

# **Affective Norms for English Words (ANEW): Instruction Manual and Affective Ratings**

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**Bradley, M.M., & Lang, P.J. (1999). *Affective norms for English words (ANEW): Instruction manual and affective ratings*. Technical Report C-1, The Center for Research in Psychophysiology, University of Florida.**

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### Introduction

The Affective Norms for English Words (ANEW) is being developed to provide a set of normative emotional ratings for a large number of words in the English language. The goal is to develop a set of verbal materials that have been rated in terms of pleasure, arousal, and dominance to complement the existing International Affective Picture System (IAPS, Lang, Bradley, & Cuthbert, 1999) and International Affective Digitized Sounds (IADS; Bradley & Lang, 1999), which are collections of picture and sound stimuli, respectively, that also include these affective ratings. The ANEW, IAPS, and IADS are being developed and distributed by NIMH Center for Emotion and Attention (CSEA) investigators Margaret Bradley and Peter Lang, in order to provide standardized materials that are available to researchers in the study of emotion and attention. The existence of these affective collections should help in comparing results across different investigations of emotion, as well as in allowing replication within and across research labs assessing basic or applied problems in the study of emotion.

In an undertaking of this nature, choices have to be made regarding the affective judgments used to standardize materials. Here, we began by using a relatively simple dimensional view, which assumes that emotion can be defined as a coincidence of values on a number of different strategic dimensions. This view is founded in Osgood's (Osgood, Suci, & Tanenbaum, 1957) seminal work with the semantic differential in which factor analyses conducted on a wide variety of verbal judgements indicated that the variance in emotional assessments was accounted for by three major dimensions: The two primary dimensions were one of affective valence (ranging from pleasant to unpleasant) and one of arousal (ranging from calm to excited). A third, less strongly-related dimension was variously called 'dominance' or 'control'. Dimensional views of emotion have been advocated by a large number of theorists through the years, including Wundt (1896), Mehrabian and Russell (1974), and Tellegen (1985).

To assess the three dimensions of pleasure, arousal, and dominance, the Self-Assessment Manikin (SAM), an affective rating

system originally devised by Lang (1980) was used. Bradley and Lang (1990) determined that the SAM correlates well with factors of pleasure and arousal obtained using the longer, verbal Semantic Differential Scale (Mehrabian and Russell, 1974). The graphic SAM figures comprise bipolar scales that depict different values along each emotional dimension. Figure 1 illustrates a relatively recent, scannable version of SAM, which was used to acquire the ratings in the ANEW. For the pleasure dimension, SAM ranges from a smiling, happy figure to a frowning, unhappy figure; to represent the arousal dimension, SAM ranges from an excited, wide-eyed figure to a relaxed, sleepy figure. For the dominance dimension, SAM ranges from a large figure (in control) to a small figure (dominated). In this version of SAM, the subject can bubble in the location corresponding to any of the 5 figures on each scale, or between any two figures, which results in a 9-point rating scale for each dimension. In addition to the ScanSAM version of SAM, there is a booklet paper-and-pencil version, as well as a dynamic computer version written for IBM-compatible written and distributed by Ed Cook<sup>1</sup> at the University of Alabama-Birmingham (e.g., Cook, Atkinson, & Lang, 1987). The computer SAM scale uses a 20-point scale, rendering more points along each dimension than the ScanSAM or paper-and-pencil versions.

Using SAM, subjects have rated the words currently in the ANEW on the dimensions of pleasure, arousal, and dominance. Figure 2 illustrates the shape of the affective space that results when each word is plotted in a 2-dimensional space defined by its mean pleasure and arousal rating. There are several characteristic features of the resulting space. First, these stimulus materials evoke reactions across the entire range of each dimension: mean pleasure ratings for these words range from very unpleasant to very pleasant, and are distributed fairly evenly across the space. Secondly, a wide range of arousal levels are elicited by these materials. For items rated as neutral in valence (i.e., those occurring at and near the midline of the valence dimension), arousal ratings do not attain the high levels associated with either pleasant or unpleasant materials. The distribution of the ANEW words in affective space is quite similar to that obtained with IAPS and IADS stimuli, suggesting that this space is representative of the affective distribution of materials from a number of different modalities.

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## Normative rating procedure for the ANEW

This overview of the rating procedure is an example of how each rating study was conducted. In general, each experiment presented 100-150 different words. Each set of words was prepared on a 8 1/2 x 11 sheet of paper that presented individual words in 4 columns and 14 rows (i.e. 56 words per sheet, see Figure 2). The words were sequentially numbered in rows from 1 to n. For each set of words, two forms were prepared which counterbalanced the order in which any specific word was rated, and the items surrounding any specific word.

SAM ratings of pleasure, arousal, and dominance were collected in a self-paced procedure, in which the subject silently read each word, and then bubbled in their emotional ratings on the ScanSam sheet.

Subjects. Introductory Psychology class students, balanced for gender, participated as part of a course requirement.

Design. Subjects were run in groups ranging in size from 8 to 25, with the male:female ratio no more than 1:2 (or 2:1) for any single group session. The ScanSAM version of the SAM instrument was used (see Figure 1). In this format, the (unlabeled) dimensions of pleasure, arousal and dominance are graphically rendered, with each of the 3 dimensions ordinally scaled with 5 figures. The subject can bubble in 1 of 9 circles on the ScanSam sheet, with bubbles between graphic figures indicating a level intermediate between the 2 graphically depicted levels for each dimension.

Materials and Equipment Among the words currently included in the ANEW are approximately 150 words used in Mehrabian & Russell (1974) and 450 words used in Bellezza, Greenwald, & Banaji, (1986).

Procedure. Subjects received the sheets containing the words to-be-rated, and a packet of ScanSam rating sheets. Instructions regarding ScanSam were given (see below), and each subject worked at his or her own pace rating the words in the word booklet. The session was completed for all subjects within 1 hour.

### Instructions (ScanSam version)

Thanks for coming; I appreciate your participation in this study. The study being conducted today is investigating emotion, and concerns how people respond to different types of words. You will notice that

you have a blue packet with these figures on them (Hold up ScanSam sheet). We call this set of figures SAM, and you will be using these figures to rate how you felt while reading each word. SAM shows three different kinds of feelings: Happy vs. Unhappy (**point left**), Excited vs. Calm (**point middle**), and Controlled vs. In-control (**point right**). You will use make all 3 ratings for *each* word that you read

Please notice that each of the three feelings are arrayed along a different scale. The left panel shows the happy-unhappy scale, which ranges from a smile to a frown. At one extreme of this scale, you are happy, pleased, satisfied, contented, hopeful. When you feel completely happy you should indicate this by bubbling in the figure at the left. The other end of the scale is when you feel completely unhappy, annoyed, unsatisfied, melancholic, despaired, or bored. You can indicate feeling completely unhappy by bubbling in the figure at the right. The figures also allow you to describe intermediate feelings of pleasure, by bubbling in any of the other pictures. If you feel completely neutral, neither happy nor sad, bubble in the figure in the middle (**point to middle SAM figure**). If your feeling of pleasure or displeasure falls *between* two of the pictures, then bubble in the space between the figures. This permits you to make more finely graded ratings of how you feel in reaction to each word. There are a total of 9 possible points along each rating scale that you can bubble in to indicate the extent to which you felt happy or unhappy. Any questions so far?

