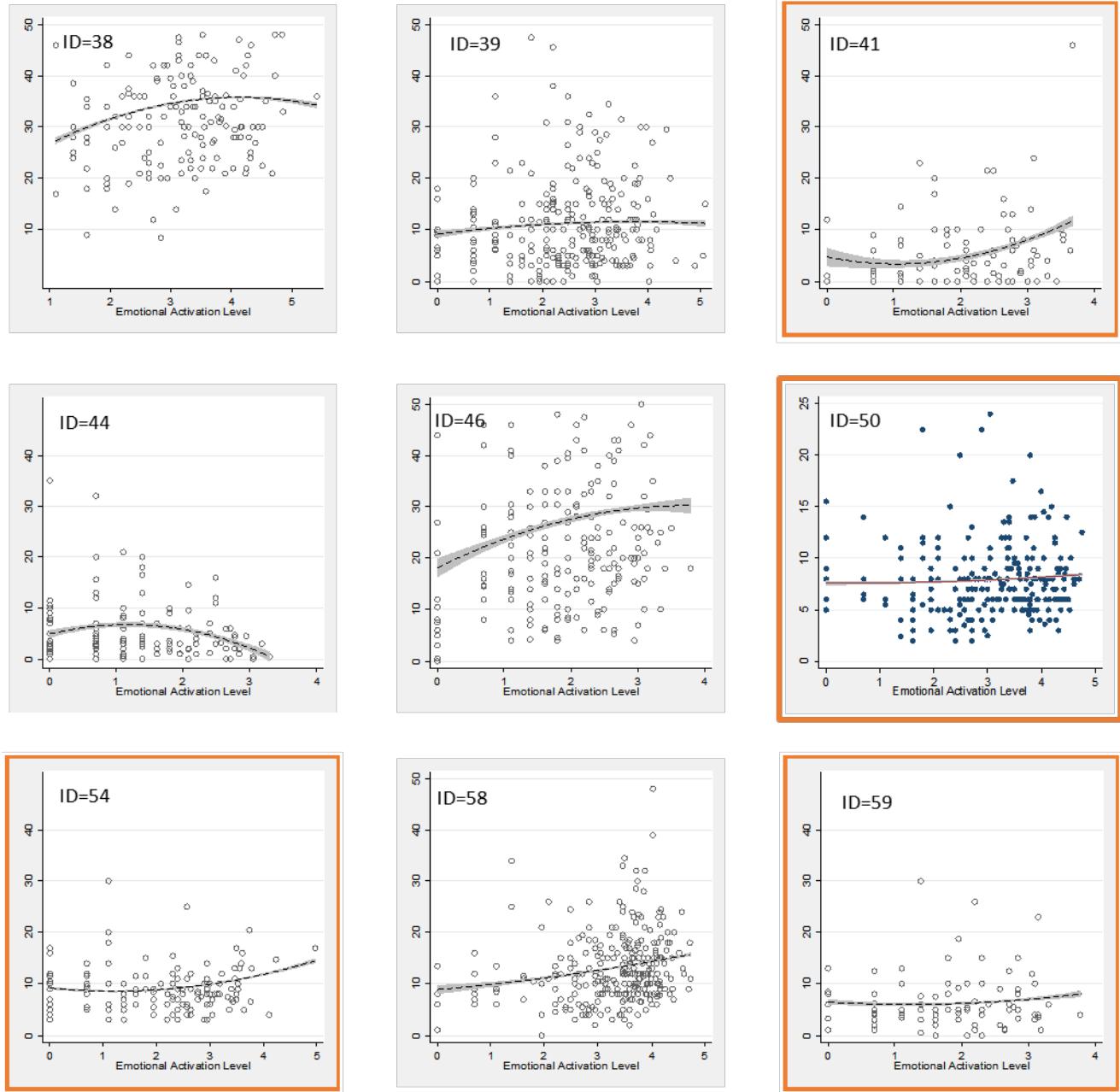


Figure E in S1 File. Scatter Plots of Each Trader's Decision Error and Emotional Activation Relationship

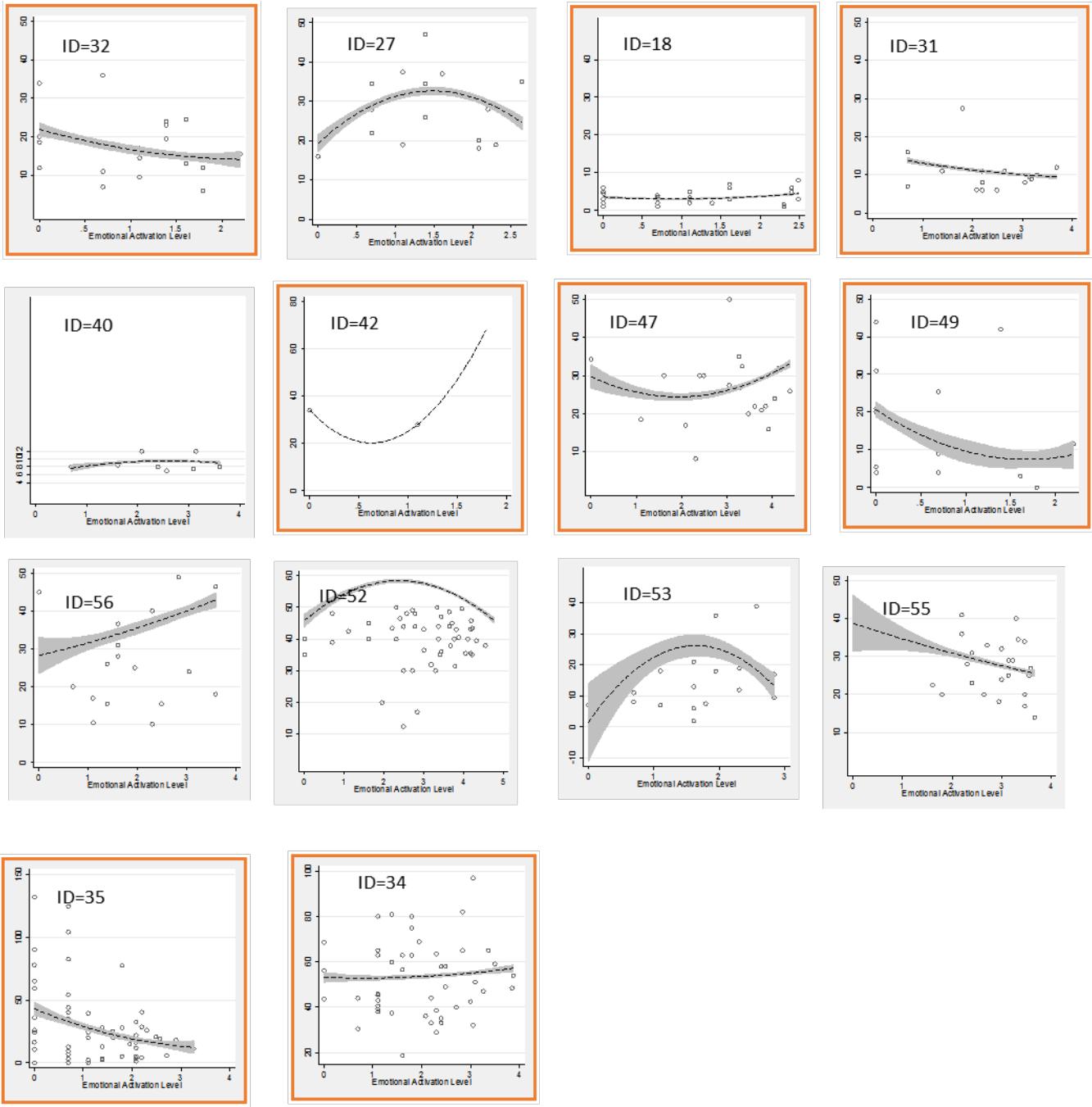


Figure F in S1 File. Scatter Plots of Trader Omitted from the Analysis due to Selection Bias. These 14 traders worked sporadically or too seldomly to include in the analysis (e.g. trader 42) because of the unknown sampling selection bias that can be introduced into the analysis by their atypical participation. Another 12 traders did not have trading data owned by the firm: they were freelance traders. Scatter plots bordered in red indicate that a U-shaped relationship between emotional activation and decision errors was statistically supported; the linear term was significant and negative ($p < .05$) and the quadratic term was significant and positive ($p < .05$). The ID number of each trader is indicated in the top left corner of each plot. Including the 14 additional cases with sketchy data does not produce results dissimilar from those reported for the 30 cases on which there is systematic data. For example, when including all 42 cases in the fixed effects regression reported in the main paper, the coefficients for emotional activation and emotional activation squared are -1.119 ($p=0.016$) and 0.2906 ($p=0.004$) respectively.

Information Complexity & Sentiment Control Variables

We measure not only the emotional activation of IMs but also the information in the messages themselves. This added control is important because information complexity and sentiment can affect a decision's accuracy independent of activation levels [26-28]. Thus, we controlled for the sentiment and information complexity of each trader's IMs and public trading information.

Thirteen different sentiment and information complexity variables were added to regressions as control variables.

To verify the validity of these controls as measures of sentiment and information complexity, we correlated the number of trading decisions taken per day with negative vs. positive sentiment and low vs. high information complexity. We defined negative and positive sentiment and low and high information complexity as being below and above the median of these variables, respectively. (Note: emotional activation is a fundamentally different concept than positive or negative emotions or positive or negative sentiments because high emotional activation can occur when emotions or sentiments are negative or positive.) As expected, validation tests confirmed that positive sentiment was positively related to the number of trading decisions and high information complexity was negatively related to the number of trading decisions ($p = 0.0044$ and $p=0.0054$ Wilcoxon rank-sum tests). Other pertinent control variables known to affect the trading behavior and decision acumen of traders were included in our regressions as specified in standard financial models (30-31).

Measures

To calculate the complexity of Bloomberg news feeds (hereafter “Bloomberg”) and individual instant messages we used compression, entropy, and perplexity measures. To compute the sentiment of Bloomberg and instant messages we used the Loughran and McDonald method (2011). Traders use Bloomberg newsfeeds to find and summarize the key information out of the surfeit of publicly available data. Bloomberg Corporation systematically tracks an exceptionally broad range of market data and pushes the “filtered” information to traders via e-messages. The ubiquitous use of, and high cost of access to, Bloomberg news feeds in finance attests to their value. The way in which these measures are related to decision making error are described in the text.

Information Complexity Methods

1. *Compression measures.* Five compression algorithms were used (ZIP, TAR, GZIP and 7ZIP). For a string, the complexity using any compression algorithm should be [0,1].
2. *Entropy and Perplexity measures.* For each Bloomberg and instant message, we calculated the entropy and perplexity at the character and word level of analysis. Note that at word level, we only keep words that are “meaningful”. Stop words and non-financial words are removed.
3. Formulas:
 - a. LZMA algorithm: http://en.wikipedia.org/wiki/Lempel-Ziv-Markov_chain_algorithm; GZIP algorithm: <http://www.gzip.org/>; BZIP2 algorithm: <http://www.bzip.org/>; DEFLATE algorithm: <http://en.wikipedia.org/wiki/DEFLATE>; PPMD algorithm: http://en.wikipedia.org/wiki/Prediction_by_partial_matching; Entropy: <http://en.wikipedia.org/wiki/Entropy> ; Perplexity: <http://en.wikipedia.org/wiki/Perplexity>

Procedures

For each of the compression algorithms listed above, we calculate information complexity as follows:

1. Use a compression algorithm to compress a string (e.g., abcd abcd") and obtain the "compression ratio", r_1
2. Use the same algorithm to compress the simplest string of the same length, i.e., a string of the same length as the focal string but containing only one character, e.g., "aaaaaaaa", and obtain the "compression ratio", r_2
3. Complexity is calculated as: $1 - r_1 / (r_2 - 1)$ and ranges from 0 to 1.

Variables

1. *Complexity of IMs and Bloomberg News Feeds* (daily level of information complexity is the average of all values of news in one day): 9 different measures

- blzma: complexity value of applying lzma compression to the news
- bgzip: complexity value of applying gzip compression to the news
- bbzip2: complexity value of applying bzip2 compression to the news
- bdeflate: complexity value of applying deflate compression to the news
- bppmd: complexity value of applying ppmd compression to the news
- bcentropy: character level entropy value of the news
- bcperplexity: character level perplexity value of the news
- bentropy: word level entropy value of the news
- bperplexity: word level perplexity value of the news

Sentiment Methods

Using Loughran and B. McDonald's method (2011), "When is a Liability not a Liability," *Journal of Finance*, V66, pp. 35-65; http://www3.nd.edu/~mcdonald/Word_Lists.html, we computed the sentiment of each Bloomberg and instant message using a finance specific lexicon.

Procedures

Bloomberg Financial words and IM sentiment statistics (each co-variable is obtained by counting the number of news that has at least one financial word (xxx_ct) or counting the number of financial words in all news (xxx_sum) within one day). For example, if there are 3 Bloomberg news items in one day, suppose the first one contains 3 positive financial words while the second one contains 5 positive financial words, and the third one contains no financial words. Then, for this day, the variable $bpos_ct = 1+1+0 = 2$, and $bpos_sum = 3+2+0 = 5$. $Bpos_ct$ and $bpos_sum$ are defined below. *IM Financial words statistics* were calculated using the same method as for Bloombergs.

Variables

- bneg_ct: number of news containing at least one Negative financial word
- bneg_sum: number of Negative financial words in all news
- bpos_ct: number of news containing at least one Positive financial word
- bpos_sum: number of Positive financial words in all news
- bunce_ct: number of news containing at least one Uncertainty financial word
- bunce_sum: number of Uncertainty financial words in all news
- bliti_ct: number of news containing at least one Litigious financial word

- bliti_sum: number of Litigious financial words in all news

Table A in S1 File. Coding Scheme for Defining the Information Complexity and Sentiment of Instant Messages

Complexity of Information Measure									Content of Bloomberg
lzma	gzip	bzip2	deflate	ppmd	centropy	cperplexity	entropy	perplexity	
0.9695	0.8859	0.8224	0.9713	0.9605	5.182	36.3018	4.8402	28.6453	*NCITI DERVS AM: THE CARS - DRIVE...SOUTH? NKY 10D VOL 13.8%?? Inflows net flat for now -buy reits,wsale & sell auto,techs/etc. Though Euro EQs get whacked w/ V2X jump to 26.25, US EQ catches late bid & VIX eases 25.5->23.6. CDX.NA.IG still @ hi-end +
0.9694	0.8844	0.823	0.9709	0.9599	5.1926	36.5702	4.5236	23	EURUROMARKETS -0.5% ON WEAK \$(EUR1.4313),US RATE CUT LIKELY OCT 31 CASINO Sells property worth E650m(as opposed to Tesco bid rumors CLARINS Q3 sales +8%(10.8% org)to E231.8m above SGe.Reits f'cast EADS ILFC ordered 20 A350s(less than exp),also 74 Drea
0.9692	0.8863	0.8333	0.9714	0.961	5.2794	38.8393	4.2971	19.6585	AUTO EVENTS TODAY: ML Conf Call - transformation at GM & Ford. (Today 10:00am EDT). Please join us to discuss the impact of the pending UAW labour contract. http://research1.ml.com/CFCR/GetDoc.aspx?q=KYQM%2Bs0078%2FltljEprEYA%3D%3D ** US markets: Mkts e
0.8106	0.5003	0.361	0.8245	0.7641	0.8722	1.8304	1.585	3	GPS 122/129 UNCH POST EARNINGS
0.8106	0.4907	0.3946	0.8193	0.7571	0.7925	1.7321	1.585	3	CAL pfd 25k at 35 1/2 vs 25.75
0.8106	0.4907	0.4101	0.8193	0.7571	0.7718	1.7074	1.585	3	YRCW 5% 95 1/4 bid 614m vs 17
									Content of Instant Messages
0.9676	0.8757	0.813	0.9685	0.9561	4.6372	24.885	4.6439	25	Jason, do you look at MLM, Vulcan, Eagle, Texas Industries, St.Gobain, Lafarge, Cemex, etc? Mike Betts will be in CT next Thursday, March 13, we just had a cancellation for 12pm lunch there, if that would work, let me know.
0.9676	0.8796	0.8203	0.9696	0.9568	4.7569	27.0379	3.9069	15	MACRO: FINANCIALS NOT THE FOCUS TODAY For what feels like the first time in a while, Financials won't be the primary focus today. Microsoft's bid for Yahoo (61% premium) has S&P futures up a quick 15 this morning. I'd still be hesitant to come to
0.9676	0.8768	0.8114	0.9688	0.9568	4.7883	27.6322	4.3219	20	I BET SOUTHEASTERN IS BLOWING OUT THE LVLT TOO -- I WOULDN'T PLAY ANY \$2 STOCK BUT I LOVE TO WATCH. This T is now stupid trading. I'm going to buy some out of attitude. I wish we could take advantage of NYT move but with the short recall pr

0.8871	0.5896	0.2059	0.9016	0.8653	3.8099	14.0252	2.8074	7	i was trying to sell at 68. then went to hit 67.25 bid.....toooooo slow.....
0.8871	0.54	0.25	0.894	0.8633	3.9259	15.1986	2	4	mike 1 day i can trade 1000 shares all my stocks move multiple points
0.8871	0.5512	0.257	0.8973	0.8702	4.1443	17.6831	2.585	6	this thing could actually be worth a shot if it opened close to 16.50

Factor Analysis of Information Complexity and Sentiment Measures

Conceptually and empirically, the measures of information complexity should correlate with each other and the measures of sentiment should correlate with each other. If this is the case, it is better to analyze related measures as factors rather than individual measures to avoid multicollinearity problems in the regression analyses.

To this point, we examined all the separate information complexity and sentiment measures for intercorrelations via factor analytic procedures using Stata in an attempt to reduce the 34 separate measures into a more economic set of factors. Factors represent highly correlated individual items, where the high correlation suggests they are measuring a related underlying construct. The protocol is conservative and minimizes noise due to individual differences and multicollinearity in a regression. We used the default factor analysis settings (Principal Axis Factor) and rotated the matrix of loadings to obtain orthogonal (independent) factors (Varimax rotation). We identified items loadings >0.10 only. This produced 4 factors, which are presented below. As expected, measures of information complexity were correlated with each other and measures of sentiment were correlated with each other but information complexity and sentiment were not correlated with each other. In addition, information complexity and sentiment were further parsed along the lines of Bloomberg and instant messages. S2 Table summarizes the factor analysis.

In our regression analyses, we ran separate analyses using the 4-factor variables below and all 34 separate measures of information complexity or sentiment. Using the factors or the separate measures did not affect the relationship between activation and decision error. Factors provided a more consistent pattern across results as expected. The factors consistently showed effects on decision making in the expected directions. The individual measures had a spottier pattern of results when used individually, as expected. Hence, we report the factor variables in our regressions.

Table B in S1 File. Factor Analysis of Information Complexity and Sentiment Measures

Factor	Construct	Individual measures loading together on the same factor
1	Bloomberg Sentiment	(bunce_ct+bunce_sum)/2
2	IM Information Complexity	(ilzma + igzip+ibzip2+ideflate+ippmd+icentropy+icperplexity+ientropy)/8
3	IM Sentiment	(ineg_ct+ineg_sum+ipos_ct+ipos_sum+iunce_ct+iunce_sum+iliti_ct+iliti_sum)/8
4	Bloomberg Information Complexity	(blzma+bgzip+bbzip2+bdeflate+bppmd+bcentropy+bcperplexity)/7

Factor analysis/correlation

Number of obs = 770029

Method: principal-component factors
Rotation: (unrotated)

Retained factors = 4
Number of params = 130

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	15.7220	6.68794	0.4624	0.4624
Factor2	9.03414	5.19822	0.2657	0.7281
Factor3	3.83592	1.61533	0.1128	0.8409
Factor4	2.22059	1.38630	0.0653	0.9063
Factor5	0.83428	0.12155	0.0245	0.9308 (Note: factors with Eigenvalues <1.0)
Factor6	0.71273	0.28203	0.0210	0.9518
.
Factor34	0.00000	0.00000	0.0000	1.0000