The excited or calm scale is the second type of feeling displayed here, and it is the middle scale in the row. At one extreme of this scale you are stimulated, excited, frenzied, jittery, wide-awake, or aroused. When you feel completely *aroused*, bubble in the figure at the left of the row. Now look at the other end of the excited-calm scale, which is the completely opposite feeling. Here you would feel completely relaxed, calm, sluggish, dull, sleepy, or unaroused. Indicate feeling *calm* by bubbling in the figure at the right of the row. As with the happy-unhappy scale, you can represent intermediate levels of excitedness or calmness by bubbling in any of the other figures. If you are not excited nor at all calm, bubble in the figure in the middle of the row. Again, if you wish to make a more finely tuned rating of how excited or calm you feel, bubble in the space *between* the pictures.

The last scale of feeling which you will rate is whether you felt controlled or in control. This scale is on the right side of the row. At one end of the scale (point left) you have feelings characterized as completely controlled, influenced, cared-for, awed, submissive, or guided. Please indicate feeling controlled by bubbling in the figure at

the left. At the opposite end of this scale, you would bubble in the rightmost figure if you feel completely in control, influential, important, dominant, autonomous, or controlling. You can indicate feeling dominant by bubbling in the figure at the right of the row. Note that when the figure is large, you feel in control, and that it will be very small when you feel controlled. If you feel neither in control nor controlled you should bubble in the middle picture. Again, you can bubble in any of the intermediate figures, or *between* them.

When you have made all 3 ratings for each word, you will have one bubble in each section, to make 3 bubbles in the row. Any questions?

Please work at a rapid pace and don't spend too much time thinking about each word. Rather, make your ratings based on your first and immediate reaction as you read each word. When you are finished please sit quietly and wait until the rest of the group has finished.

### Figures and Tables

**Table 1.** Means and standard deviations for pleasure, arousal, and dominance ratings for each word currently rated in the ANEW, averaged across all subjects. The final column lists the word frequency, taken from Kucera and Francis (1967) norms, and is the number of times the word appeared in the data base that Kucera and Francis used. A higher number indicates a more frequent word.

**Table 2.** Means and standard deviations for pleasure, arousal, and dominance ratings for each word currently rated in the ANEW, for male subjects. The final column lists word frequency, from Kucera and Francis (1967).

**Table 3.** Means and standard deviations for pleasure, arousal, and dominance ratings for each word currently rated in the ANEW, for female subjects. The final column lists word frequency, from Kucera and Francis (1967).

**Figure 1.** ScanSAM sheet illustrating computer scorable form of SAM used to rate the words in the ANEW.

**Figure 2.** Example of a word rating sheet.

**Figure 3.** Scatter plot of words in the 2-dimensional affective space defined by the mean pleasure and arousal rating for each word.

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Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
abduction	621	2.76 (2.06)	5.53 (2.43)	3.49 (2.38)	1	anguished	19	2.12 (1.56)	5.33 (2.69)	3.45 (2.37)	2
abortion	622	3.50 (2.30)	5.39 (2.80)	4.59 (2.54)	6	ankle	638	5.27 (1.54)	4.16 (2.03)	4.77 (1.74)	8
absurd	623	4.26 (1.82)	4.36 (2.20)	4.73 (1.72)	17	annoy	20	2.74 (1.81)	6.49 (2.17)	5.09 (2.04)	2
abundance	624	6.59 (2.01)	5.51 (2.63)	5.80 (2.16)	13	answer	639	6.63 (1.68)	5.41 (2.43)	5.85 (1.88)	152
abuse	1	1.80 (1.23)	6.83 (2.70)	3.69 (2.94)	18	anxious	21	4.81 (1.98)	6.92 (1.81)	5.33 (1.82)	29
acceptance	625	7.98 (1.42)	5.40 (2.70)	6.64 (1.91)	49	applause	640	7.50 (1.50)	5.80 (2.79)	6.48 (2.11)	14
accident	2	2.05 (1.19)	6.26 (2.87)	3.76 (2.22)	33	appliance	641	5.10 (1.21)	4.05 (2.06)	5.05 (1.34)	5
ace	626	6.88 (1.93)	5.50 (2.66)	6.39 (2.31)	15	arm	642	5.34 (1.82)	3.59 (2.40)	5.07 (1.50)	94
ache	627	2.46 (1.52)	5.00 (2.45)	3.54 (1.73)	4	army	23	4.72 (1.75)	5.03 (2.03)	5.03 (2.45)	132
achievement	3	7.89 (1.38)	5.53 (2.81)	6.56 (2.35)	65	aroused	24	7.97 (1.00)	6.63 (2.70)	6.14 (1.97)	20
activate	4	5.46 (0.98)	4.86 (2.56)	5.43 (1.84)	2	arrogant	25	3.69 (2.40)	5.65 (2.23)	5.14 (2.71)	2
addict	581	2.48 (2.08)	5.66 (2.26)	3.72 (2.54)	1	art	643	6.68 (2.10)	4.86 (2.88)	5.30 (2.33)	208
addicted	628	2.51 (1.42)	4.81 (2.46)	3.46 (2.23)	3	assassin	26	3.09 (2.09)	6.28 (2.53)	4.33 (2.68)	6
admired	5	7.74 (1.84)	6.11 (2.36)	7.53 (1.94)	17	assault	27	2.03 (1.55)	7.51 (2.28)	3.94 (3.10)	15
adorable	6	7.81 (1.24)	5.12 (2.71)	5.74 (2.48)	3	astonished	28	6.56 (1.61)	6.58 (2.22)	5.16 (1.79)	6
adult	546	6.49 (1.50)	4.76 (1.95)	5.75 (2.21)	25	astronaut	501	6.66 (1.60)	5.28 (2.11)	5.20 (1.95)	2
advantage	629	6.95 (1.85)	4.76 (2.18)	6.36 (2.23)	73	athletics	644	6.61 (2.08)	6.10 (2.29)	6.12 (2.12)	9
adventure	630	7.60 (1.50)	6.98 (2.15)	6.46 (1.67)	14	autumn	29	6.30 (2.14)	4.51 (2.50)	5.15 (1.85)	22
affection	7	8.39 (0.86)	6.21 (2.75)	6.08 (2.22)	18	avalanche	645	3.29 (1.95)	5.54 (2.37)	3.61 (2.00)	1
afraid	8	2.00 (1.28)	6.67 (2.54)	3.98 (2.63)	57	avenue	646	5.50 (1.37)	4.12 (2.01)	5.40 (1.53)	46
aggressive	9	5.10 (1.68)	5.83 (2.33)	5.59 (2.40)	17	awed	30	6.70 (1.38)	5.74 (2.31)	5.30 (2.03)	5
agility	22	6.46 (1.57)	4.85 (1.80)	5.87 (1.52)	3	baby	31	8.22 (1.20)	5.53 (2.80)	5.00 (2.80)	62
agony	10	2.43 (2.17)	6.06 (2.67)	4.02 (2.49)	9	bake	647	6.17 (1.71)	5.10 (2.30)	5.49 (1.88)	12
agreement	631	7.08 (1.59)	5.02 (2.24)	6.22 (1.85)	106	bandage	648	4.54 (1.75)	3.90 (2.07)	4.52 (1.89)	4
air	632	6.34 (1.56)	4.12 (2.30)	5.10 (1.56)	257	bankrupt	32	2.00 (1.31)	6.21 (2.79)	3.27 (2.39)	5
alcoholic	582	2.84 (2.34)	5.69 (2.36)	4.45 (2.56)	3	banner	649	5.40 (0.83)	3.83 (1.95)	4.80 (1.57)	8
alert	11	6.20 (1.76)	6.85 (2.53)	5.96 (2.24)	33	bar	650	6.42 (2.05)	5.00 (2.83)	5.47 (1.94)	82
alien	633	5.60 (1.82)	5.45 (2.15)	4.64 (2.07)	16	barrel	651	5.05 (1.46)	3.36 (2.28)	4.89 (1.57)	24
alimony	634	3.95 (2.00)	4.30 (2.29)	4.63 (2.30)	2	basket	547	5.45 (1.15)	3.63 (2.02)	5.76 (1.45)	17
alive	635	7.25 (2.22)	5.50 (2.74)	6.39 (2.15)	57	bastard	33	3.36 (2.16)	6.07 (2.15)	4.17 (2.40)	12
allergy	636	3.07 (1.64)	4.64 (2.34)	3.21 (1.77)	1	bath	502	7.33 (1.45)	4.16 (2.31)	6.41 (1.87)	26
alley	637	4.48 (1.97)	4.91 (2.42)	4.00 (1.70)	8	bathroom	548	5.55 (1.36)	3.88 (1.72)	5.65 (1.59)	18
alone	12	2.41 (1.77)	4.83 (2.66)	3.70 (2.42)	195	bathtub	652	6.69 (1.57)	4.36 (2.59)	5.76 (1.76)	4
aloof	13	4.90 (1.92)	4.28 (2.10)	4.69 (1.92)	5	beach	34	8.03 (1.59)	5.53 (3.07)	5.44 (2.52)	61
ambition	14	7.04 (1.98)	5.61 (2.92)	6.93 (2.07)	19	beast	653	4.23 (2.41)	5.57 (2.61)	4.89 (2.29)	7
ambulance	15	2.47 (1.50)	7.33 (1.96)	3.22 (2.29)	6	beautiful	654	7.60 (1.64)	6.17 (2.34)	6.29 (1.81)	127
angel	16	7.53 (1.58)	4.83 (2.63)	4.97 (2.34)	18	beauty	35	7.82 (1.16)	4.95 (2.57)	5.53 (2.10)	71
anger	17	2.34 (1.32)	7.63 (1.91)	5.50 (2.82)	48	bed	549	7.51 (1.38)	3.61 (2.56)	6.88 (1.78)	127
angry	18	2.85 (1.70)	7.17 (2.07)	5.55 (2.74)	45	bees	583	3.20 (2.07)	6.51 (2.14)	4.16 (2.11)	15