Table C in S1 File. Affective Norms for English Words (Bradley, M.M., & Lang, P.J., 2010)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
abduction	621	2.76 (2.06)	5.53 (2.43)	3.49 (2.38)	advantage	629	6.95 (1.85)	4.76 (2.18)	6.36 (2.23)
able	1041	6.74 (2)	4.30 (2.17)	6.83 (2.04)	adventure	630	7.60 (1.5)	6.98 (2.15)	6.46 (1.67)
abortion	622	3.50 (2.3)	5.39 (2.8)	4.59 (2.54)	advice	1060	6.17 (1.42)	5.17 (1.74)	5.47 (2.1)
absent	1042	3.69 (1.72)	4.73 (1.76)	4.35 (1.87)	affair	1061	3.12 (1.94)	6.21 (2.54)	3.71 (2.16)
absurd	623	4.26 (1.82)	4.36 (2.2)	4.73 (1.72)	affection	7	8.39 (0.86)	6.21 (2.75)	6.08 (2.22)
abundance	624	6.59 (2.01)	5.51 (2.63)	5.80 (2.16)	affectionate	1062	7.20 (1.85)	5.67 (2.83)	5.57 (2.21)
abuse	1	1.80 (1.23)	6.83 (2.7)	3.69 (2.94)	affirm	1063	6.17 (1.23)	4.79 (1.37)	6.07 (1.25)
accept	1043	6.80 (2.11)	5.53 (1.96)	5.41 (1.92)	afford	1064	6.27 (2.02)	5.31 (2.11)	5.76 (2.42)
acceptance	625	7.98 (1.42)	5.40 (2.7)	6.64 (1.91)	afraid	8	2.00 (1.28)	6.67 (2.54)	3.98 (2.63)
access	1044	6.14 (1.62)	5.07 (1.68)	6.25 (1.53)	aggravated	1065	2.66 (1.45)	5.79 (2.16)	4.28 (2.02)
accident	2	2.05 (1.19)	6.26 (2.87)	3.76 (2.22)	aggravation	1066	2.10 (1.06)	6.10 (2.47)	3.83 (1.91)
accord	1045	5.53 (1.2)	4.24 (1.72)	5.31 (1.2)	aggressive	9	5.10 (1.68)	5.83 (2.33)	5.59 (2.4)
accost	1046	4.28 (1.41)	5.24 (1.92)	4.38 (1.61)	agility	22	6.46 (1.57)	4.85 (1.8)	5.87 (1.52)
accuse	1047	2.54 (1.37)	6.57 (1.93)	4.07 (2.28)	agony	10	2.43 (2.17)	6.06 (2.67)	4.02 (2.49)
ace	626	6.88 (1.93)	5.50 (2.66)	6.39 (2.31)	agree	1067	7.00 (1.08)	4.59 (1.56)	6.28 (1.28)
ache	627	2.46 (1.52)	5.00 (2.45)	3.54 (1.73)	agreement	631	7.08 (1.59)	5.02 (2.24)	6.22 (1.85)
achievement	3	7.89 (1.38)	5.53 (2.81)	6.56 (2.35)	aid	1068	6.93 (1.16)	5.41 (1.78)	5.55 (1.99)
acre	1048	5.66 (1.26)	4.90 (1.88)	6.04 (1.67)	ail	1069	3.70 (1.73)	4.59 (2.01)	4.21 (2.08)
action	1049	6.63 (1.45)	6.53 (1.87)	5.63 (2.06)	air	632	6.34 (1.56)	4.12 (2.3)	5.10 (1.56)
activate	4	5.46 (0.98)	4.86 (2.56)	5.43 (1.84)	airplane	1070	6.43 (1.94)	6.77 (1.59)	3.73 (2.24)
actor	1050	7.13 (1.31)	6.07 (1.89)	4.97 (1.73)	airport	1071	5.90 (2.09)	5.97 (2.01)	4.41 (1.82)
ad	1051	5.00 (1.22)	4.29 (1.7)	5.00 (1.12)	alarm	1072	2.86 (1.65)	7.36 (2.3)	3.75 (1.96)
adapt	1052	5.72 (1.14)	4.52 (1.86)	5.43 (1.41)	album	1073	6.21 (1.73)	5.18 (2.21)	5.04 (1.6)
addict	581	2.48 (2.08)	5.66 (2.26)	3.72 (2.54)	alcohol	1074	5.97 (2.15)	5.94 (1.82)	5.50 (1.78)
addicted	628	2.51 (1.42)	4.81 (2.46)	3.46 (2.23)	alcoholic	582	2.84 (2.34)	5.69 (2.36)	4.45 (2.56)
adhere	1053	5.03 (1.16)	4.07 (1.74)	4.33 (1.77)	alcove	1075	5.32 (0.98)	4.19 (1.64)	4.93 (1.47)
adjust	1054	5.25 (1.55)	5.39 (1.69)	4.86 (1.46)	alert	11	6.20 (1.76)	6.85 (2.53)	5.96 (2.24)
admire	1055	7.63 (0.93)	6.20 (1.79)	6.27 (1.6)	alien	633	5.60 (1.82)	5.45 (2.15)	4.64 (2.07)
admired	5	7.74 (1.84)	6.11 (2.36)	7.53 (1.94)	alimony	634	3.95 (2)	4.30 (2.29)	4.63 (2.3)
admit	1056	4.93 (1.53)	4.97 (1.86)	4.45 (1.96)	alive	635	7.25 (2.22)	5.50 (2.74)	6.39 (2.15)
adopt	1057	6.52 (1.29)	4.71 (1.99)	5.88 (1.39)	allege	1076	4.37 (1.4)	3.87 (1.78)	4.77 (1.04)
adorable	6	7.81 (1.24)	5.12 (2.71)	5.74 (2.48)	allergy	636	3.07 (1.64)	4.64 (2.34)	3.21 (1.77)
adore	1058	7.22 (2.01)	5.74 (2.54)	5.19 (1.78)	alley	637	4.48 (1.97)	4.91 (2.42)	4.00 (1.7)
adorn	1059	6.11 (1.12)	4.56 (1.89)	5.22 (1.28)	alone	12	2.41 (1.77)	4.83 (2.66)	3.70 (2.42)
adult	546	6.49 (1.5)	4.76 (1.95)	5.75 (2.21)	aloof	13	4.90 (1.92)	4.28 (2.1)	4.69 (1.92)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
alter	1077	5.76 (1.5)	4.93 (2.31)	5.96 (1.29)	area	1100	5.45 (1.77)	3.80 (2.19)	5.23 (1.59)
amaze	1078	7.57 (1.41)	6.90 (1.94)	5.57 (1.63)	arena	1101	6.40 (1.61)	6.43 (2.05)	5.10 (2.02)
ambition	14	7.04 (1.98)	5.61 (2.92)	6.93 (2.07)	argue	1102	2.83 (1.23)	6.07 (2.12)	4.70 (2.25)
ambitious	1079	7.62 (1.35)	6.57 (2.28)	6.93 (1.92)	arm	642	5.34 (1.82)	3.59 (2.4)	5.07 (1.5)
ambulance	15	2.47 (1.5)	7.33 (1.96)	3.22 (2.29)	army	23	4.72 (1.75)	5.03 (2.03)	5.03 (2.45)
ambush	1080	4.03 (1.8)	6.23 (1.52)	4.00 (2)	aroma	1103	7.17 (1.81)	5.19 (2.62)	5.50 (1.75)
amuse	1081	7.57 (1.38)	5.97 (2.28)	5.93 (1.28)	arouse	1104	7.48 (1.33)	6.97 (2.16)	6.10 (2.14)
amusement	1082	7.96 (1.22)	6.22 (2.24)	5.74 (1.83)	aroused	24	7.97 (1)	6.63 (2.7)	6.14 (1.97)
anarchy	1083	3.58 (1.71)	5.48 (2.17)	3.65 (1.96)	arrogant	25	3.69 (2.4)	5.65 (2.23)	5.14 (2.71)
ancestor	1084	5.73 (1.74)	4.27 (2.03)	4.83 (2.05)	arrow	1105	5.17 (1.66)	5.37 (1.88)	4.87 (2.01)
angel	16	7.53 (1.58)	4.83 (2.63)	4.97 (2.34)	arson	1106	2.60 (2.12)	6.58 (2.7)	3.46 (2.48)
anger	17	2.34 (1.32)	7.63 (1.91)	5.50 (2.82)	art	643	6.68 (2.1)	4.86 (2.88)	5.30 (2.33)
angry	18	2.85 (1.7)	7.17 (2.07)	5.55 (2.74)	artist	1107	6.59 (1.72)	4.94 (2.44)	5.91 (1.35)
anguished	19	2.12 (1.56)	5.33 (2.69)	3.45 (2.37)	ash	1108	4.04 (1.76)	4.41 (2.06)	4.89 (1.48)
animal	1085	6.48 (1.55)	5.55 (1.53)	6.00 (1.6)	asphalt	1109	5.12 (1.07)	3.77 (2.1)	5.19 (1.72)
ankle	638	5.27 (1.54)	4.16 (2.03)	4.77 (1.74)	aspire	1110	7.21 (1.76)	5.83 (2.25)	7.00 (1.44)
annoy	1086	2.96 (1.65)	5.52 (2.49)	4.44 (2)	ass	1111	6.09 (2.02)	6.00 (2.17)	5.06 (1.98)
annoy	20	2.74 (1.81)	6.49 (2.17)	5.09 (2.04)	assassin	26	3.09 (2.09)	6.28 (2.53)	4.33 (2.68)
annoyance	1087	2.97 (1.61)	5.18 (2.44)	4.21 (1.87)	assault	27	2.03 (1.55)	7.51 (2.28)	3.94 (3.1)
answer	639	6.63 (1.68)	5.41 (2.43)	5.85 (1.88)	assume	1112	4.69 (1.51)	4.97 (1.38)	4.24 (1.88)
antique	1088	5.39 (1.91)	4.06 (2.26)	5.19 (1.99)	assure	1113	7.04 (1.32)	4.52 (2.31)	6.22 (2.19)
anus	1089	4.52 (2.06)	4.28 (2.32)	5.48 (1.36)	astonished	28	6.56 (1.61)	6.58 (2.22)	5.16 (1.79)
anxiety	1090	2.77 (1.59)	6.72 (1.94)	2.72 (1.83)	astronaut	501	6.66 (1.6)	5.28 (2.11)	5.20 (1.95)
anxious	21	4.81 (1.98)	6.92 (1.81)	5.33 (1.82)	athlete	1114	7.24 (1.74)	6.50 (2.17)	6.67 (1.55)
apartment	1091	6.80 (1.35)	4.75 (1.92)	6.67 (1.88)	athletics	644	6.61 (2.08)	6.10 (2.29)	6.12 (2.12)
apathy	1092	4.30 (1.95)	4.00 (2.1)	4.33 (1.65)	atlas	1115	5.53 (1.38)	4.53 (1.96)	5.37 (1.25)
apology	1093	5.00 (2.22)	5.18 (1.66)	5.31 (2.19)	atom	1116	4.73 (1.62)	4.00 (1.84)	4.33 (1.69)
appall	1094	3.61 (2.18)	6.50 (2.67)	4.61 (2.28)	attack	1117	2.70 (2.07)	7.03 (2.24)	3.30 (2.52)
applause	640	7.50 (1.5)	5.80 (2.79)	6.48 (2.11)	attain	1118	6.70 (1.49)	5.53 (2)	6.03 (1.45)
apple	1095	6.41 (1.5)	4.17 (2.11)	5.86 (1.64)	attend	1119	6.30 (1.73)	4.74 (2.1)	5.35 (1.67)
appliance	641	5.10 (1.21)	4.05 (2.06)	5.05 (1.34)	aunt	1120	6.39 (2.04)	4.96 (1.69)	5.39 (1.37)
application	1096	4.69 (1.65)	5.62 (2.27)	3.90 (1.63)	auto	1121	6.29 (1.67)	4.89 (2.28)	5.19 (1.75)
appreciative	1097	7.43 (1.36)	5.73 (2.23)	5.90 (1.75)	autumn	29	6.30 (2.14)	4.51 (2.5)	5.15 (1.85)
apprehension	1098	3.03 (1.61)	5.68 (2.26)	3.11 (1.4)	avalanche	645	3.29 (1.95)	5.54 (2.37)	3.61 (2)
arch	1099	5.37 (1.08)	4.37 (2.29)	5.07 (2.02)	avenge	1122	4.61 (1.26)	5.89 (1.76)	6.33 (1.41)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
avenue	646	5.50 (1.37)	4.12 (2.01)	5.40 (1.53)	basin	1149	4.93 (0.87)	3.83 (1.97)	4.47 (1.2)
avert	1123	5.17 (1.44)	4.73 (2.23)	4.67 (1.77)	basis	1150	4.81 (0.65)	3.83 (1.68)	5.37 (1.33)
avoid	1124	3.62 (1.45)	5.04 (2.28)	4.26 (1.95)	basket	547	5.45 (1.15)	3.63 (2.02)	5.76 (1.45)
await	1125	4.64 (1.87)	4.54 (2.78)	3.75 (2.25)	basketball	1151	6.14 (2.04)	5.94 (2.3)	5.19 (1.94)
awaken	1126	5.34 (1.88)	5.00 (2.21)	5.09 (1.77)	bastard	33	3.36 (2.16)	6.07 (2.15)	4.17 (2.4)
award	1127	8.44 (1.05)	7.22 (2.03)	7.26 (2.21)	batch	1152	6.18 (1.36)	4.63 (1.8)	5.67 (1.41)
awe	1128	6.48 (1.62)	5.50 (2.05)	4.43 (1.71)	bath	502	7.33 (1.45)	4.16 (2.31)	6.41 (1.87)
awed	30	6.70 (1.38)	5.74 (2.31)	5.30 (2.03)	bathe	1153	7.37 (1.52)	4.63 (2.48)	5.93 (1.96)
awful	1129	2.66 (1.78)	5.72 (2.15)	3.97 (1.99)	bathroom	548	5.55 (1.36)	3.88 (1.72)	5.65 (1.59)
awkward	1130	3.20 (1.79)	5.70 (1.82)	3.03 (1.59)	bathtub	652	6.69 (1.57)	4.36 (2.59)	5.76 (1.76)
awning	1131	5.10 (1.47)	3.97 (1.87)	5.17 (1.39)	baton	1154	5.16 (1.53)	4.38 (1.91)	5.22 (1.45)
baby	31	8.22 (1.2)	5.53 (2.8)	5.00 (2.8)	battleship	1155	4.93 (2.62)	5.85 (2.64)	3.89 (2.21)
backyard	1132	6.87 (1.66)	4.87 (2.5)	5.77 (1.92)	bawl	1156	3.41 (1.48)	5.00 (2.06)	3.97 (1.36)
bacon	1133	6.70 (2.46)	5.63 (2.5)	5.81 (2.39)	beach	34	8.03 (1.59)	5.53 (3.07)	5.44 (2.52)
bad	1134	2.56 (1.36)	5.52 (1.87)	3.84 (1.82)	beads	1157	5.54 (1.32)	4.11 (2.44)	4.61 (1.77)
badge	1135	5.37 (1.71)	4.60 (1.98)	4.90 (1.69)	bean	1158	5.35 (1.76)	3.97 (2.27)	5.80 (1.99)
baffle	1136	4.04 (1.49)	5.48 (1.85)	3.67 (1.55)	bear	1159	4.78 (2.03)	6.52 (2.44)	3.78 (2.24)
bake	647	6.17 (1.71)	5.10 (2.3)	5.49 (1.88)	beard	1160	5.82 (2.06)	4.30 (2.33)	5.89 (1.95)
balcony	1137	5.77 (1.72)	4.60 (2.3)	4.63 (1.65)	beast	653	4.23 (2.41)	5.57 (2.61)	4.89 (2.29)
bald	1138	3.78 (1.83)	4.26 (2.44)	4.44 (2.04)	beautiful	654	7.60 (1.64)	6.17 (2.34)	6.29 (1.81)
ballet	1139	5.61 (2.08)	4.00 (2.08)	5.84 (1.55)	beauty	35	7.82 (1.16)	4.95 (2.57)	5.53 (2.1)
balloons	1140	6.97 (1.61)	4.90 (1.75)	5.53 (1.28)	bed	549	7.51 (1.38)	3.61 (2.56)	6.88 (1.78)
ban	1141	3.48 (1.53)	5.62 (2.06)	3.90 (2.4)	bedspread	1161	5.60 (1.94)	4.21 (2.18)	5.90 (1.68)
banana	1142	6.61 (1.93)	4.93 (2.34)	5.61 (1.64)	beer	1162	5.96 (2.32)	5.36 (2.44)	5.18 (2.36)
band	1143	6.55 (1.62)	5.66 (1.91)	5.34 (1.61)	bees	583	3.20 (2.07)	6.51 (2.14)	4.16 (2.11)
bandage	648	4.54 (1.75)	3.90 (2.07)	4.52 (1.89)	beet	1163	4.33 (1.52)	4.03 (2.28)	5.03 (1.32)
banish	1144	2.46 (1.4)	5.68 (2.84)	3.21 (2.25)	beg	1164	2.75 (1.86)	5.00 (2.25)	3.30 (2)
bankrupt	32	2.00 (1.31)	6.21 (2.79)	3.27 (2.39)	beggar	36	3.22 (2.02)	4.91 (2.45)	4.09 (2.38)
banner	649	5.40 (0.83)	3.83 (1.95)	4.80 (1.57)	beginning	1165	6.20 (2.09)	4.87 (2.05)	6.10 (2.09)
bar	650	6.42 (2.05)	5.00 (2.83)	5.47 (1.94)	behave	1166	5.50 (2.05)	3.93 (2.02)	4.56 (2.15)
bargain	1145	7.28 (1.3)	5.94 (2)	6.47 (1.22)	belief	1167	6.61 (1.79)	5.70 (2.48)	5.85 (2.07)
bark	1146	4.68 (2.16)	6.07 (2.22)	4.85 (2.14)	bell	1168	5.38 (1.4)	4.45 (1.78)	5.10 (1.23)
barn	1147	5.48 (2.01)	4.27 (2.27)	5.73 (2.2)	belly	1169	4.96 (1.71)	4.33 (2.08)	4.96 (1.79)
barrel	651	5.05 (1.46)	3.36 (2.28)	4.89 (1.57)	belong	1170	6.46 (1.71)	5.64 (2.23)	5.75 (1.6)
basement	1148	4.67 (1.58)	4.73 (2.26)	4.60 (1.94)	bench	655	4.61 (1.4)	3.59 (2.07)	4.68 (1.38)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
benefit	1171	6.59 (1.78)	5.14 (2.23)	6.03 (2.13)	bloody	584	2.90 (1.98)	6.41 (2)	3.96 (1.89)
berate	1172	3.53 (2.01)	5.47 (2.37)	3.83 (1.93)	bloom	1191	7.21 (1.42)	4.96 (2.03)	5.36 (1.77)
bereavement	656	4.57 (1.7)	4.20 (2.15)	4.33 (1.73)	blossom	44	7.26 (1.18)	5.03 (2.65)	5.53 (2.21)
betray	37	1.68 (1.02)	7.24 (2.06)	4.92 (2.97)	blouse	1192	5.75 (1.71)	4.43 (2.33)	4.71 (2.31)
beverage	657	6.83 (1.48)	5.21 (2.46)	5.63 (2.17)	blowdryer	1193	5.31 (1.33)	3.84 (1.9)	5.41 (1.46)
beware	1173	3.52 (1.6)	6.38 (1.93)	3.69 (2.19)	blubber	663	3.52 (1.99)	4.57 (2.38)	3.86 (1.97)
bib	1174	5.57 (1.91)	4.37 (2.09)	4.77 (1.68)	blue	544	6.76 (1.78)	4.31 (2.2)	5.63 (1.64)
bible	1175	5.97 (2.28)	4.57 (2.75)	4.47 (2.16)	blues	1194	4.11 (2.18)	3.46 (2.01)	4.75 (2.41)
bicker	1176	3.21 (1.37)	5.36 (2.25)	4.61 (1.69)	blurt	1195	4.48 (1.09)	5.36 (1.93)	4.75 (1.62)
bicyclist	1177	5.40 (1.61)	4.93 (1.96)	5.13 (1.33)	board	664	4.82 (1.23)	3.36 (2.12)	4.98 (1.77)
bikini	1178	6.47 (2.32)	6.27 (2.05)	5.20 (2.19)	boat	1196	7.79 (1.37)	5.31 (2.9)	5.66 (2.16)
binge	1179	3.25 (1.68)	4.94 (2.2)	4.28 (2.52)	body	665	5.55 (2.37)	5.52 (2.63)	5.34 (2.12)
binoculars	1180	6.18 (1.54)	4.44 (1.87)	6.19 (1.9)	bold	45	6.80 (1.61)	5.60 (2.21)	6.67 (1.81)
bird	38	7.27 (1.36)	3.17 (2.23)	4.42 (2.26)	bolt	1197	5.42 (1.53)	5.73 (1.99)	5.08 (1.79)
birth	1181	7.64 (1.42)	6.82 (2.36)	4.96 (2.1)	bomb	46	2.10 (1.19)	7.15 (2.4)	4.54 (2.88)
birthday	39	7.84 (1.92)	6.68 (2.11)	5.89 (2.61)	bone	1198	5.00 (1.24)	4.62 (2.62)	4.88 (1.48)
bitch	1182	3.00 (1.98)	6.36 (2.72)	4.36 (2.34)	bonus	1199	8.00 (1.8)	6.83 (2.65)	6.83 (2.05)
black	543	5.39 (1.8)	4.61 (2.24)	5.14 (1.79)	book	47	5.72 (1.54)	4.17 (2.49)	5.30 (2.05)
blackmail	40	2.95 (1.95)	6.03 (2.7)	3.54 (2.67)	boom	1200	5.10 (1.83)	6.67 (1.83)	4.60 (2.25)
blade	1183	4.30 (2.05)	6.07 (2.08)	4.87 (1.78)	boost	1201	6.33 (1.94)	5.52 (2.67)	5.14 (1.68)
blame	1184	2.77 (1.41)	4.93 (2.02)	3.47 (1.59)	booth	1202	5.20 (0.71)	4.20 (1.99)	5.23 (1.59)
bland	658	4.10 (1.08)	3.29 (1.89)	4.88 (1.27)	boots	1203	5.97 (1.87)	4.67 (2.04)	5.77 (1.76)
blanket	1185	6.94 (1.34)	3.41 (2.15)	5.75 (1.7)	bored	48	2.95 (1.35)	2.83 (2.31)	4.11 (1.7)
blasé	41	4.89 (1.16)	3.94 (1.76)	4.57 (1.44)	boring	1204	3.38 (2.54)	2.29 (2.07)	4.18 (1.79)
blasphemy	659	3.75 (2.26)	4.93 (2.34)	4.75 (1.59)	bothered	1205	3.00 (1.46)	6.17 (2.1)	4.17 (1.93)
bleed	1186	2.97 (1.78)	5.64 (2.67)	3.93 (2.14)	bottle	666	6.15 (1.49)	4.79 (2.44)	4.78 (1.65)
bless	42	7.19 (1.69)	4.05 (2.59)	5.52 (2.22)	bounty	1206	5.08 (1.35)	5.64 (1.85)	4.96 (1.49)
blight	1187	4.03 (1.65)	4.66 (2.15)	4.40 (1.52)	bouquet	667	7.02 (1.84)	5.46 (2.47)	6.15 (1.8)
blind	43	3.05 (1.99)	4.39 (2.36)	3.28 (1.91)	bowl	49	5.33 (1.33)	3.47 (2.12)	4.69 (1.67)
bliss	660	6.95 (2.24)	4.41 (2.95)	6.12 (2.15)	boxer	585	5.51 (1.8)	5.12 (2.26)	5.10 (1.64)
blister	661	2.88 (1.75)	4.10 (2.34)	3.98 (1.9)	boy	50	6.32 (1.6)	4.58 (2.37)	5.34 (2.2)
blob	1188	5.23 (2.12)	4.81 (2.46)	5.70 (1.86)	boyfriend	1207	5.74 (2.58)	5.73 (2.5)	4.67 (2.29)
blond	662	6.43 (2.04)	5.07 (2.7)	5.74 (1.67)	bracelet	1208	6.17 (1.49)	5.10 (1.9)	5.47 (1.11)
blonde	1189	6.18 (2.18)	4.86 (2.63)	5.14 (2.37)	braces	1209	3.17 (1.71)	5.24 (1.88)	3.90 (2.23)
blood	1190	3.64 (1.57)	6.00 (2.72)	4.54 (2.44)	brain	1210	6.70 (1.82)	5.53 (2.08)	5.93 (2.08)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
brave	668	7.15 (1.64)	6.15 (2.45)	7.22 (1.86)	bus	541	4.51 (1.57)	3.55 (1.8)	4.84 (1.75)
break	1211	4.59 (2.09)	5.23 (2.06)	5.26 (1.73)	bustle	1232	5.43 (1.57)	5.80 (2.02)	4.93 (1.62)
breast	51	6.50 (1.78)	5.37 (2.39)	5.39 (2.27)	busy	1233	4.19 (1.6)	4.58 (1.96)	4.69 (1.49)
breath	1212	6.07 (1.46)	4.77 (2.39)	6.00 (1.68)	busybody	674	5.17 (2.02)	4.84 (2.41)	5.45 (1.97)
breathless	1213	4.54 (2.1)	5.85 (1.87)	4.31 (1.76)	butler	1234	5.93 (1.82)	4.70 (2.4)	5.48 (2.36)
breeze	669	6.85 (1.71)	4.37 (2.32)	5.54 (1.67)	butt	1235	6.47 (1.61)	5.70 (2.15)	5.97 (1.61)
bribe	1214	4.14 (1.88)	6.00 (1.62)	4.48 (1.95)	butter	57	5.33 (1.2)	3.17 (1.84)	4.67 (1.69)
brick	1215	4.79 (1.97)	4.46 (2.13)	5.14 (1.63)	butterfly	58	7.17 (1.2)	3.47 (2.39)	4.65 (2.27)
bride	670	7.34 (1.71)	5.55 (2.74)	5.74 (2.36)	button	1236	5.21 (1.13)	3.82 (2.34)	5.68 (2.18)
bridge	1216	5.26 (1.32)	5.03 (1.82)	4.68 (1.74)	cab	1237	4.53 (1.07)	3.97 (1.88)	4.27 (1.93)
bright	671	7.50 (1.55)	5.40 (2.33)	6.34 (1.82)	cabinet	675	5.05 (0.31)	3.43 (1.85)	4.73 (1.66)
broken	672	3.05 (1.92)	5.43 (2.42)	4.14 (1.62)	cake	59	7.26 (1.27)	5.00 (2.37)	5.16 (2.05)
brood	1217	4.57 (1.98)	4.63 (1.88)	5.21 (1.68)	calender	676	5.42 (1.69)	3.84 (2.34)	4.95 (1.41)
broom	1218	4.83 (0.79)	3.23 (1.98)	5.23 (1.59)	calf	1238	5.39 (1.64)	4.11 (2.18)	6.05 (1.45)
broth	1219	5.23 (1.65)	3.93 (2)	5.33 (1.56)	calm	1239	6.73 (1.68)	3.60 (2.51)	6.37 (2.06)
brother	52	7.11 (2.17)	4.71 (2.68)	5.12 (2.31)	camel	1240	5.62 (1.6)	4.34 (1.88)	5.09 (1.35)
brow	1220	5.30 (0.79)	3.57 (1.96)	5.13 (1.59)	campus	1241	6.07 (1.46)	4.79 (1.68)	5.03 (1.52)
brownie	1221	7.33 (2.14)	6.10 (2.16)	5.97 (1.97)	cancel	1242	3.46 (1.36)	4.31 (2.04)	4.08 (2)
bruise	1222	3.38 (1.45)	5.93 (1.62)	4.52 (1.99)	cancer	60	1.50 (0.85)	6.42 (2.83)	3.42 (2.99)
brutal	53	2.80 (1.9)	6.60 (2.36)	4.59 (2.7)	candlestick	1243	5.43 (1.48)	4.27 (2.21)	5.00 (1.34)
bucket	1223	5.10 (1.29)	4.17 (1.89)	5.34 (1.45)	candy	61	6.54 (2.09)	4.58 (2.4)	5.33 (1.91)
buffalo	1224	6.04 (1.56)	4.59 (2.47)	4.30 (1.73)	cane	677	4.00 (1.8)	4.20 (1.93)	4.27 (1.95)
bug	1225	3.73 (2)	5.57 (2.27)	4.50 (1.48)	cannon	678	4.90 (2.2)	4.71 (2.84)	5.17 (2.29)
bugle	1226	5.27 (1.48)	4.73 (1.95)	5.03 (0.85)	canoe	1244	6.29 (1.67)	4.79 (2.64)	5.86 (1.56)
building	550	5.29 (1.15)	3.92 (1.94)	5.25 (1.57)	canyon	1245	5.76 (1.55)	5.29 (2.48)	3.79 (1.91)
bulb	1227	5.17 (0.91)	4.24 (1.72)	5.10 (1.05)	capability	1246	7.00 (1.65)	5.43 (2.32)	6.36 (1.91)
bulge	1228	3.46 (1.69)	4.82 (2.44)	4.32 (1.76)	capable	62	7.16 (1.39)	5.08 (2.07)	6.47 (1.94)
bullet	673	3.29 (2.06)	5.33 (2.48)	3.90 (2.61)	cape	1247	6.33 (1.42)	5.03 (1.94)	6.07 (1.28)
bumble	1229	4.83 (1.73)	5.03 (1.92)	4.76 (1.57)	car	551	7.73 (1.63)	6.24 (2.04)	6.98 (2.06)
bunny	54	7.24 (1.32)	4.06 (2.61)	4.97 (2.18)	carcass	679	3.34 (1.92)	4.83 (2.07)	4.90 (1.79)
burdened	55	2.50 (1.32)	5.63 (2.07)	5.03 (2.35)	card	1248	5.61 (1.23)	4.43 (2.15)	5.57 (1.64)
burglar	1230	2.52 (1.45)	6.62 (2.06)	3.41 (2.16)	care	1249	7.53 (1.36)	6.03 (1.87)	6.37 (1.73)
burial	56	2.05 (1.41)	5.08 (2.4)	3.55 (1.95)	carefree	63	7.54 (1.38)	4.17 (2.84)	5.78 (2.5)
burn	586	2.73 (1.72)	6.22 (1.91)	4.22 (1.83)	caress	64	7.84 (1.16)	5.14 (3)	5.83 (2.13)
bury	1231	3.68 (1.4)	5.68 (1.4)	4.16 (1.32)	caring	1250	6.84 (1.92)	4.38 (2.23)	5.78 (1.79)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
carnival	1251	6.77 (2.01)	6.20 (2.47)	5.60 (1.73)	checkerboard	1274	5.80 (1.47)	4.21 (1.95)	5.07 (1.94)
carpet	1252	5.17 (1.17)	3.66 (1.72)	5.14 (1.09)	cheer	69	8.10 (1.17)	6.12 (2.45)	6.00 (2.06)
carrot	1253	5.43 (1.74)	3.90 (1.84)	5.89 (1.79)	cheerful	1275	8.10 (1.35)	6.36 (2.41)	6.79 (1.71)
cartoon	1254	6.94 (1.36)	5.52 (2.06)	5.77 (1.8)	cheerleader	1276	6.48 (2.13)	5.67 (2.69)	5.81 (1.92)
carve	1255	5.08 (1.12)	4.72 (1.65)	4.88 (1.3)	cheese	1277	6.33 (1.9)	5.20 (2.01)	4.97 (1.85)
carwash	1256	6.00 (1.74)	4.67 (2.11)	5.43 (1.74)	cheeseburger	1278	7.61 (1.83)	6.00 (2.26)	6.46 (1.97)
cash	503	8.37 (1)	7.37 (2.21)	6.96 (2.39)	chef	1279	7.26 (1.56)	5.67 (2.56)	6.33 (1.88)
casino	680	6.81 (1.66)	6.51 (2.12)	5.12 (2.15)	chess	1280	5.48 (1.24)	4.07 (2.1)	5.00 (1.6)
cast	1257	4.46 (1.36)	4.50 (1.86)	5.08 (1.55)	chest	1281	6.26 (1.56)	5.44 (2.39)	5.44 (1.95)
castle	1258	7.43 (1.55)	6.13 (2.15)	6.43 (1.99)	chicken	1282	6.87 (1.66)	5.10 (2.02)	5.83 (1.44)
castrate	1259	2.16 (1.99)	5.75 (3.05)	2.75 (2.09)	child	70	7.08 (1.98)	5.55 (2.29)	5.10 (2.3)
cat	504	5.72 (2.43)	4.38 (2.24)	6.16 (2.05)	chimney	1283	5.72 (1.28)	3.46 (1.84)	5.12 (0.85)
cattle	1260	5.50 (1.74)	4.20 (2.14)	5.57 (1.79)	chin	685	5.29 (1.27)	3.31 (1.98)	5.26 (1.48)
cave	1261	4.78 (1.98)	5.44 (1.85)	4.44 (1.56)	chocolate	505	6.88 (1.89)	5.29 (2.55)	5.18 (1.97)
cavern	1262	5.62 (1.63)	5.28 (2.23)	5.28 (1.67)	choice	1284	6.94 (2.08)	5.23 (2.54)	7.33 (2.31)
cavity	1263	2.59 (1.9)	6.14 (2.62)	3.50 (2.22)	choir	1285	6.41 (1.84)	4.50 (2.41)	5.50 (1.26)
cavort	1264	5.10 (1.05)	4.86 (1.94)	4.97 (1.27)	choke	1286	2.38 (1.43)	6.34 (2.6)	2.91 (1.96)
cease	1265	4.48 (1.15)	4.25 (1.71)	4.64 (1.57)	chore	1287	2.74 (1.38)	3.52 (2.47)	3.26 (1.95)
ceiling	1266	5.45 (0.95)	4.04 (2.22)	5.18 (1.47)	christmas	686	7.80 (1.55)	6.27 (2.56)	5.37 (2.09)
cell	587	3.82 (1.7)	4.08 (2.19)	4.12 (2.13)	church	71	6.28 (2.31)	4.34 (2.45)	5.00 (2.42)
cellar	681	4.32 (1.68)	4.39 (2.33)	4.66 (1.61)	cider	1288	6.03 (1.78)	4.10 (1.99)	5.48 (1.84)
cemetery	65	2.63 (1.4)	4.82 (2.66)	4.27 (2.14)	cigar	1289	4.61 (2.94)	4.14 (2.45)	5.18 (2.31)
cereal	1267	7.35 (1.51)	5.08 (2.61)	6.28 (2.15)	cigarette	1290	2.46 (1.75)	5.35 (2.26)	4.54 (2.35)
chair	66	5.08 (0.98)	3.15 (1.77)	4.56 (1.6)	cinema	1291	7.86 (1.16)	6.18 (2.23)	6.14 (1.76)
chalk	1268	4.89 (1.69)	3.48 (2.24)	4.70 (1.59)	circle	687	5.67 (1.26)	3.86 (2.13)	5.03 (1.46)
challenge	1269	6.43 (1.57)	6.43 (1.81)	6.07 (2.52)	circus	72	7.30 (1.84)	5.97 (2.59)	5.39 (2.25)
champ	682	7.18 (1.97)	6.00 (2.43)	6.77 (2)	city	73	6.03 (1.37)	5.24 (2.53)	5.74 (2.08)
champagne	1270	7.00 (1.77)	5.93 (2.33)	5.43 (2.06)	clan	1292	4.93 (2.2)	5.00 (1.92)	5.04 (2.41)
champion	67	8.44 (0.9)	5.85 (3.15)	6.50 (2.85)	clarinet	1293	5.70 (1.88)	4.47 (1.93)	5.43 (1.52)
chance	683	6.02 (1.77)	5.38 (2.58)	4.64 (1.93)	class	1294	4.37 (2.11)	3.93 (2.23)	4.80 (2.17)
change	1271	5.24 (1.98)	5.25 (2.38)	4.79 (1.99)	clause	1295	4.93 (1.8)	4.20 (1.47)	4.40 (1.28)
chaos	684	4.17 (2.36)	6.67 (2.06)	3.86 (1.95)	claw	1296	4.23 (1.45)	4.81 (1.79)	4.69 (1.12)
character	1272	5.87 (1.68)	5.17 (1.49)	5.77 (1.65)	clay	1297	5.33 (0.99)	3.83 (1.86)	5.50 (1.36)
charm	68	6.77 (1.58)	5.16 (2.25)	5.57 (2.25)	clean	1298	7.23 (1.76)	4.80 (2.47)	6.90 (1.84)
chase	1273	5.07 (2.03)	6.50 (1.95)	4.64 (1.97)	cleavage	1299	6.33 (1.99)	5.53 (2.45)	6.03 (1.85)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
cleft	1300	4.13 (1.72)	3.93 (2.18)	4.67 (1.65)	comedy	77	8.37 (0.94)	5.85 (2.81)	5.44 (2.08)
clench	1301	4.43 (1.38)	5.63 (1.77)	4.37 (1.75)	comet	1322	6.23 (2.1)	5.97 (2.11)	4.30 (2.38)
cliff	553	4.67 (2.08)	6.25 (2.15)	4.35 (2.11)	comfort	696	7.07 (2.14)	3.93 (2.85)	5.70 (2.05)
cliffdiver	1302	5.80 (1.9)	5.93 (2.43)	5.20 (1.95)	comfortable	1323	8.07 (1.14)	3.59 (2.5)	6.70 (2.13)
climax	1303	6.93 (2.16)	7.18 (2.4)	5.86 (2.21)	command	1324	4.57 (1.87)	5.64 (2.53)	4.25 (3.04)
cling	1304	4.52 (1.23)	4.23 (1.94)	4.77 (1.65)	communism	1325	2.80 (2.41)	5.55 (2.71)	3.07 (2.29)
clinic	1305	4.72 (1.67)	4.81 (2.02)	4.19 (1.94)	compel	1326	4.97 (1.25)	5.43 (1.89)	5.53 (1.8)
clock	688	5.14 (1.54)	4.02 (2.54)	4.67 (1.97)	competent	1327	7.07 (1.53)	5.34 (1.93)	6.72 (1.89)
closet	1306	5.21 (1.45)	4.57 (1.83)	5.82 (1.68)	complete	1328	8.17 (1.14)	5.75 (2.17)	7.36 (1.5)
clot	1307	3.13 (1.68)	4.70 (2.37)	3.66 (1.93)	complex	1329	5.25 (1.32)	5.62 (1.7)	5.34 (1.54)
cloth	1308	5.27 (1.53)	3.55 (2.05)	5.14 (1.66)	compulsive	1330	4.14 (2.05)	5.70 (2.46)	4.04 (1.93)
clothe	1309	5.97 (1.71)	4.60 (2.11)	5.80 (1.63)	computer	552	6.24 (1.61)	4.75 (1.93)	5.29 (1.99)
clothes	1310	6.66 (1.65)	5.86 (2)	6.52 (1.68)	concentrate	78	5.20 (1.28)	4.65 (2.13)	4.97 (1.75)
clothing	74	6.54 (1.85)	4.78 (2.88)	5.33 (2.14)	concerned	1331	4.06 (1.61)	5.55 (2.13)	4.45 (1.98)
clouds	533	6.18 (2.18)	3.30 (2.08)	5.22 (1.66)	concert	1332	7.66 (1.4)	7.32 (2.06)	5.71 (2.02)
clown	1311	5.39 (2.15)	5.43 (2.23)	4.86 (2.03)	concrete	1333	5.32 (0.98)	4.03 (1.89)	5.77 (1.41)
clue	1312	5.57 (1.1)	5.52 (1.43)	5.03 (1.15)	condom	1334	6.30 (1.66)	6.43 (1.96)	6.30 (2.04)
clumsy	689	4.00 (2.22)	5.18 (2.4)	3.86 (1.79)	confident	79	7.98 (1.29)	6.22 (2.41)	7.68 (1.94)
coach	1313	6.21 (1.66)	5.59 (1.92)	4.83 (2.04)	confused	80	3.21 (1.51)	6.03 (1.88)	4.24 (1.91)
coarse	690	4.55 (1.42)	4.21 (1.84)	5.00 (1.43)	confusion	1335	3.46 (1.93)	6.07 (2.34)	3.04 (1.91)
coast	691	5.98 (1.86)	4.59 (2.31)	5.67 (1.71)	conquer	1336	6.86 (1.72)	6.79 (1.79)	7.25 (1.94)
coax	1314	4.76 (1.53)	4.83 (1.73)	5.17 (1.77)	conquest	1337	5.85 (1.71)	6.50 (1.9)	5.73 (2.31)
cocaine	1315	3.37 (2.83)	4.93 (3.31)	4.70 (3.24)	consoled	81	5.78 (1.64)	4.53 (2.22)	4.44 (1.84)
cockpit	1316	6.31 (1.65)	5.53 (2.33)	4.78 (2.34)	constructive	1338	6.13 (1.43)	5.13 (1.78)	5.83 (1.78)
cockroach	75	2.81 (2.11)	6.11 (2.78)	4.74 (2.58)	contempt	82	3.85 (2.13)	5.28 (2.04)	5.13 (1.73)
cocoa	1317	7.28 (1.22)	5.54 (2.47)	6.04 (1.35)	contents	83	4.89 (0.89)	4.32 (2.14)	4.85 (1.49)
cod	1318	4.95 (1.66)	4.05 (1.87)	5.13 (1.36)	context	84	5.20 (1.38)	4.22 (2.24)	5.17 (1.39)
coddle	1319	4.81 (1.11)	4.43 (1.7)	5.07 (1.66)	continuation	1339	5.70 (1.58)	4.93 (2.24)	5.13 (1.59)
coffin	76	2.56 (1.96)	5.03 (2.79)	4.08 (2.54)	control	1340	6.46 (1.35)	5.93 (2.12)	6.79 (2.44)
cognition	1320	5.57 (1.26)	4.59 (2.1)	5.56 (1.31)	controlling	85	3.80 (2.25)	6.10 (2.19)	5.17 (3.15)
coin	692	6.02 (1.96)	4.29 (2.48)	5.66 (1.68)	convey	1341	5.61 (1.37)	4.64 (2.04)	5.75 (1.67)
cold	693	4.02 (1.99)	5.19 (2.23)	4.69 (1.73)	cook	697	6.16 (1.89)	4.44 (1.96)	5.14 (1.49)
colony	1321	5.28 (1.56)	4.86 (2.37)	5.57 (1.62)	cookie	1342	7.60 (1.43)	5.43 (2.28)	6.17 (1.78)
color	694	7.02 (1.57)	4.73 (2.64)	6.17 (1.82)	cookout	1343	7.31 (1.69)	6.14 (2.29)	5.97 (1.61)
column	695	5.17 (0.85)	3.62 (1.91)	4.81 (1.58)	cool	1344	6.83 (1.34)	4.17 (2.27)	5.97 (1.38)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
cope	1345	4.60 (1.94)	4.66 (2.14)	4.76 (2.21)	crime	704	2.89 (2.06)	5.41 (2.69)	4.12 (2.24)
copper	1346	5.35 (0.95)	3.61 (2.03)	5.29 (1.42)	criminal	705	2.93 (1.66)	4.79 (2.51)	3.34 (1.73)
cord	698	5.10 (1.09)	3.54 (2.09)	5.00 (1.22)	cripple	1368	2.89 (1.66)	5.14 (2.14)	3.64 (1.62)
core	1347	4.80 (1.19)	4.18 (1.76)	5.50 (1.45)	crisis	706	2.74 (2.23)	5.44 (3.07)	3.60 (2.47)
cork	699	5.22 (1.13)	3.80 (2.18)	4.98 (1.04)	critic	1369	3.04 (1.48)	5.67 (2.27)	3.26 (2.3)
corn	1348	6.00 (1.69)	4.57 (1.93)	5.71 (1.86)	criticism	1370	2.75 (1.76)	6.18 (2.4)	3.11 (1.89)
corner	700	4.36 (1.21)	3.91 (1.92)	4.12 (1.66)	critique	1371	4.39 (1.87)	5.37 (2.06)	4.07 (2.12)
corpse	86	2.18 (1.48)	4.74 (2.94)	3.59 (2.44)	crocodile	1372	5.00 (2.36)	6.03 (2.22)	4.17 (2)
corridor	701	4.88 (1.14)	3.63 (2.41)	5.00 (1.48)	crossword	1373	5.44 (1.58)	3.96 (1.58)	5.37 (1.18)
corrupt	702	3.32 (2.32)	4.67 (2.35)	4.64 (2.3)	crowd	1374	4.93 (1.6)	5.30 (2.05)	3.87 (1.98)
costume	1349	7.34 (1.26)	6.00 (1.91)	6.86 (1.56)	crown	90	6.58 (1.42)	4.28 (2.53)	6.06 (2.15)
cottage	87	6.45 (1.52)	3.39 (2.54)	5.39 (1.78)	crucify	91	2.23 (1.72)	6.47 (2.47)	3.74 (2.48)
couch	1350	6.78 (1.64)	4.03 (2.41)	5.83 (2.13)	crude	707	3.12 (1.65)	5.07 (2.37)	4.27 (1.94)
counselor	1351	4.68 (1.94)	4.54 (2.03)	4.07 (1.88)	cruel	92	1.97 (1.67)	5.68 (2.65)	4.24 (2.84)
country	1352	5.93 (1.91)	5.26 (1.93)	5.96 (1.93)	cruise	1375	7.17 (1.68)	5.83 (2.69)	5.63 (1.65)
couple	506	7.41 (1.97)	6.39 (2.31)	6.02 (2.28)	cruiseship	1376	7.66 (1.45)	6.76 (2.29)	5.31 (2.14)
coupon	1353	6.43 (1.57)	5.10 (2.29)	5.83 (2.07)	crumbs	1377	4.27 (1.71)	4.50 (2.06)	5.31 (1.12)
court	1354	3.44 (2.41)	5.67 (2.81)	3.56 (2.79)	crunch	1378	5.83 (1.34)	5.37 (1.94)	5.57 (1.68)
courtyard	1355	5.75 (1.35)	4.00 (2.27)	5.30 (1.73)	crush	1379	5.90 (2.07)	6.70 (1.82)	4.47 (2.18)
cousin	1356	6.32 (2.44)	4.87 (2.33)	5.13 (1.81)	crushed	93	2.21 (1.74)	5.52 (2.87)	3.36 (2.69)
cow	554	5.57 (1.53)	3.49 (2.13)	5.32 (1.61)	crutch	708	3.43 (1.62)	4.14 (2.05)	3.91 (1.79)
coward	703	2.74 (1.64)	4.07 (2.19)	2.83 (1.61)	curlle	94	7.72 (1.92)	4.40 (2.67)	5.85 (2.42)
cowboy	1357	6.48 (1.88)	5.75 (2.07)	5.71 (1.74)	cuisine	709	6.64 (1.48)	4.39 (1.99)	5.41 (1.19)
coyote	1358	4.86 (2.19)	5.19 (2.68)	3.93 (2.04)	cult	1380	2.48 (1.85)	6.15 (2.71)	3.44 (2.68)
cozy	88	7.39 (1.53)	3.32 (2.28)	4.89 (2.28)	culture	1381	5.90 (2.34)	4.90 (2.63)	5.57 (2.69)
crab	1359	5.28 (1.87)	4.72 (2.28)	5.45 (1.7)	cup	1382	5.44 (1.05)	3.70 (2.16)	5.63 (1.9)
crackers	1360	5.80 (1.4)	4.47 (1.96)	5.50 (1.28)	cupboard	1383	4.79 (1.21)	3.83 (2.16)	4.90 (1.45)
craft	1361	6.54 (1.67)	4.70 (2.27)	5.33 (2.02)	cupcake	1384	7.20 (1.85)	5.93 (2.38)	5.67 (2.01)
cram	1362	3.16 (2)	6.40 (2.82)	3.97 (2.59)	cure	1385	8.18 (1.25)	6.57 (2.23)	6.04 (2.28)
cranky	1363	2.90 (1.9)	5.36 (2.36)	4.39 (1.71)	curious	95	6.08 (1.63)	5.82 (1.64)	5.42 (1.6)
crash	89	2.31 (1.44)	6.95 (2.44)	3.44 (2.21)	curtains	710	4.83 (0.83)	3.67 (1.83)	5.05 (1.56)
crave	1364	4.88 (1.58)	6.13 (1.43)	3.97 (1.78)	curve	1386	5.54 (1.2)	5.07 (1.69)	5.19 (1.3)
crazy	1365	5.93 (1.95)	6.28 (2.25)	5.13 (2.33)	custom	96	5.85 (1.53)	4.66 (2.12)	5.00 (1.87)
create	1366	6.79 (1.95)	5.75 (1.6)	5.89 (2.2)	cut	711	3.64 (2.08)	5.00 (2.32)	4.70 (1.98)
creek	1367	6.55 (1.68)	4.62 (2.44)	5.17 (1.61)	cute	97	7.62 (1.01)	5.53 (2.71)	4.86 (2.32)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
cyclone	98	3.60 (2.38)	6.36 (2.89)	4.89 (2.56)	defy	1404	5.40 (2.11)	5.63 (2.28)	6.00 (2.27)
dagger	99	3.38 (1.77)	6.14 (2.64)	4.52 (2.27)	delayed	721	3.07 (1.74)	5.62 (2.39)	3.64 (1.94)
daisy	1387	7.48 (1.53)	3.96 (2.61)	5.33 (2.5)	delight	1405	7.48 (1.84)	6.68 (2.2)	5.68 (2.02)
damage	712	3.05 (1.65)	5.57 (2.26)	3.88 (1.86)	delight	105	8.26 (1.04)	5.44 (2.88)	5.79 (2.24)
damn	1388	4.52 (2.23)	5.43 (2.38)	5.18 (2.11)	delude	1406	4.71 (1.04)	4.10 (1.79)	5.20 (1.16)
damp	1389	3.68 (1.56)	4.07 (1.73)	4.44 (1.55)	demand	1407	3.76 (1.57)	5.75 (1.71)	4.86 (2.53)
dance	1390	7.38 (1.84)	6.71 (1.98)	6.04 (1.77)	democracy	1408	6.55 (2.03)	5.39 (2.36)	6.04 (2.03)
dancer	507	7.14 (1.56)	6.00 (2.2)	6.02 (1.93)	demon	106	2.11 (1.56)	6.76 (2.68)	4.89 (2.89)
danger	713	2.95 (2.22)	7.32 (2.07)	3.59 (2.31)	den	1409	5.72 (1.49)	3.50 (2)	6.17 (1.76)
dare	1391	5.76 (2.2)	6.57 (2.46)	5.00 (2.72)	denial	1410	3.28 (1.44)	6.03 (1.68)	4.06 (2.14)
dark	714	4.71 (2.36)	4.28 (2.21)	4.84 (2.15)	denote	1411	4.63 (1.27)	4.40 (1.87)	4.83 (1.46)
daughter	1392	6.36 (1.99)	5.11 (1.99)	5.68 (1.93)	dent	1412	2.93 (1.49)	5.69 (2.02)	4.03 (1.86)
dawn	715	6.16 (2.33)	4.39 (2.81)	5.16 (2.23)	dentist	589	4.02 (2.23)	5.73 (2.13)	3.80 (2.16)
day	1393	6.66 (1.43)	5.00 (2.02)	5.88 (1.43)	deny	1413	3.79 (1.29)	4.86 (1.76)	4.36 (1.99)
daylight	716	6.80 (2.17)	4.77 (2.5)	5.48 (2.14)	depart	1414	3.63 (2.39)	4.37 (2.48)	3.63 (2.2)
daze	1394	5.04 (1.55)	4.00 (2.17)	4.59 (1.47)	depressed	107	1.83 (1.42)	4.72 (2.95)	2.74 (2.13)
dazzle	717	7.29 (1.09)	6.33 (2.02)	5.62 (1.81)	depression	108	1.85 (1.67)	4.54 (3.19)	2.91 (2.27)
dead	588	1.94 (1.76)	5.73 (2.73)	2.84 (2.32)	derelict	722	4.28 (1.84)	4.10 (1.94)	4.78 (1.56)
deadly	1395	2.73 (1.89)	6.62 (2.25)	3.46 (2.14)	descent	1415	5.00 (1.47)	4.58 (2.06)	4.83 (1.83)
death	100	1.61 (1.4)	4.59 (3.07)	3.47 (2.5)	desert	1416	4.96 (2.5)	4.82 (2.34)	5.00 (2.09)
debt	101	2.22 (1.17)	5.68 (2.74)	3.02 (2.16)	deserter	109	2.45 (1.8)	5.50 (2.55)	3.77 (2.29)
decapitate	1396	2.45 (1.9)	6.41 (2.51)	3.28 (2.45)	desire	508	7.69 (1.39)	7.35 (1.76)	6.49 (1.83)
decay	1397	2.68 (1.66)	4.44 (2.28)	3.63 (1.84)	desk	1417	4.66 (1.14)	4.03 (1.72)	5.55 (1.94)
deceit	718	2.90 (1.63)	5.68 (2.46)	3.95 (2.12)	despairing	110	2.43 (1.47)	5.68 (2.37)	3.43 (2.11)
decency	1398	5.83 (1.78)	4.50 (1.63)	5.70 (1.37)	despise	111	2.03 (1.38)	6.28 (2.43)	4.72 (2.8)
decompose	102	3.20 (1.81)	4.65 (2.39)	4.02 (1.91)	destroy	112	2.64 (2.03)	6.83 (2.38)	4.94 (2.86)
decorate	719	6.93 (1.3)	5.14 (2.39)	6.05 (1.86)	destruction	723	3.16 (2.44)	5.82 (2.71)	3.93 (2.29)
deed	1399	5.85 (1.46)	5.15 (2.09)	5.73 (1.76)	detach	1418	3.19 (1.57)	4.19 (2.32)	3.93 (2.34)
defeat	1400	2.97 (2.34)	5.63 (2.43)	3.60 (2.34)	detached	113	3.86 (1.88)	4.26 (2.57)	3.63 (2.15)
defeated	103	2.34 (1.66)	5.09 (3)	3.11 (2.34)	detail	724	5.55 (1.58)	4.10 (2.24)	5.21 (1.6)
defecate	1401	3.33 (2.45)	5.14 (2.85)	4.77 (2.16)	detain	1419	3.03 (1.35)	5.52 (2.13)	3.58 (1.91)
defend	1402	6.07 (1.89)	5.97 (2.4)	6.27 (1.98)	detest	114	2.17 (1.3)	6.06 (2.39)	5.83 (2.6)
defer	1403	4.10 (1.54)	4.48 (2.37)	4.76 (2.44)	devil	115	2.21 (1.99)	6.07 (2.61)	5.35 (2.75)
defiant	104	4.26 (2.12)	6.10 (2.51)	5.77 (2.4)	devote	1420	6.32 (1.49)	5.37 (1.88)	6.19 (1.82)
deformed	720	2.41 (1.66)	4.07 (2.34)	3.95 (2.18)	devoted	116	7.41 (1.37)	5.23 (2.21)	6.18 (2.36)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
devour	1421	5.62 (2.13)	5.39 (2.02)	5.00 (2.09)	divorce	128	2.22 (1.88)	6.33 (2.71)	3.26 (2.24)
dew	1422	5.59 (1.52)	3.64 (1.79)	5.10 (1.74)	doctor	129	5.20 (2.54)	5.86 (2.7)	4.89 (2.75)
diamond	117	7.92 (1.2)	5.53 (2.96)	5.54 (2.28)	dog	511	7.57 (1.66)	5.76 (2.5)	6.25 (2.1)
diary	1423	5.73 (1.04)	3.69 (1.95)	6.38 (2.02)	doll	728	6.09 (1.96)	4.24 (2.43)	4.61 (2.07)
dice	1424	5.72 (1.28)	4.96 (2.15)	4.64 (1.93)	dollar	729	7.47 (1.72)	6.07 (2.67)	6.33 (2.42)
die	1425	2.48 (1.7)	6.38 (2.64)	2.55 (2.23)	donate	1439	6.89 (1.69)	4.48 (2.15)	6.70 (1.79)
difficult	1426	2.93 (1.59)	5.96 (2.1)	4.19 (2.59)	donkey	1440	5.54 (1.5)	4.22 (1.97)	5.67 (1.52)
dignified	118	7.10 (1.26)	4.12 (2.29)	6.12 (2.4)	donor	1441	6.43 (1.71)	5.11 (1.97)	6.07 (1.86)
dinner	509	7.16 (1.5)	5.43 (2.14)	6.10 (1.87)	door	130	5.13 (1.44)	3.80 (2.29)	4.69 (1.72)
diploma	119	8.00 (1.39)	5.67 (2.8)	6.76 (2.5)	doubt	1442	3.43 (1.97)	4.50 (2.15)	3.64 (1.93)
dirt	725	4.17 (1.77)	3.76 (2.26)	4.83 (1.82)	doubtful	1443	3.41 (1.18)	4.28 (1.83)	3.76 (1.72)
dirty	590	3.08 (2.05)	4.88 (2.29)	4.70 (2.12)	dough	1444	6.09 (1.59)	4.59 (1.93)	5.69 (1.79)
disability	1427	2.52 (1.27)	4.46 (2.49)	2.43 (1.5)	dove	730	6.90 (1.54)	3.79 (2.28)	5.48 (1.7)
disappoint	120	2.39 (1.44)	4.92 (2.64)	3.29 (2.32)	dragon	1445	5.43 (1.85)	5.50 (2.33)	4.39 (1.93)
disappointed	1428	2.21 (1.47)	4.82 (2.88)	3.11 (2.13)	drama	1446	3.86 (2.59)	6.39 (1.93)	5.32 (2.36)
disappointment	1429	2.37 (1.27)	4.60 (2.4)	3.20 (2.04)	dreadful	131	2.26 (1.91)	5.84 (2.62)	4.10 (2.36)
disaster	121	1.73 (1.13)	6.33 (2.7)	3.52 (2.42)	dream	132	6.73 (1.75)	4.53 (2.72)	5.53 (1.98)
discomfort	726	2.19 (1.23)	4.17 (2.44)	3.86 (2.26)	dreams	1447	7.14 (1.46)	6.48 (1.88)	5.38 (2.38)
discount	1430	7.48 (1.48)	6.10 (2.02)	5.94 (1.91)	dreary	731	3.05 (1.58)	2.98 (2.18)	3.81 (1.64)
discouraged	122	3.00 (2.16)	4.53 (2.11)	3.61 (2.01)	dress	133	6.41 (1.34)	4.05 (1.89)	5.00 (1.89)
disdainful	123	3.68 (1.9)	5.04 (2.14)	4.55 (1.92)	drill	1448	4.40 (1.57)	5.40 (1.69)	4.80 (1.73)
disease	1431	2.03 (1.24)	5.32 (2.47)	2.71 (1.84)	driver	1449	6.13 (1.28)	4.87 (1.8)	6.35 (1.87)
disgusted	124	2.45 (1.41)	5.42 (2.59)	4.34 (1.94)	droop	1450	3.21 (1.74)	3.39 (1.79)	3.96 (0.96)
disgusting	1432	2.96 (1.55)	5.18 (2.28)	3.64 (2.04)	drown	1451	2.20 (1.68)	6.84 (2.17)	2.68 (2.32)
dishes	1433	3.62 (1.56)	4.06 (2.23)	4.84 (1.76)	drown	591	1.92 (1.48)	6.57 (2.33)	2.86 (1.99)
disk	1434	5.25 (0.89)	3.86 (1.82)	5.64 (1.45)	drugs	1452	3.76 (2.2)	6.00 (2.39)	4.75 (2.62)
disloyal	125	1.93 (1.61)	6.56 (2.21)	3.79 (2.75)	drunk	1453	6.17 (2.5)	6.11 (2.46)	4.54 (2.59)
disorder	1435	2.72 (1.46)	5.42 (2.32)	2.71 (1.55)	dryer	1454	5.03 (1.12)	3.79 (1.76)	5.50 (1.5)
displeased	126	2.79 (2.23)	5.64 (2.48)	4.19 (2.19)	ducks	1455	6.20 (1.56)	4.34 (2.18)	5.24 (1.43)
distracted	1436	4.48 (1.95)	4.56 (2.26)	4.07 (1.82)	duct	1456	4.86 (1.06)	4.17 (1.81)	5.17 (1.67)
distress	1437	2.67 (2.01)	5.70 (2.34)	3.03 (1.94)	duet	1457	6.27 (1.26)	5.43 (1.94)	5.27 (1.51)
distressed	127	1.94 (1.1)	6.40 (2.38)	3.76 (2.41)	dumb	1458	3.00 (2.15)	4.24 (2.21)	3.69 (1.91)
disturb	727	3.66 (2)	5.80 (2.39)	4.55 (1.9)	dummy	732	3.38 (1.7)	4.35 (2.25)	3.67 (2.02)
diver	510	6.45 (1.55)	5.04 (2.1)	5.04 (1.91)	dump	733	3.21 (1.87)	4.12 (2.36)	3.83 (1.87)
divert	1438	4.44 (1.72)	5.22 (2.44)	4.89 (2.26)	dune	1459	5.03 (1.57)	4.17 (2.02)	5.10 (1.4)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
dusk	1460	5.40 (1.5)	4.37 (1.87)	4.77 (1.41)	emotional	1481	4.36 (1.91)	5.75 (2.37)	4.29 (1.63)
dust	1461	3.90 (1.89)	4.10 (1.99)	4.50 (1.57)	empathy	1482	5.32 (2.42)	4.81 (2.2)	4.33 (2.09)
dustpan	555	3.98 (1.68)	3.43 (2)	5.45 (1.81)	empire	1483	6.26 (1.67)	5.65 (1.84)	6.29 (2.55)
duty	1462	5.81 (1.83)	5.06 (2.08)	5.19 (1.82)	employment	147	6.47 (1.81)	5.28 (2.13)	5.73 (2.08)
dwarf	1463	5.11 (1.85)	4.32 (1.74)	5.14 (1.82)	enable	1484	5.93 (1.44)	5.10 (1.61)	5.90 (1.78)
dwell	1464	4.87 (1.65)	4.00 (2.02)	5.35 (1.89)	encourage	1485	7.27 (1.53)	5.55 (1.99)	6.48 (1.35)
eager	1465	7.32 (1.28)	6.57 (2.04)	5.14 (1.78)	end	1486	3.44 (1.64)	4.44 (2.17)	4.41 (1.78)
eagerness	1466	6.21 (1.89)	6.29 (1.84)	5.39 (1.5)	endure	1487	5.50 (1.81)	5.56 (1.92)	5.91 (2.05)
eagle	1467	6.03 (1.66)	4.76 (1.86)	4.79 (1.76)	energy	1488	7.23 (1.55)	6.90 (1.94)	6.93 (1.62)
earth	134	7.15 (1.67)	4.24 (2.49)	5.61 (2.3)	enforcement	1489	4.17 (1.49)	5.73 (1.55)	4.27 (2.29)
ease	1468	6.93 (1.46)	3.46 (2.41)	6.71 (2.02)	engage	1490	6.31 (1.81)	5.96 (2.11)	5.23 (1.88)
easel	1469	5.41 (1.43)	4.43 (1.71)	5.43 (1.97)	engaged	143	8.00 (1.38)	6.77 (2.07)	6.49 (2.22)
easy	734	7.10 (1.91)	4.48 (2.82)	7.00 (1.63)	engine	148	5.20 (1.18)	3.98 (2.34)	5.00 (1.78)
easygoing	135	7.20 (1.5)	4.30 (2.52)	5.25 (1.75)	engulf	1491	4.74 (1.7)	4.93 (2.32)	4.37 (2.54)
eat	136	7.47 (1.73)	5.69 (2.51)	5.60 (2.12)	enjoy	1492	8.17 (1.29)	6.33 (1.94)	6.40 (1.22)
echo	1470	6.17 (1.62)	5.07 (1.74)	5.17 (1.39)	enjoyment	145	7.80 (1.2)	5.20 (2.72)	6.46 (1.77)
ecstasy	735	7.98 (1.52)	7.38 (1.92)	6.68 (2.08)	enlist	1493	4.03 (1.93)	5.47 (1.88)	4.41 (2)
ecstatic	1471	8.41 (1.27)	7.71 (1.82)	6.14 (2.03)	ennui	146	5.09 (1.76)	4.40 (2.33)	4.67 (1.8)
education	137	6.69 (1.77)	5.74 (2.46)	6.15 (2.35)	enraged	149	2.46 (1.65)	7.97 (2.17)	6.33 (2.92)
effective	1472	7.06 (1.69)	5.03 (2.44)	6.13 (2.5)	enthusiastic	1494	8.17 (1.23)	7.38 (2.24)	6.75 (1.71)
efficient	1473	7.07 (1.63)	5.57 (2.15)	6.43 (2.36)	entry	1495	5.69 (1.12)	4.72 (1.94)	5.81 (1.47)
egg	736	5.29 (1.82)	3.76 (2.39)	4.49 (2.16)	envious	1496	3.57 (1.76)	5.57 (1.85)	4.54 (2.03)
ego	1474	5.07 (1.31)	4.66 (1.45)	6.66 (1.86)	envy	1497	3.41 (1.54)	5.50 (1.74)	4.12 (1.91)
ejaculate	1475	5.92 (1.44)	6.62 (1.58)	5.65 (2.21)	enzyme	1498	4.90 (1.63)	4.34 (2.3)	4.17 (1.26)
elated	138	7.45 (1.77)	6.21 (2.3)	5.53 (2.35)	erase	1499	4.17 (1.82)	4.10 (2.09)	4.87 (1.8)
elbow	737	5.12 (0.92)	3.81 (2.14)	4.88 (1.52)	erasure	1500	4.84 (0.68)	4.44 (1.7)	5.12 (1.21)
elderly	1476	4.86 (2.05)	4.03 (2.41)	3.83 (1.85)	erect	1501	6.26 (2.29)	6.40 (2.34)	5.87 (1.96)
elegant	139	7.43 (1.26)	4.53 (2.65)	5.95 (2.09)	erode	1502	3.67 (1.65)	5.17 (1.91)	3.97 (1.7)
elephant	1477	6.48 (1.72)	5.59 (2.45)	4.70 (2.46)	erotic	512	7.43 (1.53)	7.24 (1.97)	6.39 (2.16)
elevator	738	5.44 (1.18)	4.16 (1.99)	4.32 (1.69)	err	1503	4.16 (2.02)	4.88 (1.76)	4.31 (1.55)
embark	1478	6.47 (1.57)	5.83 (2.45)	6.17 (1.66)	errand	150	4.58 (1.74)	3.85 (1.92)	4.78 (1.51)
embarrass	1479	2.50 (1.45)	6.14 (2.4)	2.78 (2.36)	erupt	1504	5.43 (1.57)	6.57 (2.14)	3.80 (1.97)
embarrassed	140	3.03 (1.85)	5.87 (2.55)	2.87 (1.99)	essence	1505	6.75 (1.62)	5.18 (2.25)	5.61 (1.52)
embarrassment	1480	2.34 (1.82)	6.54 (2.28)	2.71 (2.14)	estate	1506	6.59 (1.96)	4.86 (2.33)	5.66 (2)
embattled	141	4.39 (1.63)	5.36 (2.37)	4.81 (1.79)	evade	1507	4.47 (1.83)	5.60 (2.24)	5.53 (2.27)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
event	740	6.21 (1.63)	5.10 (2.4)	5.52 (1.57)	fairy	1533	6.24 (2.01)	4.25 (1.9)	5.43 (1.79)
evict	1508	3.04 (1.4)	5.68 (2.12)	2.92 (1.91)	faith	1534	6.57 (2.16)	5.73 (2.42)	5.60 (1.85)
evil	741	3.23 (2.64)	6.39 (2.44)	5.25 (2.6)	fake	1535	3.10 (1.49)	5.26 (2.18)	4.58 (2.16)
exalt	1509	6.87 (1.59)	6.00 (2.42)	5.76 (1.66)	falcon	1536	5.79 (1.78)	5.14 (2.07)	5.21 (1.17)
exam	1510	2.76 (1.99)	7.03 (2.43)	3.34 (2.18)	fall	743	4.09 (2.21)	4.70 (2.48)	4.00 (2.15)
exasperation	1511	4.18 (2)	5.64 (2.59)	4.57 (2.03)	false	1537	3.74 (2.03)	4.40 (2.04)	4.20 (1.97)
excel	1512	7.45 (1.55)	5.45 (2.16)	7.00 (1.75)	false	744	3.27 (1.4)	3.43 (2.09)	4.10 (1.56)
excellence	151	8.38 (0.96)	5.54 (2.67)	7.28 (2.32)	falter	1538	3.77 (1.61)	5.00 (2.7)	4.00 (1.76)
excite	1513	7.60 (1.29)	7.16 (1.49)	6.16 (1.43)	fame	157	7.93 (1.29)	6.55 (2.46)	6.85 (2.14)
excitement	152	7.50 (2.2)	7.67 (1.91)	6.18 (2.17)	family	158	7.65 (1.55)	4.80 (2.71)	6.00 (1.87)
excrement	1514	4.10 (2.37)	4.83 (2.1)	4.53 (1.89)	famine	1539	1.86 (1.15)	5.04 (2.43)	2.48 (1.93)
excuse	153	4.05 (1.41)	4.48 (2.29)	4.07 (2.1)	famous	745	6.98 (2.07)	5.73 (2.68)	6.32 (2.18)
execution	154	2.37 (2.06)	5.71 (2.74)	4.11 (2.66)	fan	1540	6.36 (1.47)	4.89 (2.34)	5.33 (1.62)
exercise	155	7.13 (1.58)	6.84 (2.06)	5.68 (2.44)	fantasy	746	7.41 (1.9)	5.14 (2.82)	6.43 (2.05)
exert	1515	5.35 (1.92)	5.19 (2.35)	6.04 (1.48)	farm	557	5.53 (1.85)	3.90 (1.95)	5.59 (1.81)
exhale	1516	5.93 (1.78)	4.15 (1.85)	5.96 (1.53)	farmer	1541	4.93 (1.98)	3.55 (2.06)	5.50 (1.89)
exhaust	1517	4.00 (1.66)	4.27 (2.2)	4.43 (1.45)	fascinate	159	7.34 (1.68)	5.83 (2.73)	6.15 (1.89)
exhilaration	1518	7.43 (1.48)	7.20 (2.09)	6.67 (1.88)	fashion	1542	7.04 (1.73)	6.00 (2.11)	6.00 (1.85)
exist	1519	6.68 (1.76)	5.39 (2.59)	4.79 (2.18)	fat	160	2.28 (1.92)	4.81 (2.8)	4.47 (3.06)
expel	1520	2.77 (1.43)	5.90 (2.17)	3.29 (2)	fate	1543	5.43 (1.83)	5.36 (2.06)	4.07 (2.85)
expensive	1521	4.59 (2.16)	6.04 (1.71)	4.57 (1.89)	father	161	7.08 (2.2)	5.92 (2.6)	5.63 (2.89)