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
beggar	36	3.22 (2.02)	4.91 (2.45)	4.09 (2.38)	2	brutal	53	2.80 (1.90)	6.60 (2.36)	4.59 (2.70)	7
bench	655	4.61 (1.40)	3.59 (2.07)	4.68 (1.38)	35	building	550	5.29 (1.15)	3.92 (1.94)	5.25 (1.57)	160
bereavement	656	4.57 (1.70)	4.20 (2.15)	4.33 (1.73)	4	bullet	673	3.29 (2.06)	5.33 (2.48)	3.90 (2.61)	28
betray	37	1.68 (1.02)	7.24 (2.06)	4.92 (2.97)	4	bunny	54	7.24 (1.32)	4.06 (2.61)	4.97 (2.18)	1
beverage	657	6.83 (1.48)	5.21 (2.46)	5.63 (2.17)	5	burdened	55	2.50 (1.32)	5.63 (2.07)	5.03 (2.35)	4
bird	38	7.27 (1.36)	3.17 (2.23)	4.42 (2.26)	31	burial	56	2.05 (1.41)	5.08 (2.40)	3.55 (1.95)	11
birthday	39	7.84 (1.92)	6.68 (2.11)	5.89 (2.61)	18	burn	586	2.73 (1.72)	6.22 (1.91)	4.22 (1.83)	15
black	543	5.39 (1.80)	4.61 (2.24)	5.14 (1.79)	203	bus	541	4.51 (1.57)	3.55 (1.80)	4.84 (1.75)	34
blackmail	40	2.95 (1.95)	6.03 (2.70)	3.54 (2.67)	2	busybody	674	5.17 (2.02)	4.84 (2.41)	5.45 (1.97)	.
bland	658	4.10 (1.08)	3.29 (1.89)	4.88 (1.27)	3	butter	57	5.33 (1.20)	3.17 (1.84)	4.67 (1.69)	27
blase	41	4.89 (1.16)	3.94 (1.76)	4.57 (1.44)	7	butterfly	58	7.17 (1.20)	3.47 (2.39)	4.65 (2.27)	2
blasphemy	659	3.75 (2.26)	4.93 (2.34)	4.75 (1.59)	4	cabinet	675	5.05 (0.31)	3.43 (1.85)	4.73 (1.66)	17
bless	42	7.19 (1.69)	4.05 (2.59)	5.52 (2.22)	9	cake	59	7.26 (1.27)	5.00 (2.37)	5.16 (2.05)	9
blind	43	3.05 (1.99)	4.39 (2.36)	3.28 (1.91)	47	cancer	60	1.50 (0.85)	6.42 (2.83)	3.42 (2.99)	25
bliss	660	6.95 (2.24)	4.41 (2.95)	6.12 (2.15)	4	candy	61	6.54 (2.09)	4.58 (2.40)	5.33 (1.91)	16
blister	661	2.88 (1.75)	4.10 (2.34)	3.98 (1.90)	3	cane	677	4.00 (1.80)	4.20 (1.93)	4.27 (1.95)	12
blond	662	6.43 (2.04)	5.07 (2.70)	5.74 (1.67)	11	cannon	678	4.90 (2.20)	4.71 (2.84)	5.17 (2.29)	7
bloody	584	2.90 (1.98)	6.41 (2.00)	3.96 (1.89)	8	capable	62	7.16 (1.39)	5.08 (2.07)	6.47 (1.94)	66
blossom	44	7.26 (1.18)	5.03 (2.65)	5.53 (2.21)	7	car	551	7.73 (1.63)	6.24 (2.04)	6.98 (2.06)	274
blubber	663	3.52 (1.99)	4.57 (2.38)	3.86 (1.97)	1	carcass	679	3.34 (1.92)	4.83 (2.07)	4.90 (1.79)	7
blue	544	6.76 (1.78)	4.31 (2.20)	5.63 (1.64)	143	carefree	63	7.54 (1.38)	4.17 (2.84)	5.78 (2.50)	9
board	664	4.82 (1.23)	3.36 (2.12)	4.98 (1.77)	239	caress	64	7.84 (1.16)	5.14 (3.00)	5.83 (2.13)	1
body	665	5.55 (2.37)	5.52 (2.63)	5.34 (2.12)	276	cash	503	8.37 (1.00)	7.37 (2.21)	6.96 (2.39)	36
bold	45	6.80 (1.61)	5.60 (2.21)	6.67 (1.81)	21	casino	680	6.81 (1.66)	6.51 (2.12)	5.12 (2.15)	2
bomb	46	2.10 (1.19)	7.15 (2.40)	4.54 (2.88)	36	cat	504	5.72 (2.43)	4.38 (2.24)	6.16 (2.05)	.
book	47	5.72 (1.54)	4.17 (2.49)	5.30 (2.05)	193	cell	587	3.82 (1.70)	4.08 (2.19)	4.12 (2.13)	65
bored	48	2.95 (1.35)	2.83 (2.31)	4.11 (1.70)	14	cellar	681	4.32 (1.68)	4.39 (2.33)	4.66 (1.61)	26
bottle	666	6.15 (1.49)	4.79 (2.44)	4.78 (1.65)	76	cemetery	65	2.63 (1.40)	4.82 (2.66)	4.27 (2.14)	15
bouquet	667	7.02 (1.84)	5.46 (2.47)	6.15 (1.80)	4	chair	66	5.08 (0.98)	3.15 (1.77)	4.56 (1.60)	66
bowl	49	5.33 (1.33)	3.47 (2.12)	4.69 (1.67)	23	champ	682	7.18 (1.97)	6.00 (2.43)	6.77 (2.00)	1
boxer	585	5.51 (1.80)	5.12 (2.26)	5.10 (1.64)	1	champion	67	8.44 (0.90)	5.85 (3.15)	6.50 (2.85)	23
boy	50	6.32 (1.60)	4.58 (2.37)	5.34 (2.20)	242	chance	683	6.02 (1.77)	5.38 (2.58)	4.64 (1.93)	131
brave	668	7.15 (1.64)	6.15 (2.45)	7.22 (1.86)	24	chaos	684	4.17 (2.36)	6.67 (2.06)	3.86 (1.95)	17
breast	51	6.50 (1.78)	5.37 (2.39)	5.39 (2.27)	11	charm	68	6.77 (1.58)	5.16 (2.25)	5.57 (2.25)	26
breeze	669	6.85 (1.71)	4.37 (2.32)	5.54 (1.67)	14	cheer	69	8.10 (1.17)	6.12 (2.45)	6.00 (2.06)	8
bride	670	7.34 (1.71)	5.55 (2.74)	5.74 (2.36)	33	child	70	7.08 (1.98)	5.55 (2.29)	5.10 (2.30)	213
bright	671	7.50 (1.55)	5.40 (2.33)	6.34 (1.82)	87	chin	685	5.29 (1.27)	3.31 (1.98)	5.26 (1.48)	27
broken	672	3.05 (1.92)	5.43 (2.42)	4.14 (1.62)	63	chocolate	505	6.88 (1.89)	5.29 (2.55)	5.18 (1.97)	9
brother	52	7.11 (2.17)	4.71 (2.68)	5.12 (2.31)	73	christmas	686	7.80 (1.55)	6.27 (2.56)	5.37 (2.09)	27