expert	1522	6.40 (1.85)	5.17 (2.26)	6.23 (2.5)	fatigued	162	3.28 (1.43)	2.64 (2.19)	3.78 (1.97)
expire	1523	3.13 (1.41)	4.60 (2.08)	3.87 (1.81)	fault	747	3.43 (1.38)	4.07 (1.69)	4.02 (1.66)
explosion	1524	5.18 (2.93)	7.93 (1.9)	4.46 (2.92)	favor	748	6.46 (1.52)	4.54 (1.86)	5.67 (1.76)
extent	1525	5.20 (0.61)	3.83 (1.9)	5.00 (1.46)	fawn	1544	6.06 (1.48)	3.72 (1.9)	4.84 (1.32)
extreme	1526	6.39 (1.93)	7.11 (1.97)	5.71 (1.61)	fear	592	2.76 (2.12)	6.96 (2.17)	3.22 (2.2)
eye	1527	5.86 (1.38)	4.52 (2.15)	5.07 (1.41)	fearful	163	2.25 (1.18)	6.33 (2.28)	3.64 (2.18)
fabric	742	5.30 (1.2)	4.14 (1.98)	5.03 (1.61)	feat	1545	5.62 (1.63)	5.10 (1.72)	5.55 (1.8)
face	556	6.39 (1.6)	5.04 (2.18)	5.67 (1.58)	feeble	164	3.26 (1.47)	4.10 (2.07)	2.71 (1.64)
fact	1528	5.55 (1.68)	4.29 (1.92)	5.57 (1.71)	feeling	1546	6.23 (1.56)	5.00 (2.23)	5.62 (1.98)
factory	1529	4.59 (1.8)	3.93 (1.76)	4.93 (1.98)	feet	1547	4.60 (1.81)	3.67 (1.95)	5.60 (1.73)
fad	1530	5.08 (1.74)	4.46 (1.98)	4.15 (1.83)	female	1548	7.83 (1.42)	5.83 (2.39)	5.57 (1.55)
fail	1531	1.79 (1.74)	6.31 (2.84)	3.31 (2.77)	fence	1549	4.93 (0.59)	3.72 (1.94)	4.97 (1.52)
failure	156	1.70 (1.07)	4.95 (2.81)	2.40 (2.18)	fender	1550	4.48 (2.03)	4.86 (2.45)	4.97 (1.55)
fair	1532	6.67 (1.95)	5.40 (2.08)	5.77 (1.89)	fern	1551	5.10 (1.12)	3.83 (1.9)	5.30 (1.44)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
fervor	1552	5.00 (1.13)	4.81 (2.08)	4.44 (1.89)	flu	1573	2.52 (2.2)	4.83 (2.18)	2.67 (1.99)
festive	749	7.30 (2.26)	6.58 (2.29)	5.77 (2.34)	fluffy	1574	7.17 (1.56)	4.57 (2.52)	5.43 (1.14)
fetus	1553	5.21 (1.42)	4.97 (2.04)	4.97 (2.06)	flute	1575	5.72 (1.44)	4.25 (1.98)	5.12 (1.07)
feud	1554	3.07 (1.64)	6.14 (2.01)	4.13 (1.72)	fly	1576	7.29 (1.76)	6.64 (2.08)	5.18 (2.54)
fever	750	2.76 (1.64)	4.29 (2.31)	3.52 (2.15)	foam	756	6.07 (2.03)	5.26 (2.54)	5.24 (1.97)
field	558	6.20 (1.37)	4.08 (2.41)	5.84 (1.94)	foe	1577	3.39 (2.1)	6.00 (2.65)	5.25 (2.17)
fig	1555	5.63 (1.25)	3.87 (2.29)	4.87 (1.68)	folly	1578	4.40 (1.45)	4.30 (2.04)	4.30 (1.34)
fight	751	3.76 (2.63)	7.15 (2.19)	5.27 (2.69)	food	514	7.65 (1.37)	5.92 (2.11)	6.18 (2.48)
film	1556	6.93 (1.7)	5.32 (1.96)	5.14 (1.74)	foolish	1579	3.54 (1.79)	4.46 (2.06)	4.12 (1.77)
filth	165	2.47 (1.68)	5.12 (2.32)	3.81 (2.06)	foot	757	5.02 (0.93)	3.27 (1.98)	4.98 (1.42)
financial	1557	4.15 (2.09)	5.70 (2.22)	3.81 (1.98)	football	1580	7.64 (1.75)	6.54 (2.81)	6.21 (2.26)
finger	752	5.29 (1.42)	3.78 (2.42)	5.05 (1.7)	forbid	1581	3.13 (1.74)	5.47 (2.26)	3.57 (2.01)
fingerprint	1558	4.87 (0.73)	4.67 (1.9)	4.50 (1.55)	forceful	1582	3.84 (1.57)	5.72 (1.82)	4.31 (2.21)
finish	1559	7.80 (1.67)	5.37 (2.86)	6.93 (2.16)	forest	1583	6.39 (1.57)	4.86 (2.01)	5.11 (2.08)
fire	166	3.22 (2.06)	7.17 (2.06)	4.49 (2.49)	forget	1584	2.97 (1.54)	5.00 (2.05)	3.55 (1.57)
firefighter	1560	6.90 (1.61)	5.93 (2.16)	5.68 (2.36)	forgive	1585	6.33 (1.8)	4.89 (2.01)	4.93 (2.22)
fireplace	1561	6.93 (1.76)	4.48 (2.32)	5.69 (1.97)	fork	560	5.29 (0.97)	3.96 (1.94)	5.74 (1.52)
fireworks	513	7.55 (1.5)	6.67 (2.12)	5.51 (1.98)	fornicate	1586	5.53 (2.73)	6.60 (1.99)	5.80 (2.02)
first	1562	6.89 (2.22)	6.14 (2.48)	7.21 (1.93)	foul	169	2.81 (1.52)	4.93 (2.23)	4.51 (1.89)
fish	559	6.04 (1.94)	4.00 (2.19)	6.02 (1.68)	fragrance	170	6.07 (1.97)	4.79 (2.54)	5.14 (1.91)
fisherman	1563	5.94 (1.95)	4.97 (2.19)	5.46 (1.79)	fraud	171	2.67 (1.66)	5.75 (2.45)	3.58 (2.5)
fitting	1564	5.60 (1.66)	4.50 (1.82)	5.33 (1.17)	free	172	8.26 (1.31)	5.15 (3.04)	6.35 (2.4)
flabby	167	2.66 (1.87)	4.82 (2.81)	3.31 (1.9)	freedom	173	7.58 (2.04)	5.52 (2.72)	6.76 (2.29)
flag	753	6.02 (1.66)	4.60 (2.35)	5.50 (1.66)	freeway	1587	6.07 (2)	5.87 (2.06)	5.50 (1.8)
flare	1565	5.70 (1.97)	5.23 (2.18)	4.93 (1.41)	freezer	1588	4.96 (1.87)	4.30 (2.27)	4.85 (1.68)
flaunt	1566	5.04 (2.3)	5.70 (2.22)	5.22 (2.39)	frenzy	1589	4.97 (1.4)	6.86 (1.83)	4.41 (1.97)
flaw	1567	3.28 (1.44)	4.66 (1.72)	3.45 (1.66)	friend	174	7.74 (1.24)	5.74 (2.57)	6.74 (1.89)
flea	1568	3.47 (2.06)	5.23 (2.22)	4.13 (1.63)	friendly	175	8.43 (1.08)	5.11 (2.96)	5.92 (2.42)
flee	1569	3.29 (1.94)	6.18 (2.13)	3.79 (2.08)	fries	1590	6.81 (1.91)	4.97 (2.43)	5.97 (1.98)
flight	1570	6.69 (1.38)	6.25 (1.92)	4.81 (1.49)	fright	1591	3.19 (1.41)	5.77 (1.99)	4.12 (1.73)
flirt	754	7.52 (1.19)	6.91 (1.69)	6.24 (2.33)	frightened	1592	2.59 (1.5)	6.90 (2.11)	3.21 (2.29)
flock	1571	5.50 (1.22)	4.50 (1.63)	4.80 (1.27)	frigid	758	3.50 (1.85)	4.75 (2.56)	4.27 (1.98)
flood	755	3.19 (1.66)	6.00 (2.02)	3.24 (2.14)	frog	176	5.71 (1.74)	4.54 (2.03)	5.34 (1.96)
flow	1572	5.77 (1.19)	3.60 (1.79)	5.43 (1.55)	frolic	1593	6.64 (1.83)	5.04 (2.5)	5.29 (2.09)
flower	168	6.64 (1.78)	4.00 (2.44)	4.98 (2.17)	frosting	1594	7.23 (1.59)	5.47 (1.41)	5.53 (1.59)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
frown	1595	1.87 (1.31)	4.27 (2.24)	3.70 (1.58)	gentle	183	7.31 (1.3)	3.21 (2.57)	5.10 (2.16)
fruit	1596	6.93 (1.82)	4.63 (2.31)	5.67 (2.02)	germ	1618	3.35 (2)	5.62 (2.33)	4.58 (2.39)
frustrated	177	2.48 (1.64)	5.61 (2.76)	3.50 (2.12)	germs	764	2.86 (1.39)	4.49 (2.24)	3.79 (1.59)
frustration	1597	2.42 (1.55)	6.19 (2.58)	3.62 (2.32)	ghost	1619	4.42 (1.96)	6.19 (2.23)	3.55 (1.71)
fulfilled	1598	7.27 (1.8)	5.10 (2.6)	6.86 (1.85)	gift	184	7.77 (2.24)	6.14 (2.76)	5.52 (2.54)
fun	759	8.37 (1.11)	7.22 (2.01)	6.80 (1.85)	giggle	1620	8.06 (1.08)	6.25 (2.13)	6.31 (1.64)
funeral	178	1.39 (0.87)	4.94 (3.21)	2.97 (2.55)	giraffe	1621	6.64 (1.42)	5.00 (2.26)	5.04 (1.4)
fungus	179	3.06 (1.75)	4.68 (2.33)	4.06 (1.94)	girl	185	6.87 (1.64)	4.29 (2.69)	5.80 (2.16)
funny	1599	8.56 (0.85)	7.00 (1.86)	6.15 (1.92)	give	1622	7.13 (1.38)	5.33 (1.88)	6.27 (1.82)
fur	180	4.51 (1.88)	4.18 (2.44)	4.32 (1.97)	glacier	186	5.50 (1.25)	4.24 (2.29)	4.92 (2.12)
furious	1600	1.96 (1.43)	7.64 (2.13)	5.32 (2.93)	glad	1623	7.77 (1.22)	5.70 (2.17)	6.53 (1.5)
furnace	1601	4.81 (1.49)	4.81 (1.86)	4.97 (1.12)	glamour	187	6.76 (1.6)	4.68 (2.23)	5.76 (2.49)
furniture	1602	5.93 (1.68)	4.17 (2.42)	5.52 (1.45)	glance	1624	5.53 (1.17)	5.10 (1.79)	5.07 (1.56)
fury	1603	3.10 (1.82)	6.82 (2.23)	4.29 (2.37)	gland	1625	4.83 (1.47)	4.18 (2.18)	4.79 (1.2)
fuse	1604	5.45 (1.24)	4.97 (2.01)	5.52 (1.35)	glass	765	4.75 (1.38)	4.27 (2.07)	5.00 (1.46)
future	1605	6.71 (2.12)	6.48 (2.23)	4.89 (2.56)	glasses	1626	5.93 (1.48)	4.36 (1.85)	5.32 (1.33)
gadget	1606	5.97 (1.48)	4.96 (1.69)	5.71 (1.72)	glaze	1627	6.80 (1.24)	5.10 (2.02)	5.30 (1.49)
gaiety	1607	6.00 (1.41)	4.96 (2.03)	5.32 (1.63)	glide	1628	6.38 (1.32)	4.82 (2.51)	5.89 (2.04)
gain	1608	7.17 (1.32)	5.63 (1.67)	6.37 (1.87)	gloat	1629	4.30 (2.11)	4.52 (2.33)	5.41 (1.78)
galaxy	1609	6.21 (1.26)	5.96 (1.71)	4.29 (2.49)	gloom	188	1.88 (1.23)	3.83 (2.33)	3.55 (2.07)
gallery	1610	6.03 (2.01)	4.07 (2.41)	4.73 (1.87)	glory	189	7.55 (1.68)	6.02 (2.71)	6.85 (2.23)
gallon	1611	5.03 (1.47)	4.63 (1.65)	4.83 (1.39)	gloss	1630	6.00 (1.58)	4.71 (1.72)	4.89 (1.52)
game	760	6.98 (1.97)	5.89 (2.37)	5.70 (1.65)	gnaw	1631	3.73 (1.8)	4.40 (2.21)	4.57 (1.87)
gang	1612	2.59 (1.42)	6.52 (2.49)	3.33 (2.45)	goal	1632	7.12 (1.31)	6.44 (1.96)	6.52 (2.16)
gangrene	181	2.28 (1.91)	5.70 (2.96)	3.36 (2.34)	goat	1633	5.26 (1.75)	4.07 (1.84)	5.47 (1.8)
garbage	182	2.98 (1.96)	5.04 (2.5)	4.24 (2.02)	god	190	8.15 (1.27)	5.95 (2.84)	5.88 (2.89)
garden	761	6.71 (1.74)	4.39 (2.35)	6.02 (1.71)	gold	191	7.54 (1.63)	5.76 (2.79)	5.85 (2.46)
garlic	1613	5.38 (2.29)	4.45 (2.2)	5.34 (1.74)	golf	1634	4.83 (2.63)	3.90 (2.52)	4.83 (2.35)
garment	762	6.07 (1.61)	4.49 (2.5)	5.30 (1.96)	golfer	535	5.61 (1.93)	3.73 (2.26)	5.55 (1.79)
garter	534	6.22 (1.59)	5.47 (2.15)	5.82 (1.62)	good	766	7.47 (1.45)	5.43 (2.85)	6.41 (2.05)
gas	1614	4.43 (1.77)	5.20 (1.88)	4.60 (2.28)	goodness	1635	7.41 (1.6)	4.87 (2.45)	6.29 (1.47)
gate	1615	5.52 (1.15)	4.52 (1.92)	4.73 (2.16)	gorilla	1636	5.56 (1.95)	5.52 (2.42)	4.15 (2.6)
gem	1616	6.65 (1.74)	5.71 (1.99)	5.35 (1.72)	gossip	767	3.48 (2.33)	5.74 (2.38)	3.57 (2.26)
gender	763	5.73 (1.55)	4.38 (2.13)	5.60 (1.84)	govern	1637	4.50 (1.43)	4.53 (1.41)	4.33 (1.73)
genius	1617	7.39 (1.45)	6.11 (1.83)	6.39 (1.99)	government	1638	4.28 (1.89)	5.25 (2)	3.62 (2.08)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
grace	1639	7.00 (1.59)	4.12 (2.12)	5.62 (2.02)	gymnast	515	6.35 (1.79)	5.02 (2.2)	5.31 (1.79)
graduate	192	8.19 (1.13)	7.25 (2.25)	6.94 (2.44)	habit	775	4.11 (1.77)	3.95 (2.11)	4.30 (1.79)
grafitti	1640	4.82 (2.11)	5.32 (1.83)	5.11 (2.13)	hair	1660	5.56 (1.95)	4.48 (2.36)	5.41 (2.06)
grapes	1641	6.61 (2.25)	4.67 (2.56)	5.40 (2.19)	hairdryer	561	4.84 (0.84)	3.71 (1.75)	5.57 (1.27)
grass	768	6.12 (1.44)	4.14 (2.11)	5.44 (1.36)	hairpin	776	5.26 (1.45)	3.27 (2.41)	5.05 (1.32)
grateful	193	7.37 (0.97)	4.58 (2.14)	6.18 (1.77)	ham	1661	5.31 (1.93)	4.07 (1.94)	4.96 (1.32)
grave	1642	2.18 (1.54)	4.78 (2.85)	2.52 (1.89)	hamburger	777	6.27 (1.5)	4.55 (2.14)	5.32 (1.21)
gravy	1643	6.00 (1.74)	4.63 (1.96)	5.43 (1.48)	hammer	198	4.88 (1.16)	4.58 (2.02)	4.75 (1.88)
greed	769	3.51 (1.93)	4.71 (2.26)	4.88 (2.03)	hand	778	5.95 (1.38)	4.40 (2.07)	5.35 (1.49)
green	194	6.18 (2.05)	4.28 (2.46)	4.82 (2.05)	handicap	779	3.29 (1.69)	3.81 (2.27)	4.00 (2.24)
greet	770	7.00 (1.52)	5.27 (2.31)	5.95 (2.07)	handicapped	1662	3.23 (1.56)	4.55 (1.89)	3.40 (1.85)
grenade	771	3.60 (1.88)	5.70 (2.52)	4.29 (2.5)	hands	1663	5.93 (1.51)	5.21 (1.87)	5.74 (1.26)
greyhound	1644	5.42 (1.78)	4.39 (1.65)	4.81 (1.87)	handsome	199	7.93 (1.47)	5.95 (2.73)	5.19 (2.22)
grief	195	1.69 (1.04)	4.78 (2.84)	3.50 (2.35)	hang	1664	4.33 (2.01)	5.40 (2.42)	4.33 (1.79)
grieve	1645	2.27 (1.36)	5.60 (2.39)	2.90 (1.93)	haphazard	780	4.02 (1.41)	4.07 (2.18)	4.29 (1.67)
grime	772	3.37 (1.34)	3.98 (2.29)	4.47 (1.28)	happiness	1665	7.96 (1.4)	6.56 (2.21)	6.70 (1.64)
grin	773	7.40 (1.87)	5.27 (2.64)	6.00 (1.86)	happy	200	8.21 (1.82)	6.49 (2.77)	6.63 (2.43)
grind	1646	5.08 (1.92)	5.27 (2.27)	5.12 (1.56)	harass	1666	2.48 (1.18)	5.64 (2.28)	3.93 (2.62)
gripe	774	3.14 (1.56)	5.00 (2.19)	4.67 (1.79)	harassment	1667	2.41 (1.62)	5.75 (2.55)	3.16 (2.08)
groceries	1647	5.90 (1.75)	3.77 (2.25)	6.23 (2.16)	hard	781	5.22 (1.82)	5.12 (2.19)	5.59 (1.63)
groom	1648	6.53 (1.8)	5.23 (2.34)	5.90 (1.95)	hardship	782	2.45 (1.61)	4.76 (2.55)	4.22 (2.4)
gross	1649	3.57 (1.93)	4.82 (2.34)	4.36 (1.89)	harp	1668	6.37 (1.61)	4.41 (2.5)	4.86 (1.71)
ground	1650	5.36 (0.95)	4.14 (1.78)	5.14 (1.65)	harsh	1669	2.93 (1.64)	5.60 (1.85)	4.83 (2.28)
grove	1651	5.60 (1.28)	4.47 (1.48)	5.23 (0.97)	harvest	1670	5.74 (1.55)	4.37 (1.79)	5.76 (1.5)
grovel	1652	3.50 (1.77)	4.46 (2.35)	4.00 (2.51)	haste	1671	4.15 (1.7)	5.04 (2.49)	4.19 (1.86)
growl	1653	4.11 (2.06)	5.93 (1.9)	5.52 (2.74)	hasten	1672	4.90 (0.99)	4.90 (1.95)	4.67 (1.52)
guaranteed	1654	7.14 (1.94)	4.93 (2.64)	6.39 (2.11)	hat	783	5.46 (1.36)	4.10 (2)	5.39 (1.43)
guillotine	196	2.48 (2.11)	6.56 (2.54)	4.64 (2.63)	hate	201	2.12 (1.72)	6.95 (2.56)	5.05 (2.95)
guilt	1655	2.14 (1.33)	5.36 (2.95)	2.96 (1.83)	hatred	202	1.98 (1.92)	6.66 (2.56)	4.30 (2.76)
guilty	197	2.63 (1.98)	6.04 (2.76)	3.09 (2.22)	haunt	1673	3.48 (1.96)	6.60 (1.94)	3.72 (1.9)
guitar	1656	6.86 (1.66)	5.82 (2.52)	5.29 (1.8)	haven	1674	6.97 (1.92)	4.00 (2.38)	5.37 (2.09)
gulf	1657	5.90 (1.76)	4.93 (1.73)	5.48 (1.6)	hawk	536	5.88 (1.62)	4.39 (2.29)	5.50 (1.69)
gun	593	3.47 (2.48)	7.02 (1.84)	3.53 (2.72)	hay	784	5.24 (1.24)	3.95 (2.58)	5.37 (1.64)
guzzle	1658	4.77 (1.72)	5.23 (1.92)	4.77 (1.57)	head	1675	6.63 (1.43)	5.70 (2.2)	6.03 (1.56)
gym	1659	6.21 (1.87)	6.14 (1.96)	5.89 (1.95)	headache	203	2.02 (1.06)	5.07 (2.74)	3.60 (1.98)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
headlight	785	5.24 (1.51)	3.81 (2.22)	4.88 (1.47)	honest	210	7.70 (1.43)	5.32 (1.92)	6.24 (2.13)
heal	786	7.09 (1.46)	4.77 (2.23)	5.79 (1.8)	honesty	1696	7.88 (1.24)	5.25 (2.45)	6.88 (1.5)
health	204	6.81 (1.88)	5.13 (2.35)	5.83 (1.91)	honey	792	6.73 (1.7)	4.51 (2.25)	5.44 (1.47)
heart	787	7.39 (1.53)	6.34 (2.25)	5.49 (2.11)	honor	211	7.66 (1.24)	5.90 (1.83)	6.70 (2.04)
heat	1676	4.30 (1.95)	5.70 (2.02)	4.17 (1.86)	hooker	793	3.34 (2.31)	4.93 (2.82)	4.73 (2.48)
heaven	205	7.30 (2.39)	5.61 (3.2)	6.15 (2.56)	hope	794	7.05 (1.96)	5.44 (2.47)	5.52 (2.2)
heavy	1677	3.69 (1.38)	4.58 (1.93)	4.10 (1.62)	hopeful	212	7.10 (1.46)	5.78 (2.09)	5.41 (1.92)
heir	1678	6.57 (1.55)	5.22 (1.95)	5.78 (1.95)	horrible	1697	2.28 (1.98)	5.75 (2.41)	3.04 (1.95)
helium	1679	5.29 (2.17)	4.71 (2.55)	4.85 (1.96)	horror	213	2.76 (2.25)	7.21 (2.14)	4.63 (2.7)
hell	788	2.24 (1.62)	5.38 (2.62)	3.24 (2.36)	horse	214	5.89 (1.55)	3.89 (2.17)	4.67 (1.6)
helpless	206	2.20 (1.42)	5.34 (2.52)	2.27 (1.83)	hose	1698	5.25 (1.6)	4.82 (2.09)	5.36 (2.02)
hen	1680	5.10 (0.98)	3.79 (1.9)	5.10 (1.63)	hospital	215	5.04 (2.45)	5.98 (2.54)	4.69 (2.16)
herbal	1681	5.92 (1.29)	3.62 (1.97)	5.29 (1)	hostage	216	2.20 (1.8)	6.76 (2.63)	2.83 (2.32)
herd	1682	5.00 (1.29)	4.50 (1.8)	4.73 (1.74)	hostile	217	2.73 (1.5)	6.44 (2.28)	4.85 (2.58)
hero	1683	7.59 (1.72)	6.41 (1.8)	5.90 (1.95)	hotel	795	6.00 (1.77)	4.80 (2.53)	5.12 (1.84)
heroin	789	4.36 (2.73)	5.11 (2.72)	4.80 (2.54)	hour	1699	5.10 (1.23)	4.21 (1.77)	4.25 (1.71)
herring	1684	5.43 (1.25)	4.37 (1.71)	5.20 (1.16)	house	563	7.26 (1.72)	4.56 (2.41)	6.08 (2.12)
hide	207	4.32 (1.91)	5.28 (2.51)	3.40 (2.12)	howl	1700	4.90 (1.88)	5.27 (2.48)	4.43 (1.87)
high	1685	6.62 (1.98)	5.56 (2.09)	5.38 (1.84)	hub	1701	5.52 (1.58)	4.00 (2.11)	5.07 (1.71)
highway	562	5.92 (1.72)	5.16 (2.44)	5.66 (1.81)	hug	218	8.00 (1.55)	5.35 (2.76)	5.79 (2.41)
hiker	1686	5.79 (1.74)	5.00 (2.16)	4.68 (2.29)	huge	1702	5.39 (1.97)	5.75 (2.14)	5.68 (2.5)
hill	1687	5.32 (1.41)	3.75 (2.11)	5.00 (1.64)	humane	796	6.89 (1.7)	4.50 (1.91)	5.70 (1.91)
hinder	790	3.81 (1.42)	4.12 (2.01)	4.21 (1.54)	humble	219	5.86 (1.42)	3.74 (2.33)	4.76 (2.25)
hippotamus	1688	6.41 (1.62)	4.36 (2.15)	4.93 (1.56)	humiliate	797	2.24 (1.34)	6.14 (2.42)	2.60 (1.94)
hire	1689	5.77 (1.67)	5.63 (2.04)	4.80 (1.79)	humiliation	1703	1.90 (1.27)	6.97 (1.97)	2.20 (1.42)
history	208	5.24 (2.01)	3.93 (2.29)	4.83 (2.08)	humor	220	8.56 (0.81)	5.50 (2.91)	6.08 (2.14)
hit	594	4.33 (2.35)	5.73 (2.09)	4.88 (2.01)	hunger	1704	2.76 (1.38)	5.36 (2.31)	3.93 (1.65)
hitch	1690	5.03 (1.21)	4.25 (2.17)	5.00 (1.15)	hungry	221	3.58 (2.01)	5.13 (2.44)	4.68 (2.05)
hive	1691	3.18 (1.52)	5.82 (2.02)	4.21 (1.95)	hunter	1705	4.90 (2.4)	5.86 (2.4)	5.70 (2.48)
hobby	1692	7.24 (1.48)	5.36 (2.59)	7.24 (1.83)	hurl	1706	3.12 (1.72)	5.40 (1.76)	4.36 (2.14)
hockey	1693	5.39 (1.45)	5.00 (2.21)	5.18 (1.49)	hurricane	798	3.34 (2.12)	6.83 (2.06)	3.07 (2.18)
holiday	791	7.55 (2.14)	6.59 (2.73)	6.30 (2.17)	hurt	222	1.90 (1.26)	5.85 (2.49)	3.33 (2.22)
holy	1694	6.36 (1.93)	5.36 (2.15)	4.68 (2.25)	hydrant	564	5.02 (0.93)	3.71 (1.75)	5.53 (1.3)
home	209	7.91 (1.63)	4.21 (2.94)	5.90 (2.3)	hymn	1707	6.13 (2.08)	4.33 (2.73)	5.30 (1.82)
homeless	1695	2.06 (1.13)	4.59 (2.28)	3.31 (1.99)	hysterical	1708	5.29 (3.31)	7.36 (2.04)	4.18 (2.39)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
ice	1709	5.92 (1.55)	4.67 (2.28)	5.04 (1.4)	inhabitant	813	5.05 (1.34)	3.95 (1.97)	5.37 (1.43)
icebox	799	4.95 (1)	4.17 (2.11)	5.05 (1.05)	inject	1723	3.34 (1.74)	5.54 (2.43)	3.89 (2.1)
idea	800	7.00 (1.34)	5.86 (1.81)	6.26 (2)	injection	1724	3.03 (1.59)	6.55 (1.8)	3.48 (1.81)
identity	801	6.57 (1.99)	4.95 (2.24)	6.40 (1.89)	injure	1725	2.55 (1.89)	5.53 (2.27)	3.86 (2.33)
idiot	223	3.16 (1.91)	4.21 (2.47)	3.18 (2.13)	injury	595	2.49 (1.76)	5.69 (2.06)	3.57 (1.62)
idol	802	6.12 (1.86)	4.95 (2.14)	5.37 (2.17)	ink	229	5.05 (0.81)	3.84 (1.88)	4.61 (2.13)
ignite	1710	6.16 (2.03)	6.27 (1.87)	5.87 (1.76)	innocence	1726	6.54 (1.95)	4.79 (2.42)	5.75 (2.29)
ignorance	803	3.07 (2.25)	4.39 (2.49)	4.41 (2.38)	innocent	814	6.51 (1.34)	4.21 (1.99)	5.28 (2.08)
ignore	1711	3.15 (1.96)	4.67 (2.37)	3.56 (2.45)	insane	815	2.85 (1.94)	5.83 (2.45)	4.12 (2.23)
illness	804	2.48 (1.4)	4.71 (2.24)	3.21 (1.85)	insect	816	4.07 (2.16)	4.07 (2.46)	4.56 (2.47)
imagine	805	7.32 (1.52)	5.98 (2.14)	7.07 (1.99)	insecure	230	2.36 (1.33)	5.56 (2.34)	2.33 (1.95)
immature	806	3.39 (1.7)	4.15 (1.96)	4.85 (2.2)	insist	1727	4.64 (1.95)	5.18 (2.2)	4.93 (2.02)
immoral	807	3.50 (2.16)	4.98 (2.48)	4.66 (2.33)	insolent	231	4.35 (1.76)	5.38 (2.37)	4.50 (2.06)
impair	808	3.18 (1.86)	4.04 (2.14)	4.09 (2.18)	inspire	232	6.97 (1.91)	5.00 (2.53)	6.34 (2.11)
impart	1712	4.97 (1.12)	3.86 (2.03)	5.45 (1.59)	inspired	233	7.15 (1.85)	6.02 (2.67)	6.67 (2.31)
impatient	1713	3.63 (1.9)	5.57 (2.47)	4.23 (2.25)	instrument	1728	6.68 (1.74)	5.32 (2.48)	5.71 (2.03)
impede	1714	4.19 (1.74)	4.90 (1.99)	3.90 (1.63)	insult	817	2.29 (1.33)	6.00 (2.46)	3.62 (2.05)
impose	1715	3.66 (1.59)	5.28 (1.79)	4.45 (2.06)	intellect	818	6.82 (1.96)	4.75 (2.5)	6.30 (1.98)
impotent	224	2.81 (1.92)	4.57 (2.59)	3.43 (2.43)	intelligence	1729	7.93 (1.36)	6.21 (2.04)	6.25 (2.17)
impressed	225	7.33 (1.84)	5.42 (2.65)	5.51 (2.21)	intent	1730	5.00 (1.41)	4.73 (1.66)	4.96 (1.71)
improve	226	7.65 (1.16)	5.69 (2.15)	6.08 (2.25)	intercourse	819	7.36 (1.57)	7.00 (2.07)	6.40 (1.78)
incentive	809	7.00 (1.72)	5.69 (2.45)	5.93 (2.02)	interest	234	6.97 (1.54)	5.66 (2.26)	5.88 (1.78)
incubator	1716	4.17 (1.98)	4.86 (1.94)	4.17 (1.93)	interested	1731	6.58 (1.45)	5.42 (2.37)	5.95 (1.68)
indict	1717	4.29 (1.56)	4.93 (2.21)	4.36 (2.09)	intimate	821	7.61 (1.51)	6.98 (2.21)	5.86 (2.29)
indifferent	810	4.61 (1.28)	3.18 (1.85)	4.84 (1.67)	intoxicated	1732	5.00 (2.54)	6.19 (2.18)	4.28 (2.4)
industry	227	5.30 (1.61)	4.47 (2.43)	4.91 (2.04)	intruder	822	2.77 (2.32)	6.86 (2.41)	4.00 (2.68)
infant	811	6.95 (2.08)	5.05 (2.66)	5.67 (2.48)	invade	1733	3.41 (1.66)	6.00 (2.42)	4.25 (2.68)
infatuated	1718	5.77 (1.77)	6.27 (2.09)	4.77 (1.9)	invader	823	3.05 (2.01)	5.50 (2.4)	4.00 (2.6)
infatuation	516	6.73 (2.08)	7.02 (1.87)	4.90 (2.28)	invent	1734	6.73 (2.07)	6.20 (2.04)	6.47 (2.26)
infect	1719	2.42 (1.17)	5.38 (2.25)	3.42 (1.96)	invest	824	5.93 (2.1)	5.12 (2.42)	5.88 (1.95)
infection	228	1.66 (1.34)	5.03 (2.77)	3.61 (2.64)	iron	565	4.90 (1.02)	3.76 (2.06)	5.10 (1.27)
inferior	812	3.07 (1.57)	3.83 (2.05)	2.78 (2.08)	irony	1735	6.17 (1.67)	4.66 (2.21)	4.83 (1.79)
infest	1720	2.85 (1.41)	5.19 (1.9)	3.62 (1.65)	irritate	235	3.11 (1.67)	5.76 (2.15)	5.03 (2.05)
inform	1721	5.92 (0.95)	4.57 (2.11)	5.26 (1.66)	irritated	1736	2.23 (1.55)	6.13 (2.24)	4.37 (1.97)
ingest	1722	5.00 (1.64)	5.27 (1.74)	5.03 (1.85)	island	1737	7.59 (1.8)	6.14 (2.18)	6.21 (1.78)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
isolation	1738	2.17 (1.6)	4.70 (2.67)	2.60 (1.65)	key	833	5.68 (1.62)	3.70 (2.18)	4.98 (2.04)
issue	1739	4.13 (1.57)	5.40 (2.24)	4.63 (1.87)	kick	834	4.31 (2.18)	4.90 (2.35)	5.50 (1.93)
item	825	5.26 (0.86)	3.24 (2.08)	5.26 (1.67)	kid	1757	6.42 (1.61)	5.35 (2.06)	6.03 (2.14)
ivy	1740	4.11 (1.71)	5.11 (2.11)	4.67 (1.84)	kidnap	1758	2.62 (1.83)	6.31 (2.43)	3.08 (2.59)
jaguar	1741	6.62 (1.78)	5.50 (2.27)	4.79 (2.15)	kidney	1759	4.86 (1.92)	4.48 (2.29)	4.22 (1.97)
jail	236	1.95 (1.27)	5.49 (2.67)	3.81 (2.71)	kids	835	6.91 (1.99)	5.27 (2.36)	5.07 (2.03)
jar	1742	5.21 (0.56)	3.75 (2.17)	5.75 (1.48)	killer	244	1.89 (1.39)	7.86 (1.89)	4.54 (3.11)
jealous	1743	2.86 (1.73)	6.48 (2.18)	3.72 (2.3)	kind	245	7.59 (1.67)	4.46 (2.55)	5.95 (1.93)
jealousy	237	2.51 (1.83)	6.36 (2.66)	3.80 (2.41)	kindness	246	7.82 (1.39)	4.30 (2.62)	5.67 (2.63)
jeans	1744	6.43 (1.77)	4.74 (2.49)	5.89 (1.67)	king	247	7.26 (1.67)	5.51 (2.77)	7.38 (2.1)
jelly	238	5.66 (1.44)	3.70 (2.29)	4.53 (1.77)	kiss	248	8.26 (1.54)	7.32 (2.03)	6.93 (2.28)
jellyfish	1745	4.76 (2.47)	6.04 (2.2)	4.29 (2.05)	kitten	517	6.86 (2.13)	5.08 (2.45)	6.86 (2.01)
jeopardy	1746	6.45 (1.57)	5.18 (2.45)	4.93 (1.86)	knee	1760	5.03 (1.1)	4.40 (1.67)	5.20 (1.37)
jerk	1747	2.86 (1.66)	5.21 (2.25)	4.64 (1.93)	knife	596	3.62 (2.18)	5.80 (2)	4.12 (2.18)
jet	1748	6.29 (1.7)	5.89 (2.04)	4.89 (2.01)	knitting	1761	4.94 (2.44)	2.88 (2.27)	5.41 (2)