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
church	71	6.28 (2.31)	4.34 (2.45)	5.00 (2.42)	348	cozy	88	7.39 (1.53)	3.32 (2.28)	4.89 (2.28)	1
circle	687	5.67 (1.26)	3.86 (2.13)	5.03 (1.46)	60	crash	89	2.31 (1.44)	6.95 (2.44)	3.44 (2.21)	20
circus	72	7.30 (1.84)	5.97 (2.59)	5.39 (2.25)	7	crime	704	2.89 (2.06)	5.41 (2.69)	4.12 (2.24)	34
city	73	6.03 (1.37)	5.24 (2.53)	5.74 (2.08)	393	criminal	705	2.93 (1.66)	4.79 (2.51)	3.34 (1.73)	24
cliff	553	4.67 (2.08)	6.25 (2.15)	4.35 (2.11)	11	crisis	706	2.74 (2.23)	5.44 (3.07)	3.60 (2.47)	82
clock	688	5.14 (1.54)	4.02 (2.54)	4.67 (1.97)	20	crown	90	6.58 (1.42)	4.28 (2.53)	6.06 (2.15)	19
clothing	74	6.54 (1.85)	4.78 (2.88)	5.33 (2.14)	20	crucify	91	2.23 (1.72)	6.47 (2.47)	3.74 (2.48)	2
clouds	533	6.18 (2.18)	3.30 (2.08)	5.22 (1.66)	38	crude	707	3.12 (1.65)	5.07 (2.37)	4.27 (1.94)	15
clumsy	689	4.00 (2.22)	5.18 (2.40)	3.86 (1.79)	6	cruel	92	1.97 (1.67)	5.68 (2.65)	4.24 (2.84)	15
coarse	690	4.55 (1.42)	4.21 (1.84)	5.00 (1.43)	10	crushed	93	2.21 (1.74)	5.52 (2.87)	3.36 (2.69)	10
coast	691	5.98 (1.86)	4.59 (2.31)	5.67 (1.71)	61	crutch	708	3.43 (1.62)	4.14 (2.05)	3.91 (1.79)	1
cockroach	75	2.81 (2.11)	6.11 (2.78)	4.74 (2.58)	2	cuddle	94	7.72 (1.92)	4.40 (2.67)	5.85 (2.42)	.
coffin	76	2.56 (1.96)	5.03 (2.79)	4.08 (2.54)	7	cuisine	709	6.64 (1.48)	4.39 (1.99)	5.41 (1.19)	1
coin	692	6.02 (1.96)	4.29 (2.48)	5.66 (1.68)	10	curious	95	6.08 (1.63)	5.82 (1.64)	5.42 (1.60)	46
cold	693	4.02 (1.99)	5.19 (2.23)	4.69 (1.73)	171	curtains	710	4.83 (0.83)	3.67 (1.83)	5.05 (1.56)	8
color	694	7.02 (1.57)	4.73 (2.64)	6.17 (1.82)	141	custom	96	5.85 (1.53)	4.66 (2.12)	5.00 (1.87)	14
column	695	5.17 (0.85)	3.62 (1.91)	4.81 (1.58)	71	cut	711	3.64 (2.08)	5.00 (2.32)	4.70 (1.98)	192
comedy	77	8.37 (0.94)	5.85 (2.81)	5.44 (2.08)	39	cute	97	7.62 (1.01)	5.53 (2.71)	4.86 (2.32)	5
comfort	696	7.07 (2.14)	3.93 (2.85)	5.70 (2.05)	43	cyclone	98	3.60 (2.38)	6.36 (2.89)	4.89 (2.56)	.
computer	552	6.24 (1.61)	4.75 (1.93)	5.29 (1.99)	13	dagger	99	3.38 (1.77)	6.14 (2.64)	4.52 (2.27)	1
concentrate	78	5.20 (1.28)	4.65 (2.13)	4.97 (1.75)	11	damage	712	3.05 (1.65)	5.57 (2.26)	3.88 (1.86)	33
confident	79	7.98 (1.29)	6.22 (2.41)	7.68 (1.94)	16	dancer	507	7.14 (1.56)	6.00 (2.20)	6.02 (1.93)	31
confused	80	3.21 (1.51)	6.03 (1.88)	4.24 (1.91)	44	danger	713	2.95 (2.22)	7.32 (2.07)	3.59 (2.31)	70
consoled	81	5.78 (1.64)	4.53 (2.22)	4.44 (1.84)	2	dark	714	4.71 (2.36)	4.28 (2.21)	4.84 (2.15)	185
contempt	82	3.85 (2.13)	5.28 (2.04)	5.13 (1.73)	15	dawn	715	6.16 (2.33)	4.39 (2.81)	5.16 (2.23)	28
contents	83	4.89 (0.89)	4.32 (2.14)	4.85 (1.49)	16	daylight	716	6.80 (2.17)	4.77 (2.50)	5.48 (2.14)	15
context	84	5.20 (1.38)	4.22 (2.24)	5.17 (1.39)	2	dazzle	717	7.29 (1.09)	6.33 (2.02)	5.62 (1.81)	1
controlling	85	3.80 (2.25)	6.10 (2.19)	5.17 (3.15)	23	dead	588	1.94 (1.76)	5.73 (2.73)	2.84 (2.32)	174
cook	697	6.16 (1.89)	4.44 (1.96)	5.14 (1.49)	47	death	100	1.61 (1.40)	4.59 (3.07)	3.47 (2.50)	277
cord	698	5.10 (1.09)	3.54 (2.09)	5.00 (1.22)	6	debt	101	2.22 (1.17)	5.68 (2.74)	3.02 (2.16)	13
cork	699	5.22 (1.13)	3.80 (2.18)	4.98 (1.04)	9	deceit	718	2.90 (1.63)	5.68 (2.46)	3.95 (2.12)	2
corner	700	4.36 (1.21)	3.91 (1.92)	4.12 (1.66)	115	decompose	102	3.20 (1.81)	4.65 (2.39)	4.02 (1.91)	1
corpse	86	2.18 (1.48)	4.74 (2.94)	3.59 (2.44)	7	decorate	719	6.93 (1.30)	5.14 (2.39)	6.05 (1.86)	2
corridor	701	4.88 (1.14)	3.63 (2.41)	5.00 (1.48)	17	defeated	103	2.34 (1.66)	5.09 (3.00)	3.11 (2.34)	15
corrupt	702	3.32 (2.32)	4.67 (2.35)	4.64 (2.30)	8	defiant	104	4.26 (2.12)	6.10 (2.51)	5.77 (2.40)	3
cottage	87	6.45 (1.52)	3.39 (2.54)	5.39 (1.78)	19	deformed	720	2.41 (1.66)	4.07 (2.34)	3.95 (2.18)	.
couple	506	7.41 (1.97)	6.39 (2.31)	6.02 (2.28)	122	delayed	721	3.07 (1.74)	5.62 (2.39)	3.64 (1.94)	25
cow	554	5.57 (1.53)	3.49 (2.13)	5.32 (1.61)	29	delight	105	8.26 (1.04)	5.44 (2.88)	5.79 (2.24)	29
coward	703	2.74 (1.64)	4.07 (2.19)	2.83 (1.61)	8	demon	106	2.11 (1.56)	6.76 (2.68)	4.89 (2.89)	9