jewel	239	7.00 (1.72)	5.38 (2.54)	5.59 (2.19)	knob	1762	5.14 (1.19)	4.00 (1.98)	5.29 (1.12)
job	1749	5.83 (2.15)	5.20 (2.23)	5.70 (1.82)	knot	836	4.64 (1.36)	4.07 (2.15)	4.67 (1.65)
joke	826	8.10 (1.36)	6.74 (1.84)	6.15 (1.86)	know	1763	6.93 (1.72)	5.77 (1.92)	6.90 (2.29)
jolly	827	7.41 (1.92)	5.57 (2.8)	6.39 (1.72)	knowledge	249	7.58 (1.32)	5.92 (2.32)	6.78 (2.41)
journal	828	5.14 (1.49)	4.05 (1.96)	5.26 (1.42)	label	1764	4.36 (1.08)	3.96 (1.99)	4.83 (1.76)
joy	240	8.60 (0.71)	7.22 (2.13)	6.28 (2.15)	lack	1765	3.21 (1.37)	4.21 (2.47)	4.11 (1.97)
joyful	241	8.22 (1.22)	5.98 (2.54)	6.60 (1.8)	lad	1766	5.44 (1.13)	4.06 (1.54)	5.28 (1.37)
judge	1750	4.53 (1.7)	5.10 (2.02)	3.67 (1.9)	ladder	1767	5.06 (1.09)	4.97 (2.12)	5.10 (1.45)
judgment	1751	4.41 (1.78)	5.78 (1.91)	4.38 (2.2)	lake	250	6.82 (1.54)	3.95 (2.44)	4.90 (2.1)
jug	829	5.24 (1.65)	3.88 (2.15)	5.05 (1.62)	lamb	837	5.89 (1.73)	3.36 (2.18)	4.91 (1.96)
jugs	1752	5.65 (1.98)	5.23 (2.41)	5.00 (1.6)	lame	1768	3.66 (1.82)	3.69 (2)	4.83 (1.63)
juice	1753	6.79 (1.88)	5.69 (1.54)	5.66 (1.23)	lamp	838	5.41 (1)	3.80 (2.12)	5.27 (1.61)
jumble	1754	4.41 (1.89)	5.30 (2.35)	4.30 (1.98)	land	1769	5.66 (1.42)	4.16 (2.11)	5.53 (1.59)
jungle	1755	5.77 (2.05)	5.85 (1.49)	4.81 (1.55)	lane	1770	5.39 (1.42)	4.64 (1.79)	5.54 (1.2)
justice	242	7.78 (1.35)	5.47 (2.54)	6.47 (2.26)	lantern	839	5.57 (1.19)	4.05 (2.28)	5.07 (1.82)
keg	1756	6.21 (2.23)	5.37 (2.1)	5.33 (1.92)	laugh	1771	8.36 (1.13)	7.39 (2.01)	6.64 (1.87)
kerchief	830	5.11 (1.33)	3.43 (2.08)	5.25 (1.28)	laughter	251	8.45 (1.08)	6.75 (2.5)	6.45 (2.45)
kerosene	243	4.80 (1.59)	4.34 (2.51)	4.63 (1.99)	lava	1772	4.43 (2.15)	5.57 (2.64)	3.54 (1.99)
ketchup	831	5.60 (1.35)	4.09 (2.08)	5.29 (1.81)	lavish	840	6.21 (2.03)	4.93 (2.4)	5.64 (1.61)
kettle	832	5.22 (0.91)	3.22 (2.23)	5.00 (1.4)	law	1773	5.10 (2.37)	4.25 (2.43)	4.11 (2.08)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
lawn	841	5.24 (0.86)	4.00 (1.79)	5.37 (1.11)	lion	518	5.57 (1.99)	6.20 (2.16)	4.12 (2.33)
lawsuit	842	3.37 (2)	4.93 (2.44)	3.92 (2.02)	lips	1791	7.13 (1.5)	6.27 (1.87)	5.60 (2.11)
lawyer	1774	5.70 (2.27)	5.85 (2.61)	4.89 (2.81)	liquor	1792	4.93 (2.43)	5.66 (2.19)	4.86 (2.33)
lazy	843	4.38 (2.02)	2.65 (2.06)	4.07 (1.93)	listen	1793	5.93 (1.16)	4.45 (1.7)	5.76 (1.46)
leader	844	7.63 (1.59)	6.27 (2.18)	7.88 (1.6)	listless	259	4.12 (1.73)	4.10 (2.31)	4.14 (1.73)
leak	1775	3.07 (1.41)	4.63 (1.96)	3.87 (1.68)	liter	1794	5.00 (1.74)	4.33 (2.18)	5.37 (1.84)
learn	252	7.15 (1.49)	5.39 (2.22)	6.34 (2.17)	litter	1795	3.96 (2.22)	4.77 (1.95)	4.85 (1.76)
lease	1776	4.45 (1.36)	4.70 (1.7)	4.70 (1.56)	lively	849	7.20 (1.97)	5.53 (2.9)	6.09 (1.95)
leave	1777	3.83 (1.44)	4.36 (1.91)	4.36 (2)	lizard	1796	5.23 (1.83)	5.13 (1.57)	4.97 (1.5)
leaves	1778	6.07 (1.93)	3.80 (2.44)	4.80 (2.06)	location	1797	5.36 (0.68)	4.11 (1.83)	5.39 (1.34)
ledge	1779	4.13 (1.31)	5.35 (1.96)	4.10 (1.37)	locker	850	5.19 (1.31)	3.38 (2.13)	5.36 (1.87)
leg	1780	5.71 (1.12)	4.50 (2.12)	5.36 (1.66)	loneliness	260	1.61 (1.02)	4.56 (2.97)	2.51 (2.27)
legend	845	6.39 (1.34)	4.88 (1.76)	5.54 (1.64)	lonely	261	2.17 (1.76)	4.51 (2.68)	2.95 (2.12)
legs	1781	5.93 (1.36)	4.69 (2.35)	5.97 (1.67)	loosen	1798	5.59 (1.76)	4.50 (2.41)	6.11 (2.11)
leisurely	253	6.88 (1.81)	3.80 (2.38)	5.15 (1.9)	lose	1799	2.81 (1.64)	4.93 (2.42)	3.33 (2.17)
leopard	1782	5.97 (1.69)	5.57 (2.18)	4.57 (1.7)	loser	851	2.25 (1.48)	4.95 (2.57)	3.02 (2.17)
leprosy	254	2.09 (1.4)	6.29 (2.23)	4.00 (2.3)	loss	1800	1.89 (1.25)	5.78 (2.95)	2.38 (2.3)
lesbian	597	4.67 (2.45)	5.12 (2.27)	5.35 (2.2)	lost	852	2.82 (1.83)	5.82 (2.62)	2.86 (1.64)
lesson	1783	5.07 (1.63)	4.04 (1.75)	5.04 (1.48)	lotion	1801	5.90 (2.04)	5.52 (2.21)	5.70 (1.86)
letter	846	6.61 (1.59)	4.90 (2.37)	5.73 (1.48)	lottery	853	6.57 (2.04)	5.36 (2.45)	4.81 (2.11)
liar	1784	2.41 (1.64)	6.38 (2.47)	3.34 (2.42)	loud	1802	4.77 (1.73)	6.10 (1.6)	5.07 (1.44)
liberty	255	7.98 (1.22)	5.60 (2.65)	6.29 (2.44)	lounge	1803	6.60 (1.38)	3.97 (2.33)	5.90 (1.54)
lice	256	2.31 (1.78)	5.00 (2.26)	3.95 (2.29)	louse	262	2.81 (1.92)	4.98 (2.03)	3.57 (2.26)
lick	1785	6.27 (1.51)	5.70 (2.12)	5.90 (1.49)	love	263	8.72 (0.7)	6.44 (3.35)	7.11 (2.56)
lid	1786	5.03 (0.5)	3.66 (1.88)	5.14 (1.62)	loved	264	8.64 (0.71)	6.38 (2.68)	6.62 (2.53)
lie	257	2.79 (1.92)	5.96 (2.63)	3.30 (2.42)	loving	1804	8.28 (0.88)	6.21 (2.45)	6.29 (1.9)
life	258	7.27 (1.88)	6.02 (2.62)	5.72 (2.51)	lower	1805	4.00 (1.58)	4.36 (1.91)	4.18 (1.63)
lightbulb	566	5.61 (1.28)	4.10 (2.02)	5.82 (1.56)	loyal	265	7.55 (1.9)	5.16 (2.42)	6.91 (2.23)
lighthouse	847	5.89 (2.08)	4.41 (2.44)	5.25 (2.02)	luck	1806	7.41 (1.46)	6.45 (1.73)	4.97 (2.37)
lightning	598	4.57 (2.66)	6.61 (1.77)	3.67 (2.19)	lucky	266	8.17 (1.06)	6.53 (2.34)	6.05 (2.25)
like	1787	7.52 (1.72)	6.63 (2.2)	5.41 (2.69)	luggage	1807	6.33 (1.4)	5.70 (1.6)	5.23 (1.77)
limb	1788	5.03 (0.81)	4.53 (1.53)	5.30 (1.12)	lump	854	4.16 (2.34)	4.80 (2.82)	4.32 (2.18)
limber	848	5.68 (1.49)	4.57 (2.26)	5.34 (1.84)	lunch	1808	7.21 (1.84)	5.43 (2.46)	6.10 (2.4)
limp	1789	3.71 (1.88)	4.29 (1.78)	4.43 (2.18)	lung	1809	5.21 (1.32)	4.50 (1.73)	4.64 (1.62)
linger	1790	4.44 (1.39)	4.92 (1.63)	5.12 (1.69)	lurk	1810	4.20 (1.54)	5.73 (1.96)	4.00 (1.86)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
luscious	267	7.50 (1.08)	5.34 (2.51)	5.68 (1.84)	mascot	1828	6.29 (1.6)	5.10 (2.61)	5.39 (1.93)
lust	519	7.12 (1.62)	6.88 (1.85)	5.49 (2.27)	mask	1829	5.23 (1.31)	4.58 (1.75)	5.42 (1.72)
luxury	268	7.88 (1.49)	4.75 (2.91)	6.40 (2.45)	massacre	867	2.28 (1.74)	5.33 (2.63)	3.50 (2.26)
machine	855	5.09 (1.67)	3.82 (2.4)	5.23 (2.06)	mastectomy	1830	2.89 (1.81)	5.11 (2.17)	3.75 (1.62)
mad	856	2.44 (1.72)	6.76 (2.26)	5.86 (2.2)	masterful	271	7.09 (1.78)	5.20 (2.85)	7.18 (2.56)
madman	857	3.91 (2.49)	5.56 (2.78)	4.79 (2.55)	mastery	1831	6.69 (1.61)	5.62 (1.92)	7.28 (1.67)
madness	1811	4.37 (2.19)	5.80 (2.62)	4.53 (2.33)	masturbate	599	5.45 (2.02)	5.67 (2.18)	5.63 (2.25)
magazine	1812	5.79 (1.7)	4.82 (1.98)	4.93 (1.84)	matador	1832	5.10 (1.82)	5.57 (1.93)	4.89 (1.45)
maggot	269	2.06 (1.47)	5.28 (2.96)	4.03 (2.09)	mate	1833	6.87 (1.74)	6.30 (2.34)	5.48 (2.2)
magical	858	7.46 (1.64)	5.95 (2.36)	5.73 (2.19)	material	868	5.26 (1.29)	4.05 (2.34)	5.12 (1.45)
magnet	1813	5.31 (0.93)	4.72 (2.02)	5.21 (1.63)	math	1834	3.81 (2.13)	4.62 (2.57)	4.44 (2.34)
maid	1814	5.56 (1.36)	5.20 (1.8)	5.72 (1.49)	me	1835	8.06 (1.29)	5.97 (2.66)	7.88 (1.6)
mail	859	6.88 (1.74)	5.63 (2.36)	5.67 (1.79)	meal	1836	7.59 (1.43)	5.79 (1.97)	6.41 (1.66)
makeup	1815	5.64 (2.09)	4.48 (2.39)	5.59 (2.08)	measles	272	2.74 (1.97)	5.06 (2.44)	4.13 (2.16)
malaria	860	2.40 (1.38)	4.40 (2.54)	3.22 (1.9)	meat	1837	6.66 (1.8)	5.41 (1.97)	6.03 (1.61)
male	1816	5.84 (1.7)	4.90 (2.7)	5.32 (1.68)	meddle	1838	4.07 (2)	5.10 (1.88)	4.87 (2)
malice	270	2.69 (1.84)	5.86 (2.75)	4.74 (2.72)	medicine	869	5.67 (2.06)	4.40 (2.36)	4.70 (1.91)
malnutrition	1817	2.06 (1.27)	5.68 (2.26)	4.00 (2.13)	meek	273	3.87 (1.69)	3.80 (2.13)	3.67 (2.23)
malt	1818	6.17 (1.69)	4.83 (2.24)	5.38 (1.82)	melody	870	7.07 (1.79)	4.98 (2.52)	5.46 (1.78)
man	537	6.73 (1.7)	5.24 (2.31)	5.53 (2.23)	melt	1839	5.28 (1.94)	4.93 (1.94)	4.86 (1.9)
mane	1819	5.40 (1.38)	4.33 (2.2)	4.90 (1.52)	member	1840	5.83 (1.51)	5.03 (1.94)	5.30 (1.37)
mangle	861	3.90 (2.01)	5.44 (2.1)	4.61 (1.84)	memorial	1841	4.68 (2.14)	4.87 (2.38)	4.42 (1.57)
maniac	862	3.76 (2)	5.39 (2.46)	4.22 (2.07)	memories	871	7.48 (1.61)	6.10 (2.1)	5.88 (1.92)
manner	863	5.64 (1.34)	4.56 (1.78)	5.05 (1.83)	memory	274	6.62 (1.5)	5.42 (2.25)	5.11 (2.12)
manor	1820	5.61 (1.1)	4.74 (1.68)	5.41 (1.19)	men	1842	6.66 (1.7)	5.69 (2.24)	6.17 (2.02)
mansion	1821	7.24 (1.99)	6.03 (2.13)	5.86 (1.78)	menace	275	2.88 (1.64)	5.52 (2.45)	4.98 (2.25)
mantel	864	4.93 (1.4)	3.27 (2.23)	4.95 (1.61)	mend	1843	6.17 (1.67)	4.93 (2.18)	5.82 (1.81)
manure	865	3.10 (1.74)	4.17 (2.09)	4.67 (1.36)	menu	1844	6.37 (1.71)	4.77 (2.13)	6.00 (1.78)
map	1822	5.14 (1.64)	4.07 (1.75)	5.28 (2.12)	mercy	1845	5.71 (2.41)	5.43 (2.54)	3.70 (2.72)
margin	1823	4.79 (0.73)	3.61 (1.87)	4.85 (1.03)	merger	1846	5.06 (0.95)	4.31 (1.64)	5.16 (0.95)
market	866	5.66 (1.02)	4.12 (1.83)	5.27 (1.4)	merry	872	7.90 (1.49)	5.90 (2.42)	6.64 (1.66)
marrow	1824	4.46 (1.5)	4.26 (1.93)	4.41 (1.62)	messy	873	3.15 (1.73)	3.34 (2.37)	4.75 (2.15)
marry	1825	6.68 (2.36)	6.14 (2.76)	5.18 (2.54)	metal	874	4.95 (1.17)	3.79 (1.96)	5.38 (1.4)
marsh	1826	4.67 (1.44)	4.15 (2.18)	4.67 (1.24)	meteor	1847	5.57 (2.16)	5.83 (2.78)	3.33 (1.77)
marvel	1827	7.06 (1.77)	5.20 (2.31)	4.93 (2.07)	method	875	5.56 (1.76)	3.85 (2.58)	5.67 (1.58)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
midnight	1848	7.18 (1.7)	6.50 (2.1)	5.96 (1.93)	morgue	285	1.92 (1.32)	4.84 (2.96)	3.61 (1.94)
mighty	276	6.54 (2.19)	5.61 (2.38)	7.23 (2.11)	moron	1864	3.77 (2.13)	5.70 (1.58)	4.60 (2.24)
mildew	277	3.17 (1.36)	4.08 (1.79)	4.40 (1.79)	morsel	1865	5.47 (2.32)	4.83 (2.13)	5.17 (2.18)
mile	1849	5.24 (2.18)	4.69 (2.12)	5.31 (2)	mosquito	885	2.80 (1.91)	4.78 (2.72)	4.51 (2.15)
military	1850	5.54 (1.9)	5.35 (2)	4.65 (2.3)	moss	1866	4.59 (1.32)	3.57 (2.03)	4.54 (1.35)
milk	876	5.95 (2.16)	3.68 (2.57)	5.83 (1.5)	motel	1867	4.43 (2.17)	4.93 (2.14)	4.32 (1.91)
millionaire	278	8.03 (1.42)	6.14 (2.7)	6.97 (2.4)	moth	1868	4.66 (1.59)	4.00 (2.19)	5.00 (1.87)
mind	877	6.68 (1.84)	5.00 (2.68)	6.37 (2.19)	mother	286	8.39 (1.15)	6.13 (2.71)	5.74 (2.37)
mingle	1851	6.66 (1.33)	5.88 (1.83)	5.97 (1.6)	motorcycle	1869	5.72 (2.68)	6.46 (2.19)	5.14 (2.21)
miracle	279	8.60 (0.71)	7.65 (1.67)	5.35 (2.58)	mountain	287	6.59 (1.66)	5.49 (2.43)	5.46 (2.36)
mischief	878	5.57 (2.05)	5.76 (1.95)	5.56 (1.88)	mourn	1870	1.80 (1.73)	5.87 (2.6)	2.87 (1.91)
miserable	1852	1.55 (1.15)	5.00 (2.68)	2.43 (1.85)	mouth	1871	5.46 (1.53)	4.79 (2.48)	5.93 (1.86)
misery	879	1.93 (1.6)	5.17 (2.69)	2.55 (1.45)	movie	288	6.86 (1.81)	4.93 (2.54)	5.00 (1.79)
missiles	1853	3.17 (1.81)	6.69 (1.91)	3.14 (2.03)	mucus	886	3.34 (2.29)	3.41 (2.17)	4.80 (1.83)
missles	600	3.33 (2.26)	5.94 (2.21)	3.25 (2.31)	mud	1872	4.81 (1.88)	3.81 (1.96)	5.30 (1.77)
mistake	880	2.86 (1.79)	5.18 (2.42)	3.86 (2.42)	muddy	887	4.44 (2.07)	4.13 (2.13)	4.73 (1.77)
mitten	1854	5.59 (1.25)	3.78 (2.24)	4.63 (1.36)	muffin	888	6.57 (2.04)	4.76 (2.42)	5.51 (1.63)
mob	1855	3.27 (1.66)	6.11 (2.1)	3.32 (2)	muffle	1873	4.47 (1.43)	4.90 (1.84)	4.53 (1.78)
mobility	881	6.83 (1.79)	5.00 (2.18)	6.43 (1.48)	mug	1874	5.42 (1.84)	4.61 (2.19)	5.13 (1.93)
model	1856	7.10 (1.78)	6.00 (2.51)	4.86 (1.92)	mule	1875	5.15 (1.57)	4.27 (1.78)	5.08 (1.72)
modest	280	5.76 (1.28)	3.98 (2.24)	4.96 (2.16)	murderer	289	1.53 (0.96)	7.47 (2.18)	3.77 (3.06)
moist	1857	5.52 (1.68)	4.55 (2.38)	5.03 (1.43)	muscular	290	6.82 (1.63)	5.47 (2.2)	6.58 (2.28)
mold	882	3.55 (1.7)	4.07 (1.98)	4.33 (1.83)	museum	889	5.54 (1.86)	3.60 (2.13)	5.32 (1.68)
molest	1858	1.90 (1.35)	5.20 (2.86)	3.23 (2.36)	mushroom	567	5.78 (2.22)	4.72 (2.33)	5.52 (2.1)
moment	281	5.76 (1.65)	3.83 (2.29)	4.81 (1.92)	music	291	8.13 (1.09)	5.32 (3.19)	6.39 (2.44)
money	282	7.59 (1.4)	5.70 (2.66)	6.25 (2.33)	musician	1876	7.21 (1.52)	6.10 (2.16)	5.93 (1.79)
monk	1859	5.18 (1.85)	3.39 (2.18)	4.89 (1.89)	mutation	890	3.91 (2.44)	4.84 (2.52)	4.07 (2.1)
monopoly	1860	6.40 (1.94)	5.24 (1.6)	5.70 (1.95)	mutilate	292	1.82 (1.45)	6.41 (2.94)	3.41 (2.71)
month	283	5.15 (1.09)	4.03 (1.77)	4.85 (1.14)	mutilation	1877	1.97 (1.27)	6.07 (2.5)	2.97 (2.01)
mood	1861	5.60 (1.38)	4.73 (1.78)	5.60 (1.65)	mystic	891	6.00 (2.21)	4.84 (2.57)	5.52 (1.93)
moody	883	3.20 (1.58)	4.18 (2.38)	4.39 (1.71)	myth	1878	5.86 (2.14)	5.50 (2.67)	4.82 (1.36)
moon	1862	6.74 (1.32)	4.60 (1.9)	4.80 (1.81)	nab	1879	4.16 (1.57)	5.32 (1.44)	5.20 (1.8)
moral	884	6.20 (1.85)	4.49 (2.28)	5.90 (2.2)	nag	1880	2.90 (1.64)	5.40 (2.16)	4.27 (1.98)
morale	1863	6.57 (1.75)	5.00 (2.74)	5.75 (2.01)	nail	1881	5.14 (1.79)	4.57 (2.01)	5.25 (1.29)
morbid	284	2.87 (2.14)	5.06 (2.68)	4.34 (2.5)	naked	892	6.34 (2.42)	5.80 (2.8)	6.00 (2.05)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
name	893	5.55 (2.24)	4.25 (2.47)	5.16 (2.08)	novice	1898	4.28 (1.58)	3.69 (1.95)	4.62 (1.95)
napkin	1882	4.84 (1.1)	4.00 (2.12)	5.13 (1.56)	nozzle	1899	4.83 (1.42)	4.60 (1.57)	5.00 (1.7)
narcotic	894	4.29 (2.3)	4.93 (2.57)	4.44 (2.43)	nuclear	1900	3.25 (2.2)	5.86 (2.56)	3.41 (2.14)
nasty	895	3.58 (2.38)	4.89 (2.5)	5.00 (2.17)	nude	520	6.82 (1.63)	6.41 (2.09)	5.96 (2.29)
nation	1883	6.17 (1.91)	4.60 (2.24)	5.27 (2.33)	nudist	1901	5.89 (1.86)	6.18 (2.09)	5.39 (1.88)
natural	896	6.59 (1.57)	4.09 (2.37)	5.57 (1.69)	nuisance	908	3.27 (1.86)	4.49 (2.69)	4.36 (1.73)
nature	293	7.65 (1.37)	4.37 (2.51)	4.95 (2.72)	number	1902	5.55 (1.15)	4.34 (2.22)	5.24 (2.01)
necklace	1884	6.39 (1.69)	4.87 (2.09)	5.50 (1.8)	nun	909	4.93 (1.89)	2.93 (1.8)	4.93 (1.69)
nectar	294	6.90 (1.53)	3.89 (2.48)	4.54 (2.06)	nurse	538	6.08 (2.08)	4.84 (2.04)	4.84 (2.2)
needle	897	3.82 (1.73)	5.36 (2.89)	3.95 (2.17)	nursery	910	5.73 (2.3)	4.04 (2.74)	5.18 (2.23)
neglect	898	2.63 (1.64)	4.83 (2.31)	3.85 (2.29)	oasis	1903	7.79 (1.42)	5.04 (2.87)	6.11 (1.91)
nerves	1885	4.28 (1.75)	6.31 (2.18)	4.72 (2.05)	oath	1904	5.57 (1.52)	4.80 (1.69)	5.07 (2.1)
nervous	899	3.29 (1.47)	6.59 (2.07)	3.56 (1.73)	obesity	911	2.73 (1.85)	3.87 (2.82)	3.74 (2.45)
nestle	1886	6.63 (1.59)	4.10 (1.99)	5.97 (1.73)	obey	912	4.52 (1.88)	4.23 (1.72)	4.26 (2.4)
net	1887	4.80 (1.65)	4.83 (2.02)	4.93 (1.87)	object	1905	5.20 (1.04)	4.04 (2.18)	5.29 (1.57)
neurotic	900	4.45 (2.23)	5.13 (2.76)	4.41 (2.05)	obnoxious	913	3.50 (2.18)	4.74 (2.42)	5.39 (2.2)
news	901	5.30 (1.67)	5.17 (2.11)	4.60 (1.88)	obscene	914	4.23 (2.3)	5.04 (2.3)	4.48 (1.91)
newspaper	1888	5.52 (1.29)	4.42 (1.86)	5.26 (1.37)	obsessed	1906	3.60 (1.96)	6.24 (1.86)	4.24 (2.23)
nice	902	6.55 (2.44)	4.38 (2.69)	5.58 (2.2)	obsession	915	4.52 (2.13)	6.41 (2.13)	4.77 (2.38)
niece	1889	6.33 (1.71)	4.60 (2.08)	5.40 (1.59)	obstinate	1907	4.60 (1.59)	3.97 (1.75)	4.86 (1.25)
night	1890	6.06 (1.95)	5.94 (2.41)	4.74 (2.11)	ocean	297	7.12 (1.72)	4.95 (2.79)	5.53 (2.75)
nightmare	295	1.91 (1.54)	7.59 (2.23)	3.68 (2.76)	octopus	1908	6.03 (1.59)	5.20 (1.85)	4.87 (2.01)
nine	1891	5.07 (0.66)	4.04 (2.12)	5.18 (1.36)	odd	916	4.82 (2.04)	4.27 (2.46)	4.77 (1.89)
nip	1892	4.59 (1.6)	5.04 (1.81)	5.04 (1.19)	odor	1909	2.52 (1.57)	5.13 (2.1)	4.23 (1.96)
nipple	903	6.27 (1.81)	5.56 (2.55)	5.57 (2)	offend	917	2.76 (1.5)	5.56 (2.06)	3.73 (2.03)
noise	1893	4.93 (1.9)	4.86 (2.3)	4.61 (1.95)	office	568	5.24 (1.59)	4.08 (1.92)	5.59 (1.89)
noisy	904	5.02 (2.02)	6.38 (1.78)	4.93 (1.76)	officer	1910	3.72 (1.89)	5.55 (2.26)	4.07 (2.7)
nonchalant	296	4.74 (1.11)	3.12 (1.93)	4.31 (1.54)	oil	1911	4.60 (1.48)	4.72 (2.28)	4.72 (2.02)
nonsense	905	4.61 (1.63)	4.17 (2.02)	4.90 (1.55)	old	1912	3.31 (1.89)	3.50 (1.95)	3.29 (1.8)
noon	1894	6.30 (1.54)	3.65 (1.96)	5.08 (1.67)	omelet	1913	6.48 (1.85)	4.52 (1.9)	5.40 (1.5)
noose	906	3.76 (1.64)	4.39 (2.08)	4.17 (1.92)	omit	1914	4.19 (1.47)	4.00 (1.98)	4.73 (2.29)
nose	1895	4.71 (1.51)	4.32 (1.91)	4.93 (1.63)	onion	1915	4.43 (1.91)	4.60 (2.27)	4.97 (1.16)
nosey	1896	3.97 (1.72)	4.48 (1.95)	4.63 (1.9)	opera	1916	4.84 (2.28)	3.97 (2.43)	5.07 (1.87)
nourish	907	6.46 (1.69)	4.29 (2.51)	5.80 (1.62)	opinion	298	6.28 (1.45)	4.89 (2.46)	5.53 (1.93)
novel	1897	6.07 (1.62)	4.61 (2.3)	5.82 (1.7)	opportunity	1917	7.41 (1.52)	6.47 (1.83)	6.59 (1.68)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
oppose	1918	4.14 (1.43)	5.29 (1.82)	5.14 (2.29)	panic	601	3.12 (1.84)	7.02 (2.02)	3.20 (1.67)
optimism	918	6.95 (2.24)	5.34 (2.58)	6.61 (2.06)	pant	1938	4.61 (1.64)	5.14 (2.16)	4.86 (2.01)
optimistic	1919	7.59 (1.32)	5.83 (2.24)	7.00 (1.51)	pantry	1939	6.58 (1.69)	4.57 (2.1)	5.63 (2.16)
option	919	6.49 (1.31)	4.74 (2.23)	6.34 (1.8)	pantyhose	1940	5.86 (1.78)	5.07 (1.98)	5.29 (1.86)
orange	1920	6.47 (1.66)	4.97 (2.28)	5.31 (2.04)	paper	303	5.20 (1.21)	2.50 (1.85)	4.47 (1.67)
orangutan	1921	6.59 (1.68)	4.64 (2.23)	4.68 (1.44)	paradise	304	8.72 (0.6)	5.12 (3.38)	6.03 (2.79)
orchestra	299	6.02 (1.89)	3.52 (2.29)	5.17 (2.14)	paralysis	926	1.98 (1.44)	4.73 (2.83)	2.56 (1.82)
ordeal	1922	3.77 (1.31)	4.92 (1.75)	4.42 (1.42)	parch	1941	3.27 (1.78)	4.72 (1.94)	4.25 (1.96)
organ	1923	5.24 (1.57)	4.54 (1.86)	4.96 (1.75)	parlor	1942	5.40 (1.28)	3.83 (1.74)	5.47 (1.11)
orgasm	920	8.32 (1.31)	8.10 (1.45)	6.83 (2.18)	parrot	1943	6.94 (1.61)	5.37 (2.13)	4.53 (2.03)
orphan	1924	2.29 (1.6)	5.35 (1.82)	3.87 (1.86)	part	927	5.11 (1.78)	3.82 (2.24)	4.75 (1.59)
ounce	1925	5.50 (1.07)	4.41 (1.94)	4.97 (1.45)	party	305	7.86 (1.83)	6.69 (2.84)	5.83 (2.46)
outdoors	521	7.47 (1.8)	5.92 (2.55)	6.27 (2.24)	passage	928	5.28 (1.44)	4.36 (2.13)	5.02 (1.62)
outlet	1926	5.52 (1.53)	3.97 (2.16)	5.55 (1.92)	passion	306	8.03 (1.27)	7.26 (2.57)	6.13 (2.24)
outrage	921	3.52 (2.12)	6.83 (2.26)	5.26 (2.72)	passive	1944	4.17 (1.97)	3.69 (2.16)	4.17 (2.27)
outstanding	922	7.75 (1.75)	6.24 (2.59)	6.40 (2.29)	pasta	524	6.69 (1.64)	4.94 (2.04)	5.80 (1.47)
oven	1927	5.71 (1.33)	3.78 (1.76)	5.41 (1.67)	pastry	1945	7.18 (1.83)	5.79 (2.32)	5.64 (2.04)
overcast	923	3.65 (1.61)	3.46 (1.92)	4.20 (1.79)	patent	307	5.29 (1.08)	3.50 (1.84)	4.90 (1.79)
overweight	1928	2.00 (1.21)	5.52 (2.44)	4.19 (2.77)	path	1946	5.74 (1.32)	4.84 (2.21)	5.97 (1.68)
overwhelmed	300	4.19 (2.61)	7.00 (2.37)	3.89 (2.58)	patient	929	5.29 (1.89)	4.21 (2.37)	4.90 (2.31)
owe	1929	3.25 (1.78)	5.68 (2.16)	3.07 (1.72)	patio	1947	5.83 (1.42)	3.75 (2.07)	5.21 (1.83)
owl	522	5.80 (1.31)	3.98 (1.87)	5.82 (1.62)	patriot	930	6.71 (1.69)	5.17 (2.53)	5.90 (1.54)
pacify	1930	6.10 (1.73)	4.23 (2.1)	5.33 (2.01)	patriotic	1948	6.62 (2)	5.54 (2.23)	6.35 (2)
packet	1931	4.69 (1.23)	4.27 (2.25)	4.73 (1.66)	patriotism	1949	6.85 (1.94)	5.56 (2.76)	6.52 (2.23)
pact	1932	6.20 (1.3)	5.20 (2.06)	6.30 (1.39)	pea	1950	5.26 (0.93)	3.45 (2.05)	5.39 (1.61)
pail	1933	5.04 (1.23)	3.64 (1.87)	5.43 (1.75)	peace	308	7.72 (1.75)	2.95 (2.55)	5.45 (2.84)
pain	301	2.13 (1.81)	6.50 (2.49)	3.71 (2.53)	peaceful	1951	7.77 (1.28)	2.87 (2.39)	5.70 (1.93)
paint	924	5.62 (1.72)	4.10 (2.36)	5.75 (1.71)	peanut	1952	5.56 (2.1)	3.74 (2.18)	5.11 (1.8)
painting	1934	6.59 (1.65)	5.00 (2.04)	5.81 (1.49)	pear	1953	6.52 (1.65)	3.96 (2.38)	5.37 (1.92)
palace	302	7.19 (1.78)	5.10 (2.75)	5.69 (2.17)	pecan	1954	5.68 (1.72)	4.04 (1.93)	5.07 (1.49)
pale	1935	3.17 (1.47)	3.50 (1.71)	4.32 (1.22)	pee	1955	5.41 (2.06)	4.84 (2.22)	6.06 (1.93)
pamphlet	925	4.79 (1.05)	3.62 (2.02)	4.63 (1.48)	peep	1956	4.64 (1.95)	4.71 (1.9)	4.79 (1.85)
pan	1936	5.46 (1.23)	4.54 (1.9)	5.54 (1.45)	penalty	931	2.83 (1.56)	5.10 (2.31)	3.95 (1.97)
pancakes	523	6.08 (1.83)	4.06 (2.13)	5.76 (1.61)	pencil	309	5.22 (0.68)	3.14 (1.9)	4.78 (1.73)
pang	1937	4.27 (1.8)	5.90 (2.14)	4.48 (1.4)	penis	932	5.90 (1.72)	5.54 (2.63)	5.92 (2.54)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
penny	1957	5.06 (1.7)	3.52 (1.88)	5.06 (1.53)	plan	1975	6.47 (1.36)	4.77 (2.49)	6.55 (1.53)
penthouse	933	6.81 (1.64)	5.52 (2.49)	6.52 (1.82)	plane	539	6.43 (1.98)	6.14 (2.39)	4.78 (2.19)
people	525	7.33 (1.7)	5.94 (2.09)	6.14 (2.02)	planet	1976	5.69 (1.6)	4.34 (2.16)	4.47 (1.54)
perfection	310	7.25 (2.05)	5.95 (2.73)	6.71 (2.26)	plant	316	5.98 (1.83)	3.62 (2.25)	4.71 (2.12)
perfume	934	6.76 (1.48)	5.05 (2.36)	5.93 (1.69)	plate	1977	5.30 (1.68)	4.00 (1.89)	5.55 (1.96)
period	1958	3.80 (1.65)	4.30 (1.86)	3.80 (1.86)	play	1978	8.10 (1.16)	6.93 (1.8)	6.97 (1.5)
perish	1959	2.90 (1.99)	5.30 (2.49)	3.20 (1.92)	plaza	1979	5.59 (1.32)	3.89 (1.93)	5.21 (1.13)
permit	1960	5.47 (2.2)	5.08 (1.92)	5.17 (2.38)	plea	1980	4.04 (1.57)	5.11 (2.01)	3.96 (2.47)
person	311	6.32 (1.74)	4.19 (2.45)	5.35 (2.02)	plead	1981	3.74 (1.55)	5.00 (2.13)	4.06 (2.08)
personality	1961	7.48 (1.5)	5.88 (2.29)	5.50 (2.34)	pleased	1982	7.79 (1.75)	5.68 (2.63)	6.29 (2.03)
pervert	312	2.79 (2.12)	6.26 (2.61)	4.72 (2.83)	pleasure	317	8.28 (0.92)	5.74 (2.81)	6.15 (2.31)