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
dentist	589	4.02 (2.23)	5.73 (2.13)	3.80 (2.16)	12	dreadful	131	2.26 (1.91)	5.84 (2.62)	4.10 (2.36)	10
depressed	107	1.83 (1.42)	4.72 (2.95)	2.74 (2.13)	11	dream	132	6.73 (1.75)	4.53 (2.72)	5.53 (1.98)	64
depression	108	1.85 (1.67)	4.54 (3.19)	2.91 (2.27)	24	dreary	731	3.05 (1.58)	2.98 (2.18)	3.81 (1.64)	6
derelict	722	4.28 (1.84)	4.10 (1.94)	4.78 (1.56)	1	dress	133	6.41 (1.34)	4.05 (1.89)	5.00 (1.89)	67
deserter	109	2.45 (1.80)	5.50 (2.55)	3.77 (2.29)	.	drown	591	1.92 (1.48)	6.57 (2.33)	2.86 (1.99)	3
desire	508	7.69 (1.39)	7.35 (1.76)	6.49 (1.83)	79	dummy	732	3.38 (1.70)	4.35 (2.25)	3.67 (2.02)	3
despairing	110	2.43 (1.47)	5.68 (2.37)	3.43 (2.11)	4	dump	733	3.21 (1.87)	4.12 (2.36)	3.83 (1.87)	4
despise	111	2.03 (1.38)	6.28 (2.43)	4.72 (2.80)	7	dustpan	555	3.98 (1.68)	3.43 (2.00)	5.45 (1.81)	.
destroy	112	2.64 (2.03)	6.83 (2.38)	4.94 (2.86)	48	earth	134	7.15 (1.67)	4.24 (2.49)	5.61 (2.30)	150
destruction	723	3.16 (2.44)	5.82 (2.71)	3.93 (2.29)	38	easy	734	7.10 (1.91)	4.48 (2.82)	7.00 (1.63)	125
detached	113	3.86 (1.88)	4.26 (2.57)	3.63 (2.15)	12	easygoing	135	7.20 (1.50)	4.30 (2.52)	5.25 (1.75)	1
detail	724	5.55 (1.58)	4.10 (2.24)	5.21 (1.60)	72	eat	136	7.47 (1.73)	5.69 (2.51)	5.60 (2.12)	61
detest	114	2.17 (1.30)	6.06 (2.39)	5.83 (2.60)	1	ecstasy	735	7.98 (1.52)	7.38 (1.92)	6.68 (2.08)	6
devil	115	2.21 (1.99)	6.07 (2.61)	5.35 (2.75)	25	education	137	6.69 (1.77)	5.74 (2.46)	6.15 (2.35)	214
devoted	116	7.41 (1.37)	5.23 (2.21)	6.18 (2.36)	51	egg	736	5.29 (1.82)	3.76 (2.39)	4.49 (2.16)	12
diamond	117	7.92 (1.20)	5.53 (2.96)	5.54 (2.28)	8	elated	138	7.45 (1.77)	6.21 (2.30)	5.53 (2.35)	3
dignified	118	7.10 (1.26)	4.12 (2.29)	6.12 (2.40)	7	elbow	737	5.12 (0.92)	3.81 (2.14)	4.88 (1.52)	10
dinner	509	7.16 (1.50)	5.43 (2.14)	6.10 (1.87)	91	elegant	139	7.43 (1.26)	4.53 (2.65)	5.95 (2.09)	14
diploma	119	8.00 (1.39)	5.67 (2.80)	6.76 (2.50)	.	elevator	738	5.44 (1.18)	4.16 (1.99)	4.32 (1.69)	12
dirt	725	4.17 (1.77)	3.76 (2.26)	4.83 (1.82)	43	embarrassed	140	3.03 (1.85)	5.87 (2.55)	2.87 (1.99)	8
dirty	590	3.08 (2.05)	4.88 (2.29)	4.70 (2.12)	36	embattled	141	4.39 (1.63)	5.36 (2.37)	4.81 (1.79)	1
disappoint	120	2.39 (1.44)	4.92 (2.64)	3.29 (2.32)	.	employment	147	6.47 (1.81)	5.28 (2.12)	5.73 (2.08)	47
disaster	121	1.73 (1.13)	6.33 (2.70)	3.52 (2.42)	26	engaged	143	8.00 (1.38)	6.77 (2.07)	6.49 (2.22)	47
discomfort	726	2.19 (1.23)	4.17 (2.44)	3.86 (2.26)	7	engine	148	5.20 (1.18)	3.98 (2.33)	5.00 (1.77)	50
discouraged	122	3.00 (2.16)	4.53 (2.11)	3.61 (2.01)	15	enjoyment	145	7.80 (1.20)	5.20 (2.72)	6.46 (1.77)	21
disdainful	123	3.68 (1.90)	5.04 (2.14)	4.55 (1.92)	2	ennui	146	5.09 (1.76)	4.40 (2.33)	4.67 (1.80)	.
disgusted	124	2.45 (1.41)	5.42 (2.59)	4.34 (1.94)	6	enraged	149	2.46 (1.65)	7.97 (2.17)	6.33 (2.92)	1
disloyal	125	1.93 (1.61)	6.56 (2.21)	3.79 (2.75)	2	erotic	512	7.43 (1.53)	7.24 (1.97)	6.39 (2.16)	8
displeased	126	2.79 (2.23)	5.64 (2.48)	4.19 (2.19)	7	errand	150	4.58 (1.74)	3.85 (1.92)	4.78 (1.51)	7
distressed	127	1.94 (1.10)	6.40 (2.38)	3.76 (2.41)	4	event	740	6.21 (1.63)	5.10 (2.40)	5.52 (1.57)	81
disturb	727	3.66 (2.00)	5.80 (2.39)	4.55 (1.90)	10	evil	741	3.23 (2.64)	6.39 (2.44)	5.25 (2.60)	72
diver	510	6.45 (1.55)	5.04 (2.10)	5.04 (1.91)	1	excellence	151	8.38 (0.96)	5.54 (2.67)	7.28 (2.32)	15
divorce	128	2.22 (1.88)	6.33 (2.71)	3.26 (2.24)	29	excitement	152	7.50 (2.20)	7.67 (1.91)	6.18 (2.17)	32
doctor	129	5.20 (2.54)	5.86 (2.70)	4.89 (2.75)	100	excuse	153	4.05 (1.41)	4.48 (2.29)	4.07 (2.10)	27
dog	511	7.57 (1.66)	5.76 (2.50)	6.25 (2.10)	75	execution	154	2.37 (2.06)	5.71 (2.74)	4.11 (2.66)	15
doll	728	6.09 (1.96)	4.24 (2.43)	4.61 (2.07)	10	exercise	155	7.13 (1.58)	6.84 (2.06)	5.68 (2.44)	58
dollar	729	7.47 (1.72)	6.07 (2.67)	6.33 (2.42)	46	fabric	742	5.30 (1.20)	4.14 (1.98)	5.03 (1.61)	15
door	130	5.13 (1.44)	3.80 (2.29)	4.69 (1.72)	312	face	556	6.39 (1.60)	5.04 (2.18)	5.67 (1.58)	371
dove	730	6.90 (1.54)	3.79 (2.28)	5.48 (1.70)	4	failure	156	1.70 (1.07)	4.95 (2.81)	2.40 (2.18)	89



Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
fall	743	4.09 (2.21)	4.70 (2.48)	4.00 (2.15)	147	friend	174	7.74 (1.24)	5.74 (2.57)	6.74 (1.89)	133
FALSE	744	3.27 (1.40)	3.43 (2.09)	4.10 (1.56)	29	friendly	175	8.43 (1.08)	5.11 (2.96)	5.92 (2.42)	61
fame	157	7.93 (1.29)	6.55 (2.46)	6.85 (2.14)	18	frigid	758	3.50 (1.85)	4.75 (2.56)	4.27 (1.98)	5
family	158	7.65 (1.55)	4.80 (2.71)	6.00 (1.87)	331	frog	176	5.71 (1.74)	4.54 (2.03)	5.34 (1.96)	1
famous	745	6.98 (2.07)	5.73 (2.68)	6.32 (2.18)	89	frustrated	177	2.48 (1.64)	5.61 (2.76)	3.50 (2.12)	10
fantasy	746	7.41 (1.90)	5.14 (2.82)	6.43 (2.05)	14	fun	759	8.37 (1.11)	7.22 (2.01)	6.80 (1.85)	44
farm	557	5.53 (1.85)	3.90 (1.95)	5.59 (1.81)	125	funeral	178	1.39 (0.87)	4.94 (3.21)	2.97 (2.55)	33
fascinate	159	7.34 (1.68)	5.83 (2.73)	6.15 (1.89)	3	fungus	179	3.06 (1.75)	4.68 (2.33)	4.06 (1.94)	2
fat	160	2.28 (1.92)	4.81 (2.80)	4.47 (3.06)	60	fur	180	4.51 (1.88)	4.18 (2.44)	4.32 (1.97)	13
father	161	7.08 (2.20)	5.92 (2.60)	5.63 (2.89)	383	game	760	6.98 (1.97)	5.89 (2.37)	5.70 (1.65)	123
fatigued	162	3.28 (1.43)	2.64 (2.19)	3.78 (1.97)	3	gangrene	181	2.28 (1.91)	5.70 (2.96)	3.36 (2.34)	.
fault	747	3.43 (1.38)	4.07 (1.69)	4.02 (1.66)	22	garbage	182	2.98 (1.96)	5.04 (2.50)	4.24 (2.02)	7
favor	748	6.46 (1.52)	4.54 (1.86)	5.67 (1.76)	78	garden	761	6.71 (1.74)	4.39 (2.35)	6.02 (1.71)	60
fear	592	2.76 (2.12)	6.96 (2.17)	3.22 (2.20)	127	garment	762	6.07 (1.61)	4.49 (2.50)	5.30 (1.96)	6
fearful	163	2.25 (1.18)	6.33 (2.28)	3.64 (2.18)	13	garter	534	6.22 (1.59)	5.47 (2.15)	5.82 (1.62)	2
feeble	164	3.26 (1.47)	4.10 (2.07)	2.71 (1.64)	8	gender	763	5.73 (1.55)	4.38 (2.13)	5.60 (1.84)	2
festive	749	7.30 (2.26)	6.58 (2.29)	5.77 (2.34)	2	gentle	183	7.31 (1.30)	3.21 (2.57)	5.10 (2.16)	27
fever	750	2.76 (1.64)	4.29 (2.31)	3.52 (2.15)	19	germs	764	2.86 (1.39)	4.49 (2.24)	3.79 (1.59)	1
field	558	6.20 (1.37)	4.08 (2.41)	5.84 (1.94)	274	gift	184	7.77 (2.24)	6.14 (2.76)	5.52 (2.54)	33
fight	751	3.76 (2.63)	7.15 (2.19)	5.27 (2.69)	98	girl	185	6.87 (1.64)	4.29 (2.69)	5.80 (2.16)	220
filth	165	2.47 (1.68)	5.12 (2.32)	3.81 (2.06)	2	glacier	186	5.50 (1.25)	4.24 (2.29)	4.92 (2.12)	1
finger	752	5.29 (1.42)	3.78 (2.42)	5.05 (1.70)	40	glamour	187	6.76 (1.60)	4.68 (2.23)	5.76 (2.49)	5
fire	166	3.22 (2.06)	7.17 (2.06)	4.49 (2.49)	187	glass	765	4.75 (1.38)	4.27 (2.07)	5.00 (1.46)	99
fireworks	513	7.55 (1.50)	6.67 (2.12)	5.51 (1.98)	5	gloom	188	1.88 (1.23)	3.83 (2.33)	3.55 (2.07)	14
fish	559	6.04 (1.94)	4.00 (2.19)	6.02 (1.68)	35	glory	189	7.55 (1.68)	6.02 (2.71)	6.85 (2.23)	21
flabby	167	2.66 (1.87)	4.82 (2.81)	3.31 (1.90)	.	god	190	8.15 (1.27)	5.95 (2.84)	5.88 (2.89)	318
flag	753	6.02 (1.66)	4.60 (2.35)	5.50 (1.66)	16	gold	191	7.54 (1.63)	5.76 (2.79)	5.85 (2.46)	52
flirt	754	7.52 (1.19)	6.91 (1.69)	6.24 (2.33)	1	golfer	535	5.61 (1.93)	3.73 (2.26)	5.55 (1.79)	3
flood	755	3.19 (1.66)	6.00 (2.02)	3.24 (2.14)	19	good	766	7.47 (1.45)	5.43 (2.85)	6.41 (2.05)	807
flower	168	6.64 (1.78)	4.00 (2.44)	4.98 (2.17)	23	gossip	767	3.48 (2.33)	5.74 (2.38)	3.57 (2.26)	13
foam	756	6.07 (2.03)	5.26 (2.54)	5.24 (1.97)	37	graduate	192	8.19 (1.13)	7.25 (2.25)	6.94 (2.44)	30
food	514	7.65 (1.37)	5.92 (2.11)	6.18 (2.48)	147	grass	768	6.12 (1.44)	4.14 (2.11)	5.44 (1.36)	53
foot	757	5.02 (0.93)	3.27 (1.98)	4.98 (1.42)	70	grateful	193	7.37 (0.97)	4.58 (2.14)	6.18 (1.77)	25
fork	560	5.29 (0.97)	3.96 (1.94)	5.74 (1.52)	14	greed	769	3.51 (1.93)	4.71 (2.26)	4.88 (2.03)	3
foul	169	2.81 (1.52)	4.93 (2.23)	4.51 (1.89)	4	green	194	6.18 (2.05)	4.28 (2.46)	4.82 (2.05)	116
fragrance	170	6.07 (1.97)	4.79 (2.54)	5.14 (1.91)	6	greet	770	7.00 (1.52)	5.27 (2.31)	5.95 (2.07)	7
fraud	171	2.67 (1.66)	5.75 (2.45)	3.58 (2.50)	8	grenade	771	3.60 (1.88)	5.70 (2.52)	4.29 (2.50)	3
free	172	8.26 (1.31)	5.15 (3.04)	6.35 (2.40)	260	grief	195	1.69 (1.04)	4.78 (2.84)	3.50 (2.35)	10
freedom	173	7.58 (2.04)	5.52 (2.72)	6.76 (2.29)	128	grime	772	3.37 (1.34)	3.98 (2.29)	4.47 (1.28)	.