pessimism	1962	3.10 (2.15)	4.74 (2.14)	4.48 (2)	pledge	1983	5.62 (1.65)	4.92 (2.1)	4.50 (2.2)
pest	313	3.13 (1.82)	5.62 (2.15)	5.29 (2.13)	plod	1984	4.74 (1.09)	3.80 (1.81)	4.77 (1.5)
pester	1963	2.77 (1.45)	5.77 (2.13)	4.60 (1.65)	poach	1985	3.76 (1.41)	5.24 (1.84)	4.59 (1.72)
pet	935	6.79 (2.32)	5.10 (2.59)	5.85 (2.28)	poem	1986	6.48 (1.94)	4.59 (2.37)	5.34 (1.65)
phase	936	5.17 (0.79)	3.98 (1.82)	4.65 (1.72)	poet	1987	6.46 (1.55)	4.67 (2.37)	4.81 (1.71)
photo	1964	6.77 (1.5)	5.63 (1.81)	5.70 (1.21)	poetry	318	5.86 (1.91)	4.00 (2.85)	5.31 (1.81)
picket	1965	4.97 (1.02)	4.45 (1.84)	5.55 (1.68)	poise	1988	6.90 (1.6)	5.33 (2.04)	6.63 (1.63)
picnic	1966	7.07 (1.25)	5.18 (2.16)	5.93 (1.56)	poison	319	1.98 (1.44)	6.05 (2.82)	3.10 (2.44)
pie	314	6.41 (1.89)	4.20 (2.4)	5.35 (1.78)	poker	1989	6.31 (1.85)	5.64 (2.13)	5.46 (1.29)
pier	1967	6.61 (1.56)	5.32 (2.48)	5.71 (1.51)	pole	1990	5.13 (0.72)	4.35 (1.33)	5.32 (1.22)
pierce	1968	4.35 (1.84)	5.81 (2.18)	4.97 (2.01)	police	1991	4.17 (2.15)	6.27 (2.13)	3.30 (1.97)
pig	937	5.07 (1.97)	4.20 (2.42)	5.34 (1.88)	policy	1992	4.50 (1.55)	4.30 (2)	4.03 (1.81)
pigeon	1969	4.93 (2.06)	4.92 (2.08)	5.68 (2.04)	politeness	320	7.18 (1.5)	3.74 (2.37)	5.74 (1.7)
pill	1970	4.81 (1.28)	4.63 (1.71)	5.13 (1.66)	politics	1993	3.97 (1.88)	5.48 (2.1)	4.00 (2.15)
pillow	315	7.92 (1.4)	2.97 (2.52)	4.56 (2.17)	pollen	1994	3.31 (1.57)	4.69 (2.22)	3.91 (1.65)
pilot	1971	6.11 (1.62)	5.07 (2.43)	5.39 (2.5)	pollute	321	1.85 (1.11)	6.08 (2.42)	4.92 (2.51)
pin	1972	4.50 (1.46)	5.17 (1.82)	4.77 (1.72)	pollution	1995	2.43 (1.79)	5.77 (2.37)	3.66 (2.36)
pinch	938	3.83 (1.7)	4.59 (2.1)	4.76 (1.73)	pond	1996	6.14 (1.51)	4.10 (2.14)	5.38 (1.59)
pint	1973	5.41 (1.74)	5.04 (1.73)	5.18 (1.49)	pony	1997	6.00 (1.74)	5.07 (2)	5.29 (1.49)
pipe	1974	5.52 (1.74)	4.69 (2)	5.66 (1.67)	pool	1998	7.70 (1.37)	5.90 (2.52)	5.93 (2.1)
pistol	939	4.20 (2.58)	6.15 (2.19)	5.05 (2.77)	poor	1999	2.28 (1.73)	5.21 (2.86)	2.68 (2.39)
pity	940	3.37 (1.57)	3.72 (2.02)	4.12 (1.82)	popcorn	2000	6.93 (1.61)	4.89 (2.06)	5.42 (1.33)
pizza	526	6.65 (2.23)	5.24 (2.09)	5.69 (1.9)	porch	2001	6.14 (1.53)	3.82 (2.21)	5.39 (1.29)
plain	941	4.39 (1.46)	3.52 (2.05)	4.71 (1.68)	pork	2002	6.20 (1.73)	4.77 (2.47)	5.30 (1.78)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
porpoise	2003	5.93 (1.34)	4.37 (1.88)	5.07 (1.41)	promotion	332	8.20 (1.15)	6.44 (2.58)	6.79 (2.28)
position	2004	5.74 (1.18)	5.10 (2.29)	6.13 (1.61)	propeller	2022	5.43 (1.55)	4.43 (2.7)	5.33 (1.24)
positive	2005	8.07 (1.1)	5.57 (2.18)	6.19 (1.83)	proper	2023	5.93 (2.02)	3.56 (1.6)	5.04 (2.19)
poster	942	5.34 (1.75)	3.93 (2.56)	4.91 (1.87)	prose	2024	5.56 (1.28)	4.41 (1.8)	5.26 (1.35)
potential	2006	7.00 (1.83)	5.93 (2.39)	6.50 (2.29)	prostitute	2025	4.24 (2.49)	5.60 (2.27)	5.64 (1.93)
pout	2007	2.83 (1.86)	5.07 (1.75)	4.10 (2.06)	protected	333	7.29 (1.79)	4.09 (2.77)	5.80 (2.54)
poverty	322	1.67 (0.9)	4.87 (2.66)	3.21 (2.21)	proud	334	8.03 (1.56)	5.56 (3.01)	6.74 (2.73)
power	323	6.54 (2.21)	6.67 (1.87)	7.28 (2.35)	pry	2026	3.47 (1.48)	5.03 (2.3)	4.33 (1.99)
powerful	324	6.84 (1.8)	5.83 (2.69)	7.19 (2.52)	pub	2027	6.35 (1.92)	5.48 (2.2)	6.19 (1.66)
prairie	325	5.75 (1.43)	3.41 (2.17)	4.62 (2.13)	puddle	2028	5.07 (1.65)	4.14 (1.82)	4.68 (1.87)
praise	2008	7.24 (1.88)	6.28 (2.07)	6.59 (2.29)	pulp	2029	5.00 (2.27)	4.03 (1.9)	5.00 (1.46)
pray	2009	6.23 (2.01)	4.57 (2.25)	5.40 (2.28)	pulpit	2030	5.45 (1.45)	4.11 (1.87)	5.11 (0.92)
prayer	2010	6.24 (2.34)	5.14 (2.52)	5.64 (2.48)	pun	2031	6.20 (1.67)	4.60 (1.98)	5.27 (1.41)
preach	2011	5.41 (2.44)	5.89 (2.36)	4.31 (2.24)	pungent	948	3.95 (2.09)	4.24 (2.17)	4.78 (1.52)
prefer	2012	6.00 (1.86)	4.50 (1.78)	5.47 (1.55)	punish	2032	1.92 (1.06)	6.69 (2.22)	2.65 (2.08)
pregnant	2013	4.30 (2.69)	6.37 (2.86)	4.11 (2.74)	punishment	335	2.22 (1.41)	5.93 (2.4)	3.50 (2.43)
preoccupied	2014	4.03 (1.82)	4.93 (1.96)	4.31 (2.14)	punk	2033	4.37 (2.2)	4.59 (2.31)	5.23 (2.45)
present	943	6.95 (1.85)	5.12 (2.39)	5.83 (1.78)	puppy	336	7.56 (1.9)	5.85 (2.78)	5.51 (2.39)
president	2015	5.20 (2.17)	5.63 (2.14)	4.77 (2.6)	purify	2034	6.63 (1.63)	4.90 (2.11)	5.63 (1)
press	2016	4.81 (0.93)	4.61 (1.82)	4.58 (1.2)	pus	602	2.86 (1.91)	4.82 (2.06)	4.35 (1.82)
pressure	944	3.38 (1.61)	6.07 (2.26)	3.45 (2.07)	pushy	2035	3.30 (1.7)	6.00 (1.76)	3.73 (2.1)
prestige	945	7.26 (1.9)	5.86 (2.08)	6.90 (1.96)	putrid	337	2.38 (1.71)	5.74 (2.26)	4.89 (2.09)
pretty	326	7.75 (1.26)	6.03 (2.22)	5.50 (1.97)	python	949	4.05 (2.48)	6.18 (2.25)	4.52 (2.56)
price	2017	3.83 (1.26)	4.87 (1.91)	4.10 (2.01)	quality	950	6.25 (1.59)	4.48 (2.12)	5.64 (1.59)
prick	946	3.98 (1.73)	4.70 (2.59)	4.47 (1.88)	quarrel	338	2.93 (2.06)	6.29 (2.56)	4.02 (2.16)
pride	327	7.00 (2.11)	5.83 (2.48)	7.06 (2.15)	quart	951	5.39 (2.01)	3.59 (2.51)	5.20 (1.86)
priest	328	6.42 (2)	4.41 (2.71)	4.88 (2.07)	queen	952	6.44 (1.43)	4.76 (2.18)	5.49 (2.12)
prince	2018	7.03 (1.71)	6.07 (2.19)	5.59 (2.34)	quench	2036	5.52 (1.86)	3.93 (1.65)	5.71 (1.76)
princess	2019	7.08 (1.66)	5.46 (2.22)	6.32 (2.07)	quick	953	6.64 (1.61)	6.57 (1.78)	6.57 (1.91)
prison	329	2.05 (1.34)	5.70 (2.56)	4.20 (2.58)	quiet	339	5.58 (1.83)	2.82 (2.13)	4.42 (2.3)
privacy	330	5.88 (1.5)	4.12 (1.83)	5.66 (1.78)	quilt	2037	6.38 (1.76)	4.31 (1.85)	5.48 (1.53)
problem	2020	2.74 (1.61)	5.81 (2.22)	4.04 (2.53)	quit	2038	2.46 (1.4)	4.82 (2.52)	3.64 (2.45)
procedure	2021	4.55 (1.66)	4.68 (2.13)	4.71 (1.72)	rabbit	527	6.57 (1.92)	4.02 (2.19)	6.08 (1.72)
profit	331	7.63 (1.3)	6.68 (1.78)	5.85 (2.47)	rabies	340	1.77 (0.97)	6.10 (2.62)	3.85 (2.34)
progress	947	7.73 (1.34)	6.02 (2.58)	6.76 (2.05)	race	2039	6.07 (2)	5.43 (2.47)	5.17 (1.98)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
rack	2040	6.19 (1.78)	5.15 (2.92)	5.37 (1.82)	refugee	2062	3.65 (1.44)	5.04 (2.01)	3.69 (2.43)
radar	2041	4.54 (1.79)	5.57 (2.01)	4.64 (1.37)	refute	2063	4.57 (1.65)	5.07 (2.05)	4.90 (1.54)
radiant	954	6.73 (2.17)	5.39 (2.82)	5.61 (2.17)	regime	2064	4.88 (1.45)	4.88 (1.96)	4.97 (2.19)
radiator	955	4.67 (1.05)	4.02 (1.94)	4.81 (1.38)	regret	2065	2.26 (1.44)	5.67 (2.17)	3.23 (1.65)
radio	341	6.73 (1.47)	4.78 (2.82)	5.28 (1.85)	regretful	348	2.28 (1.42)	5.74 (2.32)	3.43 (2.52)
raft	2042	5.72 (1.13)	5.04 (2.08)	4.89 (1.23)	reign	2066	5.82 (1.74)	4.93 (2.34)	6.57 (2.28)
rag	2043	3.70 (1.51)	3.70 (2.11)	4.22 (2.17)	rejected	349	1.50 (1.09)	6.37 (2.56)	2.72 (2.58)
rage	342	2.41 (1.86)	8.17 (1.4)	5.68 (3.01)	rejection	2067	1.77 (1.22)	6.00 (2.48)	2.17 (1.49)
rain	569	5.08 (2.51)	3.65 (2.35)	4.78 (1.68)	relate	2068	6.04 (1.7)	4.33 (2.5)	5.41 (1.58)
rainbow	343	8.14 (1.23)	4.64 (2.88)	4.72 (2.37)	relax	2069	7.87 (1.7)	2.47 (2)	6.37 (2.75)
raise	2044	6.67 (1.99)	5.63 (2.37)	5.77 (1.76)	relaxed	350	7.00 (1.77)	2.39 (2.13)	5.55 (1.9)
rally	2045	6.23 (1.79)	6.50 (2.06)	5.57 (1.81)	relent	2070	4.30 (1.27)	4.74 (1.83)	4.15 (1.88)
ramble	2046	4.23 (1.87)	4.53 (2.36)	4.47 (1.74)	relic	2071	5.76 (1.23)	5.16 (1.82)	5.84 (1.49)
rancid	956	4.34 (2.28)	5.04 (2.27)	4.59 (1.86)	relief	2072	6.81 (1.78)	4.17 (1.97)	5.60 (1.79)
randy	2047	5.77 (1.28)	4.71 (2.16)	5.13 (1.94)	religion	2073	5.07 (2.21)	5.85 (1.79)	5.30 (2.43)
rape	344	1.25 (0.91)	6.81 (3.17)	2.97 (2.94)	rely	2074	5.27 (1.17)	4.66 (2.02)	4.38 (2.29)
rash	2048	2.54 (1.79)	5.43 (2.28)	3.68 (2.18)	remorse	2075	2.48 (1.55)	5.66 (2.26)	3.31 (2.19)
rat	345	3.02 (1.66)	4.95 (2.36)	4.55 (2.14)	remove	2076	4.13 (1.59)	4.73 (2)	4.70 (1.76)
rattle	346	5.03 (1.23)	4.36 (2.18)	4.17 (1.56)	render	2077	4.50 (1.33)	4.65 (1.83)	4.85 (1.67)
raw	2049	4.32 (1.68)	5.04 (2.16)	5.22 (1.5)	rent	2078	4.16 (1.21)	5.04 (1.1)	4.76 (1.88)
razor	957	4.81 (2.16)	5.36 (2.44)	4.91 (1.95)	repent	2079	4.93 (2.39)	5.11 (2.67)	4.21 (2.59)
react	2050	5.63 (1)	5.87 (1.74)	5.53 (1.74)	repentant	351	5.53 (1.86)	4.69 (1.98)	5.42 (2.06)
ready	2051	6.23 (1.26)	5.23 (2)	6.55 (1.79)	report	2080	4.11 (1.75)	4.18 (2.61)	4.29 (2.12)
realize	2052	6.25 (1.43)	5.26 (1.97)	5.30 (1.98)	reptile	958	4.77 (2)	5.18 (2.19)	4.77 (2.02)
reap	2053	5.50 (2.01)	4.89 (1.91)	5.43 (1.93)	repulsed	2081	2.48 (1.6)	5.93 (2.07)	4.10 (1.72)
rebuff	2054	5.00 (1.97)	4.64 (2.37)	4.86 (1.69)	rescue	352	7.70 (1.24)	6.53 (2.56)	6.45 (2.29)
recede	2055	4.19 (1.02)	4.08 (1.76)	4.62 (1.17)	resent	959	3.76 (1.9)	4.47 (2.12)	4.46 (2.09)
recipe	2056	6.70 (1.53)	5.60 (1.87)	6.10 (1.4)	reserved	353	4.88 (1.83)	3.27 (2.05)	4.30 (1.93)
red	570	6.41 (1.61)	5.29 (2.04)	5.78 (1.59)	resign	2082	3.47 (1.63)	4.21 (2.1)	4.57 (1.73)
redeem	2057	7.47 (1.28)	5.43 (2.11)	6.20 (1.52)	resist	2083	5.12 (1.76)	5.35 (1.78)	5.80 (1.65)
reef	2058	6.97 (1.72)	5.52 (2.38)	4.97 (1.76)	respect	354	7.64 (1.29)	5.19 (2.39)	6.89 (2.11)
refine	2059	5.50 (1.41)	4.48 (1.7)	5.71 (1.78)	respectful	355	7.22 (1.27)	4.60 (2.67)	5.67 (2.38)
reflection	2060	5.97 (1.83)	4.38 (2.01)	6.10 (1.7)	response	2084	5.67 (1.14)	5.00 (1.94)	4.96 (1.83)
refreshment	347	7.44 (1.29)	4.45 (2.7)	5.00 (1.92)	restaurant	960	6.76 (1.85)	5.41 (2.55)	5.73 (1.41)
refrigerator	2061	6.14 (1.27)	4.66 (1.78)	6.28 (1.79)	retain	2085	5.38 (1.66)	4.57 (2.25)	5.79 (1.93)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
retard	2086	2.89 (2.08)	4.96 (2.19)	3.43 (1.91)	rodeo	2107	5.62 (1.74)	5.00 (2.19)	4.69 (1.49)
retire	2087	6.37 (2.51)	4.70 (2.63)	6.22 (2.44)	role	2108	6.11 (1.31)	4.61 (2.17)	5.68 (1.85)
retreat	2088	4.50 (1.68)	4.43 (2.05)	4.60 (2.18)	rollercoaster	528	8.02 (1.63)	8.06 (1.71)	5.10 (2.76)
reunion	961	6.48 (2.45)	6.34 (2.35)	5.64 (1.95)	romance	2109	7.61 (1.58)	6.90 (2.22)	6.03 (1.96)
reveal	2089	6.29 (1.98)	6.32 (2.04)	5.21 (1.91)	romantic	364	8.32 (1)	7.59 (2.07)	6.08 (2.29)
revere	2090	5.45 (2.05)	4.29 (2.09)	5.04 (1.79)	roof	2110	5.40 (1.5)	4.07 (2.09)	5.27 (2)
reverent	356	5.35 (1.21)	4.00 (1.6)	4.67 (1.68)	room	2111	5.52 (1.12)	3.77 (1.96)	5.52 (1.61)
revert	2091	4.53 (1.61)	4.73 (1.74)	4.23 (1.98)	rope	2112	5.07 (1.41)	4.57 (1.65)	5.00 (1.74)
revise	2092	4.33 (1.75)	4.67 (1.79)	4.93 (1.83)	rot	2113	2.68 (1.87)	5.18 (2.74)	3.07 (1.92)
revive	2093	6.68 (1.95)	5.54 (2.43)	5.58 (2.15)	rotten	365	2.26 (1.37)	4.53 (2.38)	4.32 (2.09)
revolt	357	4.13 (1.78)	6.56 (2.34)	6.18 (2.11)	rough	966	4.74 (2)	5.33 (2.04)	4.81 (1.7)
revolver	962	4.02 (2.44)	5.55 (2.39)	4.39 (2.47)	rower	2114	5.31 (1.31)	4.97 (1.77)	5.47 (0.95)
reward	358	7.53 (1.67)	4.95 (2.62)	6.00 (2.14)	royalty	2115	6.57 (1.79)	5.59 (2.04)	5.76 (2.06)
rhythm	2094	7.06 (1.63)	5.73 (2.07)	6.23 (1.76)	ruby	2116	6.89 (1.34)	5.18 (2.34)	6.07 (1.68)
rich	2095	7.17 (2.2)	5.80 (2.59)	6.57 (1.79)	rude	366	2.50 (2.11)	6.31 (2.47)	4.91 (2.49)
riches	359	7.70 (1.95)	6.17 (2.7)	6.74 (2.43)	rug	2117	4.93 (1.23)	3.63 (1.79)	5.57 (1.43)
riddle	2096	5.93 (1.34)	5.20 (1.77)	4.90 (1.65)	rugby	2118	5.77 (1.33)	5.00 (2.02)	5.03 (1.4)
ridicule	360	3.13 (2.24)	5.83 (2.73)	3.87 (2.7)	ruins	2119	4.84 (2.21)	5.48 (1.86)	4.61 (1.23)
rifle	603	4.02 (2.76)	6.35 (2.04)	4.16 (2.71)	ruler	2120	5.10 (1.7)	4.33 (2.51)	5.78 (2.38)
right	2097	6.45 (1.55)	4.79 (2.18)	6.38 (1.78)	rules	2121	4.23 (1.41)	4.38 (1.52)	3.34 (1.86)
rigid	963	3.66 (2.12)	4.66 (2.47)	4.61 (2.04)	rum	2122	6.00 (2.19)	5.39 (2.5)	4.75 (2.52)
rigor	2098	4.96 (1.82)	5.57 (2.5)	5.18 (2.13)	runner	571	5.67 (1.91)	4.76 (2.4)	5.47 (1.84)
ring	2099	6.33 (1.58)	5.37 (2.17)	4.73 (1.74)	rush	2123	3.97 (2.01)	6.38 (2.24)	3.88 (1.54)
rink	2100	5.70 (1.66)	4.33 (2.06)	5.73 (1.76)	rusty	367	3.86 (1.47)	3.77 (2.16)	4.53 (1.62)
riot	361	2.96 (1.93)	6.39 (2.63)	4.18 (2.47)	rye	2124	5.24 (0.78)	3.96 (2.09)	5.28 (1.74)
risk	2101	4.64 (2.04)	6.54 (2.12)	3.82 (2.23)	sad	368	1.61 (0.95)	4.13 (2.38)	3.45 (2.18)
river	362	6.85 (1.69)	4.51 (2.42)	5.10 (1.86)	sadness	2125	2.21 (1.75)	5.21 (2.44)	2.82 (1.63)
roach	363	2.35 (1.7)	6.64 (2.64)	4.82 (2.94)	safe	967	7.07 (1.9)	3.86 (2.72)	5.81 (2.06)
road	2102	5.53 (1.28)	4.90 (1.65)	5.33 (1.88)	safety	2126	6.70 (1.9)	4.78 (2.55)	5.56 (2.31)
roast	2103	5.80 (1.71)	5.10 (2.14)	5.93 (1.39)	sailboat	529	7.25 (1.71)	4.88 (2.73)	5.86 (1.71)
rob	2104	2.80 (1.67)	6.40 (2.59)	2.80 (1.81)	saint	968	6.49 (1.7)	4.49 (1.9)	5.37 (2.11)
robber	964	2.61 (1.69)	5.62 (2.72)	3.62 (2.38)	salad	369	5.74 (1.62)	3.81 (2.29)	5.47 (1.68)
robbery	2105	2.42 (1.52)	6.90 (2.01)	2.26 (1.55)	salary	2127	6.75 (1.76)	5.85 (2.32)	5.30 (2.11)
robot	2106	5.36 (1.31)	4.71 (2.14)	4.46 (1.97)	sale	2128	7.07 (1.69)	6.00 (2.37)	6.33 (2.06)
rock	965	5.56 (1.38)	4.52 (2.37)	5.15 (2.01)	salon	2129	5.69 (1.69)	4.92 (2.17)	5.35 (1.5)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
salt	2130	5.56 (1.04)	4.54 (2.04)	5.75 (1.22)	scrotum	2148	5.85 (1.38)	5.04 (2.39)	6.00 (1.57)
salute	370	5.92 (1.57)	5.31 (2.23)	5.46 (2.05)	scuff	2149	3.93 (1.64)	5.10 (1.6)	4.43 (2.03)
sand	2131	6.34 (2.04)	4.79 (2.35)	5.83 (1.85)	scum	377	2.43 (1.56)	4.88 (2.36)	4.26 (1.99)
sandwich	2132	6.28 (1.56)	5.59 (2.21)	5.46 (1.9)	scurvy	378	3.19 (2)	4.71 (2.72)	4.48 (2.48)
sapphire	371	7.00 (1.88)	5.00 (2.72)	5.55 (2.24)	sea	2150	7.00 (1.66)	4.83 (2.99)	5.28 (2.02)
satellite	2133	6.10 (1.5)	4.90 (2.08)	5.00 (1.87)	seagull	2151	5.89 (1.91)	4.57 (2.33)	4.93 (1.62)
satire	2134	6.23 (1.91)	5.34 (2.04)	5.62 (1.54)	seal	2152	5.81 (1.44)	5.42 (1.79)	5.58 (1.5)
satisfaction	2135	7.69 (1.42)	6.83 (2.22)	6.76 (1.57)	seasick	379	2.05 (1.2)	5.80 (2.88)	3.41 (2.39)
satisfied	372	7.94 (1.19)	4.94 (2.63)	6.14 (2.37)	seat	380	4.95 (0.98)	2.95 (1.72)	4.84 (1.88)
saucer	2136	5.09 (0.96)	4.41 (1.68)	5.06 (1.19)	secretary	2153	5.76 (1.3)	4.66 (2.04)	5.86 (1.62)
save	969	6.45 (1.93)	4.95 (2.19)	6.00 (1.79)	secure	381	7.57 (1.76)	3.14 (2.47)	5.93 (2.57)
savior	373	7.73 (1.56)	5.80 (3.01)	6.64 (2.18)	security	2154	7.28 (1.51)	4.22 (2.45)	5.53 (2.27)
scalding	970	2.82 (2.12)	5.95 (2.55)	3.82 (2.3)	seduction	2155	7.53 (1.66)	7.43 (1.83)	5.63 (2.5)
scandal	971	3.32 (1.81)	5.12 (2.22)	4.34 (1.73)	seek	2156	5.59 (1.43)	5.12 (1.84)	5.28 (1.78)
scapegoat	972	3.67 (1.65)	4.53 (2.13)	3.52 (1.7)	seize	2157	3.52 (2.1)	6.52 (2.42)	3.26 (2.47)
scar	973	3.38 (1.7)	4.79 (2.11)	3.88 (1.71)	self	2158	7.00 (1.58)	5.46 (2.47)	7.21 (1.96)
scare	2137	3.62 (1.93)	6.56 (2.26)	3.66 (1.81)	selfish	382	2.42 (1.62)	5.50 (2.62)	4.64 (2.31)
scared	604	2.78 (1.99)	6.82 (2.03)	2.94 (2.19)	semen	2159	5.07 (1.72)	5.67 (1.67)	5.57 (1.72)
scarf	2138	5.64 (1.47)	3.46 (1.93)	5.46 (1.56)	sensitive	2160	5.50 (1.87)	4.27 (2.21)	4.55 (1.55)
scary	2139	3.24 (1.83)	6.69 (1.98)	3.66 (2.13)	sentiment	977	5.98 (1.71)	4.41 (2.3)	5.09 (1.46)
scene	2140	5.59 (1.38)	4.93 (1.94)	5.14 (1.22)	sentry	2161	5.00 (1.17)	4.19 (1.74)	5.00 (1.5)
scent	2141	6.30 (1.26)	5.30 (1.9)	5.27 (1.14)	serene	2162	6.90 (1.99)	3.40 (2.43)	5.93 (1.74)
scholar	374	7.26 (1.42)	5.12 (2.46)	6.59 (2.02)	serious	383	5.08 (1.59)	4.00 (1.87)	5.12 (1.65)
school	2142	4.36 (2.13)	4.44 (2.22)	5.00 (2.15)	sermon	2163	5.72 (2.03)	4.45 (2.47)	4.45 (2.34)
science	2143	4.76 (2.28)	4.71 (2.31)	4.82 (2.13)	sever	2164	3.08 (1.68)	5.72 (2.19)	3.76 (1.98)
scientific	2144	5.66 (2)	4.86 (1.94)	5.36 (1.93)	severe	978	3.20 (1.74)	5.26 (2.36)	3.83 (1.91)
scissors	974	5.05 (0.96)	4.47 (1.76)	5.16 (1.84)	sewage	2165	2.61 (2.16)	4.57 (2.4)	4.47 (1.48)
scoff	2145	3.94 (2.29)	5.25 (1.95)	4.78 (1.9)	sex	384	8.05 (1.53)	7.36 (1.91)	5.75 (2.25)
scold	2146	2.81 (1.49)	6.06 (1.95)	3.39 (2.08)	sexy	530	8.02 (1.12)	7.36 (1.91)	6.82 (2.13)
scorch	2147	3.23 (1.99)	4.97 (2.49)	3.90 (1.6)	shadow	385	4.35 (1.23)	4.30 (2.26)	4.19 (1.82)
scorching	975	3.76 (1.83)	5.00 (2.74)	4.10 (2.01)	shaky	2166	3.42 (1.17)	5.08 (1.83)	3.46 (1.45)
scorn	375	2.84 (2.07)	5.48 (2.52)	3.93 (2.64)	shame	2167	2.13 (1.14)	6.33 (2.04)	2.97 (1.73)
scornful	376	3.02 (2.03)	5.04 (2.56)	4.59 (2.18)	shamed	386	2.50 (1.34)	4.88 (2.27)	2.98 (1.94)
scorpion	976	3.69 (2.63)	5.38 (3.08)	3.98 (2.44)	shark	606	3.65 (2.47)	7.16 (1.96)	2.63 (2.16)
scream	605	3.88 (2.07)	7.04 (1.96)	4.75 (2.21)	shawl	2168	5.24 (1.64)	3.90 (2.14)	5.24 (1.77)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
sheep	2169	6.44 (1.63)	3.78 (2.29)	5.41 (1.67)	sister	2192	7.46 (1.77)	5.43 (2.66)	4.93 (2.14)
shelf	2170	5.28 (0.77)	4.22 (1.52)	5.44 (1.32)	sizzle	2193	6.70 (1.42)	5.90 (1.94)	5.80 (1.54)
sheltered	387	5.75 (1.92)	4.28 (1.77)	3.76 (1.91)	skate	2194	6.60 (1.48)	6.33 (1.71)	5.73 (1.86)
shield	2171	6.54 (1.93)	5.36 (2.34)	6.43 (1.99)	skeleton	2195	3.83 (1.97)	4.79 (2.06)	4.39 (2.08)
shine	2172	7.07 (1.46)	5.25 (1.94)	6.29 (1.86)	skeptical	395	4.52 (1.63)	4.91 (1.92)	4.50 (1.61)
ship	388	5.55 (1.4)	4.38 (2.29)	5.12 (2.31)	ski	2196	6.80 (1.9)	6.62 (2.01)	5.21 (1.93)
shock	2173	4.03 (2.25)	7.45 (1.97)	3.34 (2.19)	skier	2197	5.72 (1.89)	5.36 (2.25)	5.75 (1.69)
shoes	2174	6.19 (1.36)	4.52 (2.38)	5.89 (1.95)	skijump	531	7.06 (1.73)	7.06 (2.1)	4.90 (2.32)
shoplifter	2175	2.93 (1.85)	6.00 (2.27)	4.24 (2.34)	skill	2198	6.90 (1.95)	5.70 (2.02)	6.33 (2.38)
shopping	2176	6.48 (2.53)	5.79 (2.62)	6.50 (2.25)	skin	2199	5.55 (1.53)	4.86 (2.31)	5.21 (1.72)
short	2177	4.64 (1.79)	3.75 (2.15)	3.96 (2.24)	skinhead	2200	3.54 (2.25)	4.62 (2.47)	4.19 (1.36)
shotgun	979	4.37 (2.75)	6.27 (1.94)	5.29 (2.67)	skip	2201	6.15 (1.51)	5.70 (2)	5.37 (1.92)
shower	2178	7.04 (1.23)	5.54 (2.27)	6.32 (1.63)	skit	2202	6.44 (1.76)	5.22 (2.26)	5.89 (1.83)
shred	2179	4.46 (1.43)	5.00 (1.87)	4.89 (1.87)	skull	608	4.27 (1.83)	4.75 (1.85)	4.86 (1.62)
shriek	980	3.93 (2.22)	5.36 (2.91)	4.30 (1.86)	sky	572	7.37 (1.4)	4.27 (2.17)	5.16 (2)
shrimp	2180	6.00 (2.3)	4.52 (2.25)	6.45 (2.1)	skyline	2203	6.90 (1.74)	5.28 (2.03)	5.31 (1.97)
shrink	2181	4.00 (1.2)	5.07 (2.05)	3.59 (2.11)	skyscraper	573	5.88 (1.87)	5.71 (2.17)	4.33 (2.36)
shrub	2182	4.92 (0.4)	4.04 (1.7)	5.52 (1.33)	slang	2204	4.67 (1.49)	4.80 (1.71)	5.23 (1.63)
shun	2183	2.97 (1.71)	5.24 (2.25)	3.66 (2)	slap	396	2.95 (1.79)	6.46 (2.58)	4.21 (2.29)
shut	2184	4.53 (1.46)	4.87 (1.85)	4.40 (1.71)	slaughter	397	1.64 (1.18)	6.77 (2.42)	3.82 (2.75)
shy	389	4.64 (1.83)	3.77 (2.29)	3.44 (1.96)	slave	398	1.84 (1.13)	6.21 (2.93)	3.29 (2.76)
sick	607	1.90 (1.14)	4.29 (2.45)	3.04 (1.65)	slayer	2205	4.00 (2.38)	6.24 (2.2)	4.76 (2.65)
sickness	390	2.25 (1.71)	5.61 (2.67)	3.84 (2.5)	sleep	399	7.20 (1.77)	2.80 (2.66)	5.41 (2.41)
sidle	2185	5.29 (1.01)	4.89 (1.4)	5.18 (0.61)	slim	2206	6.97 (1.43)	5.62 (1.72)	5.93 (1.91)
sigh	2186	4.15 (1.75)	2.78 (1.78)	4.44 (1.85)	slime	400	2.68 (1.66)	5.36 (2.63)	4.17 (1.82)
sight	2187	6.58 (1.69)	4.73 (2.23)	5.47 (2.08)	slip	2207	3.59 (1.82)	5.46 (2.43)	3.14 (1.92)
silent	2188	4.79 (1.97)	3.46 (2.19)	4.96 (2.19)	slob	2208	3.12 (1.77)	4.23 (1.8)	4.27 (1.87)
silk	391	6.90 (1.27)	3.71 (2.51)	4.81 (1.93)	slogan	2209	5.83 (1.39)	4.18 (2.07)	5.14 (0.8)
silly	981	7.41 (1.8)	5.88 (2.38)	6.00 (2.09)	slouch	2210	4.07 (1.26)	3.83 (1.89)	4.83 (1.83)
silver	2189	6.85 (1.59)	5.19 (1.86)	5.65 (1.55)	slow	982	3.93 (1.6)	3.39 (2.22)	4.35 (1.61)
simple	2190	6.50 (1.55)	3.73 (2.15)	6.10 (2.02)	sludge	2211	4.00 (1.77)	3.80 (1.69)	4.77 (1.61)
sin	392	2.80 (1.67)	5.78 (2.21)	3.62 (2.29)	slum	401	2.39 (1.25)	4.78 (2.52)	3.83 (2.18)
sinful	393	2.93 (2.15)	6.29 (2.43)	4.24 (2.73)	slush	983	4.66 (1.88)	3.73 (2.23)	4.91 (1.48)
sing	2191	6.77 (2.24)	5.73 (2.1)	5.37 (2.34)	smack	2212	3.50 (1.71)	5.64 (2.3)	4.57 (2.53)
sissy	394	3.14 (1.96)	5.17 (2.57)	3.58 (2.74)	smallpox	402	2.52 (2.08)	5.58 (2.13)	4.29 (2.17)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
smart	2213	7.93 (1.48)	5.90 (2.22)	6.77 (2.18)	soothe	2239	7.58 (1.24)	4.96 (2.62)	6.00 (1.26)
smear	2214	3.92 (1.62)	5.15 (1.78)	4.46 (1.61)	soothe	988	7.30 (1.85)	4.40 (3.08)	5.36 (2.24)
smell	2215	5.20 (1.83)	5.20 (1.89)	5.44 (1.8)	sorrow	2240	2.32 (1.68)	4.48 (2.38)	3.67 (2.18)
smile	2216	8.16 (1.77)	5.93 (2.64)	6.60 (2.22)	sorry	2241	3.62 (2.29)	5.11 (2.35)	3.82 (1.98)
smirk	2217	5.52 (1.84)	4.97 (1.76)	5.55 (1.62)	soul	2242	6.72 (1.33)	4.39 (1.85)	5.71 (1.76)