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
grin	773	7.40 (1.87)	5.27 (2.64)	6.00 (1.86)	13	honest	210	7.70 (1.43)	5.32 (1.92)	6.24 (2.13)	47
gripe	774	3.14 (1.56)	5.00 (2.19)	4.67 (1.79)	.	honey	792	6.73 (1.70)	4.51 (2.25)	5.44 (1.47)	25
guillotine	196	2.48 (2.11)	6.56 (2.54)	4.64 (2.63)	.	honor	211	7.66 (1.24)	5.90 (1.83)	6.70 (2.04)	66
guilty	197	2.63 (1.98)	6.04 (2.76)	3.09 (2.22)	29	hooker	793	3.34 (2.31)	4.93 (2.82)	4.73 (2.48)	.
gun	593	3.47 (2.48)	7.02 (1.84)	3.53 (2.72)	118	hope	794	7.05 (1.96)	5.44 (2.47)	5.52 (2.20)	178
gymnast	515	6.35 (1.79)	5.02 (2.20)	5.31 (1.79)	1	hopeful	212	7.10 (1.46)	5.78 (2.09)	5.41 (1.92)	12
habit	775	4.11 (1.77)	3.95 (2.11)	4.30 (1.79)	23	horror	213	2.76 (2.25)	7.21 (2.14)	4.63 (2.70)	17
hairdryer	561	4.84 (0.84)	3.71 (1.75)	5.57 (1.27)	.	horse	214	5.89 (1.55)	3.89 (2.17)	4.67 (1.60)	117
hairpin	776	5.26 (1.45)	3.27 (2.41)	5.05 (1.32)	1	hospital	215	5.04 (2.45)	5.98 (2.54)	4.69 (2.16)	110
hamburger	777	6.27 (1.50)	4.55 (2.14)	5.32 (1.21)	6	hostage	216	2.20 (1.80)	6.76 (2.63)	2.83 (2.32)	2
hammer	198	4.88 (1.16)	4.58 (2.02)	4.75 (1.88)	9	hostile	217	2.73 (1.50)	6.44 (2.28)	4.85 (2.58)	19
hand	778	5.95 (1.38)	4.40 (2.07)	5.35 (1.49)	431	hotel	795	6.00 (1.77)	4.80 (2.53)	5.12 (1.84)	126
handicap	779	3.29 (1.69)	3.81 (2.27)	4.00 (2.24)	6	house	563	7.26 (1.72)	4.56 (2.41)	6.08 (2.12)	591
handsome	199	7.93 (1.47)	5.95 (2.73)	5.19 (2.22)	40	hug	218	8.00 (1.55)	5.35 (2.76)	5.79 (2.41)	3
haphazard	780	4.02 (1.41)	4.07 (2.18)	4.29 (1.67)	2	humane	796	6.89 (1.70)	4.50 (1.91)	5.70 (1.91)	5
happy	200	8.21 (1.82)	6.49 (2.77)	6.63 (2.43)	98	humble	219	5.86 (1.42)	3.74 (2.33)	4.76 (2.25)	18
hard	781	5.22 (1.82)	5.12 (2.19)	5.59 (1.63)	202	humiliate	797	2.24 (1.34)	6.14 (2.42)	2.60 (1.94)	.
hardship	782	2.45 (1.61)	4.76 (2.55)	4.22 (2.40)	9	humor	220	8.56 (0.81)	5.50 (2.91)	6.08 (2.14)	47
hat	783	5.46 (1.36)	4.10 (2.00)	5.39 (1.43)	56	hungry	221	3.58 (2.01)	5.13 (2.44)	4.68 (2.05)	23
hate	201	2.12 (1.72)	6.95 (2.56)	5.05 (2.95)	42	hurricane	798	3.34 (2.12)	6.83 (2.06)	3.07 (2.18)	8
hatred	202	1.98 (1.92)	6.66 (2.56)	4.30 (2.76)	20	hurt	222	1.90 (1.26)	5.85 (2.49)	3.33 (2.22)	37
hawk	536	5.88 (1.62)	4.39 (2.29)	5.50 (1.69)	14	hydrant	564	5.02 (0.93)	3.71 (1.75)	5.53 (1.30)	.
hay	784	5.24 (1.24)	3.95 (2.58)	5.37 (1.64)	19	icebox	799	4.95 (1.00)	4.17 (2.11)	5.05 (1.05)	3
headache	203	2.02 (1.06)	5.07 (2.74)	3.60 (1.98)	5	idea	800	7.00 (1.34)	5.86 (1.81)	6.26 (2.00)	195
headlight	785	5.24 (1.51)	3.81 (2.22)	4.88 (1.47)	.	identity	801	6.57 (1.99)	4.95 (2.24)	6.40 (1.89)	55
heal	786	7.09 (1.46)	4.77 (2.23)	5.79 (1.80)	2	idiot	223	3.16 (1.91)	4.21 (2.47)	3.18 (2.13)	2
health	204	6.81 (1.88)	5.13 (2.35)	5.83 (1.91)	105	idol	802	6.12 (1.86)	4.95 (2.14)	5.37 (2.17)	7
heart	787	7.39 (1.53)	6.34 (2.25)	5.49 (2.11)	173	ignorance	803	3.07 (2.25)	4.39 (2.49)	4.41 (2.38)	16
heaven	205	7.30 (2.39)	5.61 (3.20)	6.15 (2.56)	43	illness	804	2.48 (1.40)	4.71 (2.24)	3.21 (1.85)	20
hell	788	2.24 (1.62)	5.38 (2.62)	3.24 (2.36)	95	imagine	805	7.32 (1.52)	5.98 (2.14)	7.07 (1.99)	61
helpless	206	2.20 (1.42)	5.34 (2.52)	2.27 (1.83)	21	immature	806	3.39 (1.70)	4.15 (1.96)	4.85 (2.20)	7
heroin	789	4.36 (2.73)	5.11 (2.72)	4.80 (2.54)	2	immoral	807	3.50 (2.16)	4.98 (2.48)	4.66 (2.33)	5
hide	207	4.32 (1.91)	5.28 (2.51)	3.40 (2.12)	22	impair	808	3.18 (1.86)	4.04 (2.14)	4.09 (2.18)	4
highway	562	5.92 (1.72)	5.16 (2.44)	5.66 (1.81)	40	impotent	224	2.81 (1.92)	4.57 (2.59)	3.43 (2.43)	2
hinder	790	3.81 (1.42)	4.12 (2.01)	4.21 (1.54)	.	impressed	225	7.33 (1.84)	5.42 (2.65)	5.51 (2.21)	30
history	208	5.24 (2.01)	3.93 (2.29)	4.83 (2.08)	286	improve	226	7.65 (1.16)	5.69 (2.15)	6.08 (2.25)	39
hit	594	4.33 (2.35)	5.73 (2.09)	4.88 (2.01)	115	incentive	809	7.00 (1.72)	5.69 (2.45)	5.93 (2.02)	12
holiday	791	7.55 (2.14)	6.59 (2.73)	6.30 (2.17)	17	indifferent	810	4.61 (1.28)	3.18 (1.85)	4.84 (1.67)	11
home	209	7.91 (1.63)	4.21 (2.94)	5.90 (2.30)	547	industry	227	5.30 (1.61)	4.47 (2.43)	4.91 (2.04)	171