smoke	2218	3.39 (3.02)	4.48 (2.87)	4.67 (2.48)	soup	2243	6.25 (1.94)	4.32 (2.09)	5.61 (1.85)
smooth	984	6.58 (1.78)	4.91 (2.57)	5.09 (2.09)	sour	989	3.93 (1.98)	5.10 (1.95)	4.64 (1.5)
smudge	2219	4.00 (1.34)	4.43 (1.67)	4.46 (1.32)	spa	2244	7.86 (1.27)	4.82 (2.92)	5.46 (1.95)
snail	2220	4.31 (1.67)	3.86 (2.27)	5.68 (2.04)	space	574	6.78 (1.66)	5.14 (2.54)	5.20 (2.44)
snake	609	3.31 (2.2)	6.82 (2.1)	3.78 (2.05)	spanking	990	3.55 (2.54)	5.41 (2.73)	3.91 (2.51)
snare	2221	4.48 (2.12)	5.41 (1.82)	4.78 (2.03)	speech	2245	4.54 (2.17)	5.68 (2.33)	4.86 (2.73)
snatch	2222	4.66 (2.18)	5.47 (2.16)	4.53 (2.05)	spend	2246	5.60 (2.47)	5.60 (1.87)	5.90 (1.97)
sneakers	2223	6.34 (1.59)	5.07 (2.31)	6.36 (1.5)	sphere	991	5.33 (0.87)	3.88 (1.99)	5.00 (0.92)
sneer	2224	3.76 (1.55)	4.93 (2.27)	4.66 (1.65)	spice	2247	6.21 (1.74)	5.62 (2.34)	5.62 (1.5)
sneeze	2225	4.76 (1.77)	4.96 (2.03)	3.93 (1.68)	spider	610	3.33 (1.72)	5.71 (2.21)	4.75 (2.11)
snob	403	3.36 (1.81)	5.65 (2.36)	5.11 (2.25)	spike	2248	5.34 (1.14)	4.96 (1.62)	5.11 (1.26)
snow	575	7.08 (1.83)	5.75 (2.47)	5.80 (1.97)	spine	2249	5.12 (1.13)	4.48 (2.06)	5.32 (1.46)
snuggle	404	7.92 (1.24)	4.16 (2.8)	5.66 (2.47)	spirit	406	7.00 (1.32)	5.56 (2.62)	5.82 (2.42)
soak	2226	5.38 (1.97)	5.36 (2.51)	5.11 (1.55)	sponge	2250	5.11 (1.15)	3.52 (1.95)	4.96 (1.76)
soap	2227	5.97 (1.64)	4.52 (1.64)	5.97 (1.38)	spoon	2251	5.93 (1.39)	4.15 (2.13)	5.37 (1.67)
soar	2228	6.90 (1.63)	6.17 (2.25)	5.83 (2.21)	sports	2252	6.45 (1.95)	6.23 (2.31)	5.77 (2.13)
sob	2229	2.03 (1.32)	5.86 (2.32)	3.36 (1.5)	spouse	407	7.58 (1.48)	5.21 (2.75)	5.53 (1.97)
soccer	2230	5.90 (1.95)	5.39 (2.3)	5.61 (1.73)	spray	992	5.45 (1.63)	4.14 (2.28)	5.12 (1.43)
social	985	6.88 (1.82)	4.98 (2.59)	5.91 (2.07)	spring	993	7.76 (1.51)	5.67 (2.51)	6.26 (1.98)
society	2231	5.03 (1.3)	4.82 (2.44)	4.39 (2.31)	spur	2253	5.17 (2.17)	5.07 (2.12)	5.50 (1.55)
sock	2232	5.04 (1.14)	3.46 (2.12)	5.57 (1.53)	spurn	2254	4.38 (1.54)	4.38 (2.11)	4.41 (1.52)
soda	2233	6.50 (2.08)	5.77 (2.05)	5.83 (1.95)	squad	2255	5.58 (1.42)	5.19 (1.88)	4.77 (1.82)
sodomize	2234	3.70 (1.97)	5.13 (2.39)	3.80 (2.02)	square	408	4.74 (1.02)	3.18 (1.76)	4.51 (1.45)
sofa	2235	6.53 (1.5)	3.10 (1.92)	6.17 (1.56)	squash	2256	4.97 (1.79)	3.93 (2.12)	5.48 (1.88)
soft	986	7.12 (1.34)	4.63 (2.61)	6.00 (1.8)	squeal	2257	4.67 (2.53)	6.26 (2.41)	4.52 (1.95)
soil	2236	4.67 (1.47)	3.57 (1.76)	4.70 (1.95)	stagnant	994	4.15 (1.57)	3.93 (1.94)	4.71 (1.36)
soldier	2237	5.79 (2.02)	5.48 (2.1)	5.69 (1.95)	stairs	2258	4.67 (1.45)	5.00 (1.64)	4.87 (1.87)
solemn	405	4.32 (1.51)	3.56 (1.95)	4.61 (1.87)	stalk	2259	2.80 (1.65)	5.41 (2.37)	3.62 (2.11)
son	2238	6.39 (1.52)	5.71 (1.8)	5.64 (1.79)	star	409	7.27 (1.66)	5.83 (2.44)	4.68 (2.15)
song	987	7.10 (1.97)	6.07 (2.42)	5.85 (2.12)	startled	410	4.50 (1.67)	6.93 (2.24)	4.48 (1.57)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
starvation	2260	1.82 (1.68)	6.46 (2.47)	3.11 (2.17)	stun	2283	4.93 (1.77)	6.29 (2.05)	3.66 (1.93)
starve	2261	2.50 (1.7)	4.93 (2.32)	3.93 (2.27)	stupid	415	2.31 (1.37)	4.72 (2.71)	2.98 (2.18)
starving	611	2.39 (1.82)	5.61 (2.53)	3.63 (2.1)	stupor	2284	4.39 (1.99)	4.48 (2.06)	3.67 (2.04)
statue	995	5.17 (0.7)	3.46 (1.72)	4.95 (1.4)	style	2285	6.82 (1.63)	5.36 (2.08)	5.64 (1.85)
status	2262	5.62 (1.27)	4.93 (1.79)	5.41 (1.59)	subdue	2286	4.69 (1.65)	4.30 (2.05)	4.56 (2.06)
steak	2263	6.86 (2.46)	5.32 (2.55)	6.18 (2.02)	subdued	416	4.67 (1.31)	2.90 (1.81)	4.08 (1.56)
steal	2264	3.18 (1.91)	5.11 (2.51)	4.93 (2.42)	subject	2287	5.04 (0.79)	3.93 (1.82)	4.68 (1.68)
steam	2265	5.00 (1.13)	4.35 (2.3)	5.15 (0.78)	submit	2288	4.37 (1.86)	5.22 (1.95)	3.96 (2.21)
stench	996	2.19 (1.37)	4.36 (2.46)	4.29 (1.91)	suburb	2289	5.89 (1.43)	4.54 (1.86)	5.84 (1.07)
stereo	2266	6.89 (1.47)	6.04 (2.19)	6.07 (1.54)	subway	2290	6.29 (1.72)	5.52 (2.39)	5.37 (2.17)
stiff	997	4.68 (1.97)	4.02 (2.41)	4.93 (2.04)	success	417	8.29 (0.93)	6.11 (2.65)	6.89 (2.4)
stifle	2267	3.50 (1.5)	4.93 (1.98)	3.71 (1.88)	suffer	2291	1.72 (1.34)	6.12 (2.89)	2.54 (2.13)
sting	2268	2.48 (1.76)	6.78 (2.59)	3.67 (2.47)	suffocate	418	1.56 (0.96)	6.03 (3.19)	3.44 (2.81)
stingy	2269	3.10 (1.6)	5.37 (1.96)	4.53 (1.89)	sugar	1002	6.74 (1.73)	5.64 (2.18)	5.50 (1.5)
stink	411	3.00 (1.79)	4.26 (2.1)	4.16 (1.98)	suggestion	2292	5.66 (1.04)	4.72 (1.55)	4.88 (1.31)
stolen	2270	2.69 (1.51)	6.03 (2.11)	3.41 (1.92)	suicide	419	1.25 (0.69)	5.73 (3.14)	3.58 (3.02)
stomach	998	4.82 (2.06)	3.93 (2.49)	4.68 (1.85)	suite	2293	7.25 (1.78)	5.59 (2.55)	5.44 (1.99)
stool	999	4.56 (1.72)	4.00 (2.14)	4.98 (1.85)	sun	532	7.55 (1.85)	5.04 (2.66)	6.16 (2.09)
stop	2271	3.96 (1.37)	4.26 (2.01)	4.89 (2.01)	sunflower	2294	7.41 (1.34)	4.30 (2.2)	5.33 (2.11)
store	2272	5.93 (1.31)	5.00 (2.04)	6.00 (1.46)	sunglasses	2295	6.47 (1.43)	4.90 (2.37)	5.97 (1.43)
storm	1000	4.95 (2.22)	5.71 (2.34)	4.54 (2.04)	sunlight	1003	7.76 (1.43)	6.10 (2.3)	5.63 (2.15)
story	2273	6.63 (1.85)	5.37 (2.2)	5.47 (1.25)	sunrise	420	7.86 (1.35)	5.06 (3.05)	5.29 (2.41)
stove	1001	4.98 (1.69)	4.51 (2.14)	5.36 (1.87)	sunset	421	7.68 (1.72)	4.20 (2.99)	5.66 (2.08)
stow	2274	5.23 (0.67)	3.74 (1.71)	5.19 (1.49)	supper	2296	7.23 (1.55)	6.30 (2.18)	6.03 (1.77)
street	412	5.22 (0.72)	3.39 (1.87)	4.81 (1.21)	supply	2297	5.27 (1.12)	4.38 (1.7)	5.27 (1.31)
strength	2275	7.41 (1.5)	5.76 (1.7)	7.21 (1.61)	sure	2298	6.53 (1.96)	5.00 (2.39)	6.03 (2.16)
stress	413	2.09 (1.41)	7.45 (2.38)	3.93 (2.75)	surfer	2299	6.55 (1.86)	5.45 (2.25)	5.45 (1.62)
stricken	2276	3.29 (1.82)	6.04 (2.1)	3.14 (1.6)	surgeon	2300	5.36 (1.87)	5.86 (2.22)	4.61 (2.1)
stride	2277	5.72 (1.31)	4.75 (1.87)	6.38 (1.47)	surgery	612	2.86 (2.19)	6.35 (2.32)	2.75 (1.86)
string	2278	5.34 (1.76)	4.36 (2.33)	5.57 (1.64)	surprise	2301	7.73 (1.66)	7.07 (1.95)	3.87 (2.22)
strive	2279	6.78 (1.34)	6.19 (2.02)	6.19 (1.75)	surprised	422	7.47 (1.56)	7.47 (2.09)	6.11 (2.19)
strong	414	7.11 (1.48)	5.92 (2.28)	6.92 (2.43)	sushi	2302	5.72 (2.67)	5.22 (2.21)	5.81 (2.09)
structure	2280	5.21 (1.42)	4.04 (1.85)	5.41 (1.55)	suspicious	423	3.76 (1.42)	6.25 (1.59)	4.47 (1.99)
stubborn	2281	3.86 (1.94)	5.30 (2.4)	5.33 (2.25)	swamp	1004	5.14 (2.24)	4.86 (2.36)	5.29 (1.63)
studio	2282	6.03 (1.45)	5.11 (1.65)	5.85 (1.56)	swan	2303	6.48 (2.01)	3.52 (2.16)	5.32 (1.87)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
swear	2304	4.43 (1.45)	5.46 (2.05)	4.79 (1.79)	teeth	2327	5.46 (1.36)	4.77 (2.29)	4.85 (2.24)
sweet	2305	7.64 (1.42)	5.96 (2.5)	5.36 (2.02)	tempo	2328	5.89 (1.74)	5.04 (2.25)	5.96 (1.66)
sweetheart	424	8.42 (0.83)	5.50 (2.73)	6.03 (2.24)	temptation	2329	4.94 (1.98)	5.88 (1.96)	4.50 (2.26)
swift	1005	6.46 (1.76)	5.39 (2.53)	6.29 (1.85)	tend	2330	5.55 (1.62)	3.93 (2.46)	5.43 (2.35)
swimmer	576	6.54 (1.64)	4.82 (2.49)	5.96 (1.91)	tender	1011	6.93 (1.28)	4.88 (2.3)	5.33 (1.75)
swing	2306	7.20 (1.49)	5.53 (2.13)	5.33 (1.81)	tendon	2331	4.90 (1.22)	4.90 (2.22)	4.83 (2.2)
swipe	2307	4.86 (1.46)	4.33 (1.82)	5.11 (1.97)	tennis	540	6.02 (1.97)	4.61 (2.6)	5.61 (2.12)
sword	2308	5.52 (2.14)	6.08 (1.82)	5.62 (1.88)	tense	428	3.56 (1.36)	6.53 (2.1)	5.22 (2.02)
sympathy	2309	5.33 (1.97)	5.03 (1.96)	4.73 (1.7)	termite	429	3.58 (2.08)	5.39 (2.43)	3.87 (1.87)
syphilis	425	1.68 (1.23)	5.69 (3.25)	3.33 (2.67)	terrace	2332	5.55 (1.5)	4.71 (1.76)	5.00 (1.59)
syrup	2310	6.07 (1.28)	4.69 (2.16)	5.86 (1.3)	terrible	430	1.93 (1.44)	6.27 (2.44)	3.58 (2.34)
system	2311	5.37 (1.3)	3.93 (1.91)	5.37 (1.88)	terrific	431	8.16 (1.12)	6.23 (2.73)	6.60 (2.15)
table	426	5.22 (0.72)	2.92 (2.16)	4.47 (1.66)	terrified	432	1.72 (1.14)	7.86 (2.27)	3.08 (2.75)
taint	2312	3.92 (1.65)	4.85 (1.71)	4.35 (1.7)	terror	2333	2.75 (2.2)	7.07 (2.32)	2.71 (2.16)
tale	2313	6.43 (1.89)	4.13 (2)	5.50 (2.01)	terrorist	614	1.69 (1.42)	7.27 (2.38)	2.65 (2.3)
talent	427	7.56 (1.25)	6.27 (1.8)	6.49 (1.75)	testicles	2334	5.38 (1.1)	5.25 (1.92)	5.81 (1.51)
tall	2314	6.64 (1.85)	4.82 (2.6)	5.57 (2.57)	thankful	433	6.89 (2.29)	4.34 (2.31)	5.32 (2)
tamper	1006	4.10 (1.88)	4.95 (2.01)	4.58 (2.1)	theater	2335	6.69 (1.42)	5.86 (1.57)	5.45 (1.48)
tangle	2315	3.97 (1.45)	5.66 (1.79)	4.66 (1.54)	theft	2336	2.67 (1.49)	5.96 (2.56)	3.27 (2.07)
tank	613	5.16 (1.87)	4.88 (1.86)	4.78 (1.93)	theory	434	5.30 (1.49)	4.62 (1.94)	4.88 (1.81)
tar	2316	4.31 (1.46)	4.46 (1.58)	4.50 (1.88)	therapy	2337	4.42 (2.25)	4.57 (2.29)	4.03 (2.33)
task	2317	4.79 (1.52)	4.72 (1.65)	5.93 (2.03)	thermometer	1012	4.73 (1.05)	3.79 (2.02)	4.39 (1.51)
taste	1007	6.66 (1.57)	5.22 (2.38)	5.50 (1.65)	thief	435	2.13 (1.69)	6.89 (2.13)	3.79 (2.55)
tatter	2318	4.53 (1.7)	3.90 (1.93)	4.50 (1.23)	thigh	2338	5.77 (1.36)	5.47 (1.98)	5.60 (1.43)
tattoo	2319	5.62 (2.11)	6.06 (1.88)	5.69 (1.99)	thin	2339	6.43 (1.71)	5.57 (2.08)	5.36 (2.16)
taunt	2320	3.61 (1.71)	5.55 (1.8)	4.90 (1.97)	thing	2340	4.83 (0.83)	4.17 (1.72)	4.77 (1.28)
tavern	2321	5.81 (1.42)	5.00 (1.98)	5.48 (1.29)	think	2341	6.41 (1.88)	5.34 (2.48)	6.38 (2.19)
taxi	1008	5.00 (1.96)	3.41 (2.14)	4.64 (1.83)	thirst	2342	3.37 (1.81)	5.03 (1.97)	3.93 (1.95)
tea	2322	5.87 (2.39)	4.13 (2.26)	5.71 (1.96)	thirsty	2343	3.61 (1.63)	5.67 (1.45)	3.77 (1.36)
teach	2323	5.89 (1.95)	5.59 (1.89)	5.88 (2.3)	thong	2344	6.69 (1.99)	5.78 (2.52)	6.69 (1.69)
teacher	1009	5.68 (2.12)	4.05 (2.61)	5.11 (2.2)	thorn	436	3.64 (1.76)	5.14 (2.14)	4.45 (1.5)
team	2324	7.43 (1.3)	5.93 (2.23)	5.90 (2.23)	thought	1013	6.39 (1.58)	4.83 (2.46)	6.02 (1.7)
tease	1010	4.84 (2.51)	5.87 (2.56)	4.67 (2.37)	thoughtful	437	7.65 (1.03)	5.72 (2.3)	5.61 (2.11)
teenager	2325	6.41 (2)	6.33 (2.13)	4.67 (2.25)	threat	2345	2.50 (1.21)	6.08 (2.48)	3.27 (2.03)
teeter	2326	5.18 (1.72)	5.30 (2.18)	4.56 (2.22)	thrift	2346	4.90 (1.73)	4.43 (1.72)	5.23 (1.36)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
thrill	438	8.05 (1.48)	8.02 (1.65)	6.54 (2.3)	tourist	2372	5.66 (1.59)	4.52 (1.77)	5.38 (1.45)
thrilled	2347	7.81 (1.19)	7.47 (1.72)	6.13 (1.25)	tow	2373	3.63 (1.63)	4.67 (2.29)	4.00 (2.26)
thrive	2348	7.45 (1.57)	6.03 (2.24)	6.29 (1.76)	towel	2374	5.75 (1.55)	4.19 (2.47)	5.69 (1.65)
thud	2349	4.47 (0.97)	5.20 (1.35)	4.87 (0.97)	tower	1016	5.46 (1.75)	3.95 (2.28)	5.78 (2.14)
thug	2350	3.86 (1.63)	5.32 (2.02)	3.96 (2.01)	town	2375	5.93 (1.61)	4.29 (2.31)	4.64 (1.73)
thumb	2351	5.52 (1.24)	4.54 (1.91)	5.25 (1.69)	toxic	446	2.10 (1.48)	6.40 (2.41)	4.42 (2.51)
tick	2352	3.72 (1.56)	4.14 (2.27)	4.18 (1.61)	toy	1017	7.00 (2.01)	5.11 (2.84)	6.09 (1.84)
ticket	2353	5.46 (2.56)	5.79 (2.59)	5.14 (2.26)	traffic	2376	2.27 (1.31)	5.80 (2.52)	2.57 (1.68)
tickle	2354	6.86 (2.14)	6.70 (2.16)	4.07 (2.37)	tragedy	447	1.78 (1.31)	6.24 (2.64)	3.50 (2.34)
tidy	1014	6.30 (1.56)	3.98 (2.22)	5.49 (1.93)	train	2377	5.59 (1.25)	4.85 (2.36)	5.04 (1.87)
tiger	2355	5.89 (2.45)	6.41 (2.42)	3.44 (2.15)	trait	2378	6.04 (1.81)	4.04 (2.53)	4.07 (2.07)
time	439	5.31 (2.02)	4.64 (2.75)	4.63 (2.24)	traitor	448	2.22 (1.69)	5.78 (2.47)	4.61 (2.71)
timid	440	3.86 (1.55)	4.11 (2.09)	3.09 (1.91)	trash	615	2.67 (1.45)	4.16 (2.16)	5.24 (1.85)
tire	2356	4.97 (1.5)	4.00 (2)	5.03 (1.12)	trauma	616	2.10 (1.49)	6.33 (2.45)	2.84 (1.87)
tired	2357	3.28 (1.69)	2.64 (1.5)	3.96 (2.1)	travel	1018	7.10 (2)	6.21 (2.51)	6.31 (2.08)
tissue	2358	4.93 (1.62)	3.63 (2.11)	5.07 (1.8)	tray	2379	5.10 (1.03)	3.67 (1.77)	5.17 (1.21)
title	2359	5.80 (1.81)	4.93 (1.84)	5.89 (2.15)	tread	2380	5.31 (1.31)	4.97 (1.99)	4.86 (1.53)
toad	2360	4.59 (1.68)	4.76 (2.34)	4.45 (1.82)	treasure	449	8.27 (0.9)	6.75 (2.3)	6.36 (2.42)
tobacco	441	3.28 (2.16)	4.83 (2.9)	4.08 (2.27)	treat	1019	7.36 (1.38)	5.62 (2.25)	5.78 (1.82)
toddler	2361	6.97 (1.54)	5.68 (2.01)	6.55 (1.88)	treatment	2381	5.24 (2.13)	5.52 (1.7)	4.48 (1.82)
toil	2362	4.20 (1.63)	5.04 (1.77)	4.56 (1.94)	tree	450	6.32 (1.56)	3.42 (2.21)	5.08 (2.29)
toilet	2363	4.66 (1.8)	3.96 (1.95)	5.26 (1.02)	tremor	2382	3.94 (1.22)	5.41 (2.17)	3.34 (1.79)
tomato	2364	5.45 (1.97)	3.79 (2.02)	5.36 (1.52)	trend	2383	5.40 (2.03)	5.03 (2.01)	4.40 (1.87)
tomb	442	2.94 (1.88)	4.73 (2.72)	3.72 (2.05)	tribe	2384	5.61 (1.77)	4.68 (2.33)	5.00 (1.96)
ton	2365	4.68 (1.47)	4.33 (1.98)	5.04 (2.17)	trick	2385	4.97 (2.5)	6.10 (1.73)	4.60 (1.99)
tool	1015	5.19 (1.27)	4.33 (1.78)	5.67 (1.62)	trip	2386	6.96 (1.74)	6.30 (2.05)	5.00 (2.08)
tooth	2366	5.19 (1.26)	4.66 (1.98)	5.06 (1.39)	triumph	451	7.80 (1.83)	5.78 (2.6)	6.98 (2.2)
toothache	443	1.98 (1.15)	5.55 (2.51)	3.90 (1.85)	triumphant	452	8.82 (0.73)	6.78 (2.58)	6.95 (2.55)
topless	2367	6.93 (2.12)	6.67 (2.4)	6.30 (1.97)	trivia	2387	5.77 (1.66)	5.00 (2.32)	5.15 (1.8)
topple	2368	3.93 (1.9)	5.46 (2.33)	4.25 (2.3)	trophy	453	7.78 (1.22)	5.39 (2.44)	6.44 (2.32)
tornado	444	2.55 (1.78)	6.83 (2.49)	4.30 (2.42)	trouble	454	3.03 (2.09)	6.85 (2.03)	4.85 (2.39)
torte	2369	5.33 (1.09)	4.30 (1.74)	4.97 (1.03)	troubled	455	2.17 (1.21)	5.94 (2.36)	3.91 (2.33)
torture	445	1.56 (0.79)	6.10 (2.77)	3.33 (2.37)	trout	2388	5.57 (1.57)	4.40 (2.09)	5.67 (2.09)
total	2370	5.74 (1.63)	4.81 (2.22)	5.30 (1.64)	truce	2389	6.62 (1.45)	4.82 (2.06)	6.11 (1.03)
touch	2371	6.31 (1.49)	6.19 (2.08)	5.81 (1.67)	truck	577	5.47 (1.88)	4.84 (2.17)	5.33 (1.83)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
true	2390	6.96 (1.32)	5.11 (2.06)	6.00 (1.39)	urine	617	3.25 (1.71)	4.20 (2.18)	5.24 (1.86)
trumpet	456	5.75 (1.38)	4.97 (2.13)	4.57 (1.72)	usage	2410	4.93 (1.13)	4.90 (1.57)	4.97 (1.3)
trunk	1020	5.09 (1.57)	4.18 (2.19)	5.14 (1.9)	useful	466	7.14 (1.6)	4.26 (2.47)	5.93 (2.1)
trust	457	6.68 (2.71)	5.30 (2.66)	6.61 (2.04)	useless	467	2.13 (1.42)	4.87 (2.58)	3.92 (2.62)
truth	458	7.80 (1.29)	5.00 (2.77)	6.47 (2.11)	utensil	1024	5.14 (1.39)	3.57 (1.98)	5.40 (1.47)
tulip	2391	6.83 (1.81)	4.52 (2.37)	5.69 (2.19)	vacation	468	8.16 (1.36)	5.64 (2.99)	6.80 (2.08)
tumor	459	2.36 (2.04)	6.51 (2.85)	3.58 (2.42)	vagina	1025	6.14 (1.77)	5.55 (2.55)	5.88 (1.74)
tune	1021	6.93 (1.47)	4.71 (2.09)	5.74 (1.82)	valentine	469	8.11 (1.35)	6.06 (2.91)	5.81 (2.45)
turkey	2392	6.48 (1.92)	5.04 (2.54)	6.12 (1.62)	valley	2411	5.46 (1.55)	3.70 (1.88)	4.74 (1.85)
turmoil	2393	2.71 (2.04)	5.87 (2.53)	3.20 (2.16)	vampire	470	4.26 (1.86)	6.37 (2.35)	5.05 (2.27)
turtle	2394	6.78 (1.53)	4.85 (2.3)	5.07 (1.96)	van	2412	4.97 (1.77)	3.86 (2.42)	5.03 (1.52)
tusk	2395	5.41 (1.43)	4.46 (2.05)	4.93 (1.46)	vandal	471	2.71 (1.91)	6.40 (1.88)	3.91 (2.49)
twelve	2396	5.24 (1.43)	3.66 (2.16)	5.31 (1.73)	vanish	2413	3.83 (2.28)	5.29 (2.32)	3.18 (2.07)
twilight	1022	7.23 (1.8)	4.70 (2.41)	5.59 (1.82)	vanity	472	4.30 (1.91)	4.98 (2.31)	4.80 (2.03)
twins	2397	6.24 (1.33)	5.17 (1.93)	5.21 (1.72)	vase	2414	4.97 (1.18)	3.90 (2.14)	5.41 (1.52)
tyrant	2398	3.25 (2.05)	5.71 (2.35)	3.14 (2.35)	vegetable	2415	5.40 (2.06)	4.07 (2.16)	5.27 (2)
ugly	460	2.43 (1.27)	5.38 (2.23)	4.26 (2.33)	vehicle	473	6.27 (2.34)	4.63 (2.81)	5.77 (2.61)
ulcer	461	1.78 (1.17)	6.12 (2.68)	4.17 (2.22)	venom	474	2.68 (1.81)	6.08 (2.44)	3.94 (2.23)
umbrella	578	5.16 (1.57)	3.68 (1.99)	5.42 (1.91)	vessel	2416	5.50 (1.68)	4.31 (1.81)	5.34 (1.8)
uncertain	2399	3.45 (1.43)	4.79 (2.6)	3.37 (1.9)	vest	1026	5.25 (1.33)	3.95 (2.09)	5.09 (1.24)
uncomfortable	2400	2.97 (1.6)	6.06 (1.98)	3.42 (1.77)	vibrator	2417	6.17 (2.36)	6.39 (2.22)	5.54 (2.2)
understand	2401	7.13 (1.89)	5.00 (2.08)	6.77 (2.03)	vice	2418	4.43 (2.25)	5.30 (2.1)	5.23 (2.18)
uneasy	2402	3.07 (1.91)	6.03 (2.29)	3.24 (1.79)	victim	618	2.18 (1.48)	6.06 (2.32)	2.69 (2.04)
unfaithful	462	2.05 (1.55)	6.20 (2.7)	3.02 (2.54)	victory	475	8.32 (1.16)	6.63 (2.84)	7.26 (2.14)
unhappy	463	1.57 (0.96)	4.18 (2.5)	3.34 (2.35)	video	2419	7.30 (1.42)	5.67 (2.15)	5.77 (1.45)
unify	2403	6.90 (2.06)	4.93 (2.53)	5.83 (2.36)	vigor	2420	5.85 (1.78)	5.77 (1.97)	5.73 (1.64)
union	2404	6.48 (1.66)	4.79 (1.88)	6.14 (1.55)	vigorous	476	6.79 (1.54)	5.90 (2.66)	5.41 (2.22)
unit	1023	5.59 (1.87)	3.75 (2.49)	5.11 (1.74)	village	477	5.92 (1.34)	4.08 (1.87)	4.94 (1.74)
unite	2405	6.77 (1.59)	5.81 (1.96)	6.10 (1.54)	vine	2421	5.36 (1.64)	4.48 (2.17)	4.75 (1.9)
unity	2406	7.29 (1.44)	4.64 (2.68)	6.43 (1.73)	violent	478	2.29 (1.78)	6.89 (2.47)	5.16 (2.86)
unsafe	2407	2.82 (1.81)	6.18 (2.64)	3.67 (2.54)	violin	579	5.43 (1.98)	3.49 (2.26)	5.18 (2.01)
unsure	2408	3.03 (1.52)	5.97 (1.99)	3.60 (2.03)	violinist	2422	6.32 (1.57)	4.33 (2.24)	5.38 (1.93)
untroubled	464	7.62 (1.41)	3.89 (2.54)	5.53 (2.54)	virgin	1027	6.45 (1.76)	5.51 (2.06)	6.24 (2.48)
upset	465	2.00 (1.18)	5.86 (2.4)	4.08 (2.31)	virtue	479	6.22 (2.06)	4.52 (2.52)	6.13 (2.09)
urinate	2409	5.59 (1.58)	4.10 (2.34)	5.45 (2.41)	virus	2423	2.50 (1.75)	5.46 (2.66)	2.79 (1.55)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
vision	480	6.62 (1.84)	4.66 (2.43)	6.02 (1.96)	wedding	491	7.82 (1.56)	5.97 (2.85)	6.68 (2.08)
vista	2424	5.10 (1.81)	4.57 (2.03)	4.63 (1.5)	week	2444	5.35 (1.02)	4.38 (1.7)	4.92 (1.41)
vodka	2425	5.52 (2.34)	5.86 (2.37)	5.00 (2.05)	weep	2445	1.80 (1.24)	5.07 (2.19)	3.00 (1.79)
volcano	619	4.84 (2.14)	6.33 (2.21)	3.25 (1.97)	weight	2446	4.28 (1.74)	5.40 (1.96)	4.92 (2.55)
vomit	481	2.06 (1.57)	5.75 (2.84)	3.58 (2.45)	weightlifter	2447	5.93 (1.7)	5.50 (2.08)	5.57 (2.11)
vote	2426	6.63 (1.59)	5.30 (2.22)	6.93 (2.07)	welfare	2448	3.36 (2.13)	5.18 (2.54)	2.82 (1.63)
vow	2427	6.08 (2.04)	5.35 (1.98)	5.92 (2)	wet	2449	5.57 (1.76)	5.57 (2.08)	5.63 (1.67)
vows	2428	6.48 (1.79)	6.13 (1.71)	5.61 (1.75)	wheat	2450	5.90 (1.32)	4.03 (2.08)	5.62 (1.24)
voyage	1028	6.25 (1.91)	5.55 (2.23)	5.18 (1.98)	wheel	2451	5.55 (0.83)	4.86 (1.51)	5.55 (1.24)
wagon	1029	5.37 (0.97)	3.98 (2.04)	5.05 (1.2)	whistle	1030	5.81 (1.21)	4.69 (1.99)	5.27 (1.87)
wail	2429	3.63 (1.94)	5.50 (1.63)	4.53 (1.57)	white	542	6.47 (1.59)	4.37 (2.14)	5.98 (1.73)
wall	2430	4.76 (1.21)	4.18 (1.87)	4.41 (1.78)	whore	492	2.30 (2.11)	5.85 (2.93)	4.61 (2.73)
wander	2431	5.27 (1.6)	4.93 (1.72)	5.43 (2.16)	wicked	493	2.96 (2.37)	6.09 (2.44)	4.36 (2.65)
wane	2432	4.39 (1.81)	4.54 (2.01)	3.96 (1.71)	wife	1031	6.33 (1.97)	4.93 (2.22)	5.57 (1.68)
want	2433	5.25 (2.08)	6.00 (2.11)	4.54 (2.13)	wild	2452	6.37 (1.4)	6.43 (1.92)	5.27 (1.89)
war	482	2.08 (1.91)	7.49 (2.16)	4.50 (3)	willing	2453	6.60 (1.45)	5.30 (1.82)	6.00 (1.53)
warden	2434	3.79 (1.68)	4.24 (2.01)	3.41 (1.88)	win	494	8.38 (0.92)	7.72 (2.16)	7.39 (2.36)
warehouse	2435	5.13 (1.55)	4.00 (1.97)	4.72 (1.51)	wince	2454	3.85 (1.41)	5.27 (1.8)	4.69 (1.46)
warm	2436	6.50 (1.2)	5.14 (1.92)	5.36 (1.25)	windmill	1032	5.60 (1.65)	3.74 (2.13)	5.24 (1.04)
warmth	483	7.41 (1.81)	3.73 (2.4)	5.61 (1.67)	window	495	5.91 (1.38)	3.97 (2.01)	4.91 (1.6)
warn	2437	4.20 (1.52)	5.37 (2.19)	4.60 (1.77)	windshield	2455	4.64 (0.99)	4.22 (2.03)	4.93 (1.41)
wart	2438	2.41 (1.36)	4.34 (2.5)	3.62 (1.52)	windsurfers	2456	6.50 (1.57)	6.30 (1.47)	5.33 (1.84)
wasp	484	3.37 (1.63)	5.50 (2.17)	3.76 (1.82)	wine	496	5.95 (2.19)	4.78 (2.34)	5.31 (2.15)
waste	485	2.93 (1.76)	4.14 (2.3)	4.72 (1.94)	wings	2457	6.39 (1.93)	5.33 (2.27)	4.96 (1.95)
watch	580	5.78 (1.51)	4.10 (2.12)	5.37 (1.75)	wink	1033	6.93 (1.83)	5.44 (2.68)	5.70 (1.77)
water	486	6.61 (1.78)	4.97 (2.49)	5.08 (1.99)	winner	2458	8.24 (1.18)	6.86 (2.46)	7.72 (1.77)
waterfall	487	7.88 (1.03)	5.37 (2.84)	5.20 (2.18)	winter	2459	5.79 (2.61)	5.32 (2.5)	4.79 (2.04)
watermelon	2439	6.52 (1.64)	5.18 (1.74)	5.79 (1.34)	wires	2460	4.63 (1.5)	4.70 (2.02)	4.73 (1.57)
waterskiing	2440	7.00 (2.19)	6.77 (2.18)	5.60 (2.53)	wisdom	2461	7.34 (1.45)	5.25 (2.38)	6.61 (1.66)
wealth	2441	7.70 (1.39)	5.90 (2.11)	6.70 (2.25)	wise	497	7.52 (1.23)	3.91 (2.64)	6.70 (2.39)
wealthy	488	7.70 (1.34)	5.80 (2.73)	6.77 (2.57)	wish	1034	7.09 (2)	5.16 (2.62)	5.28 (2.09)
weapon	489	3.97 (1.92)	6.03 (1.89)	5.19 (2.61)	wishful	2462	7.50 (1.46)	5.57 (2.36)	5.27 (1.89)
weary	490	3.79 (2.12)	3.81 (2.29)	4.00 (1.91)	wit	1035	7.32 (1.9)	5.42 (2.44)	6.38 (2.01)
web	2442	5.33 (1.69)	4.30 (2.38)	5.20 (1.47)	wolf	2463	5.00 (2.35)	6.70 (1.82)	4.33 (2.31)
wed	2443	6.75 (1.96)	6.41 (2.26)	5.56 (2.33)	woman	498	6.64 (1.76)	5.32 (2.59)	6.33 (1.52)

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)
wonder	499	6.03 (1.58)	5.00 (2.23)	5.32 (2.17)					
wood	2464	5.86 (1.84)	4.67 (1.98)	5.59 (1.19)					
wool	2465	5.27 (1.14)	3.60 (2.04)	5.17 (1.32)					
work	2466	3.96 (2.05)	5.11 (2.28)	4.11 (2.17)					
worker	2467	5.07 (1.53)	4.73 (1.95)	5.27 (1.86)					
world	500	6.50 (2.03)	5.32 (2.39)	5.26 (2.47)					
worry	2468	2.31 (1.51)	6.00 (2.45)	2.96 (2.22)					
worth	2469	6.15 (1.35)	4.62 (2.12)	5.23 (1.63)					
wounds	620	2.51 (1.58)	5.82 (2.01)	3.92 (1.57)					
wrath	2470	3.47 (2.33)	5.60 (2.42)	4.23 (2.53)					
wreath	2471	6.07 (1.36)	4.64 (1.75)	5.14 (1.04)					
wring	2472	4.81 (0.93)	4.78 (1.52)	5.03 (1.43)					
writer	1036	5.52 (1.9)	4.33 (2.45)	4.73 (1.84)					
wrong	2473	2.93 (1.8)	4.67 (2.04)	3.30 (1.8)					
yacht	1037	6.95 (1.79)	5.61 (2.72)	6.10 (2.13)					
year	2474	5.41 (1.41)	4.22 (1.96)	5.25 (1.3)					
yellow	545	5.61 (1.94)	4.43 (2.05)	5.47 (1.58)					
yelp	2475	3.69 (1.46)	5.73 (1.95)	4.27 (1.69)					
yolk	2476	5.48 (1.77)	4.07 (2.14)	5.04 (1.35)					
young	1038	6.89 (2.12)	5.64 (2.51)	5.30 (2.49)					
youth	1039	6.75 (2.29)	5.67 (2.52)	5.11 (2.55)					
zeal	2477	6.15 (1.66)	5.41 (1.6)	5.52 (1.5)					
zealous	2478	5.67 (2.02)	5.47 (2.5)	5.60 (1.73)					
zest	1040	6.79 (2.04)	5.59 (2.66)	6.00 (1.99)					
zipper	2479	5.39 (1.23)	5.19 (1.9)	5.63 (2)					
zoom	2480	6.56 (1.83)	5.88 (2.35)	5.91 (1.87)					