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
infant	811	6.95 (2.08)	5.05 (2.66)	5.67 (2.48)	11	kettle	832	5.22 (0.91)	3.22 (2.23)	5.00 (1.40)	3
infatuation	516	6.73 (2.08)	7.02 (1.87)	4.90 (2.28)	4	key	833	5.68 (1.62)	3.70 (2.18)	4.98 (2.04)	88
infection	228	1.66 (1.34)	5.03 (2.77)	3.61 (2.64)	8	kick	834	4.31 (2.18)	4.90 (2.35)	5.50 (1.93)	16
inferior	812	3.07 (1.57)	3.83 (2.05)	2.78 (2.08)	7	kids	835	6.91 (1.99)	5.27 (2.36)	5.07 (2.03)	32
inhabitant	813	5.05 (1.34)	3.95 (1.97)	5.37 (1.43)	.	killer	244	1.89 (1.39)	7.86 (1.89)	4.54 (3.11)	21
injury	595	2.49 (1.76)	5.69 (2.06)	3.57 (1.62)	27	kind	245	7.59 (1.67)	4.46 (2.55)	5.95 (1.93)	313
ink	229	5.05 (0.81)	3.84 (1.88)	4.61 (2.13)	7	kindness	246	7.82 (1.39)	4.30 (2.62)	5.67 (2.63)	5
innocent	814	6.51 (1.34)	4.21 (1.99)	5.28 (2.08)	37	king	247	7.26 (1.67)	5.51 (2.77)	7.38 (2.10)	88
insane	815	2.85 (1.94)	5.83 (2.45)	4.12 (2.23)	13	kiss	248	8.26 (1.54)	7.32 (2.03)	6.93 (2.28)	17
insect	816	4.07 (2.16)	4.07 (2.46)	4.56 (2.47)	14	kitten	517	6.86 (2.13)	5.08 (2.45)	6.86 (2.01)	5
insecure	230	2.36 (1.33)	5.56 (2.34)	2.33 (1.95)	3	knife	596	3.62 (2.18)	5.80 (2.00)	4.12 (2.18)	76
insolent	231	4.35 (1.76)	5.38 (2.37)	4.50 (2.06)	2	knot	836	4.64 (1.36)	4.07 (2.15)	4.67 (1.65)	8
inspire	232	6.97 (1.91)	5.00 (2.53)	6.34 (2.11)	3	knowledge	249	7.58 (1.32)	5.92 (2.32)	6.78 (2.41)	145
inspired	233	7.15 (1.85)	6.02 (2.67)	6.67 (2.31)	25	lake	250	6.82 (1.54)	3.95 (2.44)	4.90 (2.10)	54
insult	817	2.29 (1.33)	6.00 (2.46)	3.62 (2.05)	7	lamb	837	5.89 (1.73)	3.36 (2.18)	4.91 (1.96)	7
intellect	818	6.82 (1.96)	4.75 (2.50)	6.30 (1.98)	5	lamp	838	5.41 (1.00)	3.80 (2.12)	5.27 (1.61)	18
intercourse	819	7.36 (1.57)	7.00 (2.07)	6.40 (1.78)	9	lantern	839	5.57 (1.19)	4.05 (2.28)	5.07 (1.82)	13
interest	234	6.97 (1.53)	5.66 (2.26)	5.88 (1.78)	330	laughter	251	8.45 (1.08)	6.75 (2.50)	6.45 (2.45)	22
intimate	821	7.61 (1.51)	6.98 (2.21)	5.86 (2.29)	21	lavish	840	6.21 (2.03)	4.93 (2.40)	5.64 (1.61)	3
intruder	822	2.77 (2.32)	6.86 (2.41)	4.00 (2.68)	1	lawn	841	5.24 (0.86)	4.00 (1.79)	5.37 (1.11)	15
invader	823	3.05 (2.01)	5.50 (2.40)	4.00 (2.60)	1	lawsuit	842	3.37 (2.00)	4.93 (2.44)	3.92 (2.02)	1
invest	824	5.93 (2.10)	5.12 (2.42)	5.88 (1.95)	3	lazy	843	4.38 (2.02)	2.65 (2.06)	4.07 (1.93)	9
iron	565	4.90 (1.02)	3.76 (2.06)	5.10 (1.27)	43	leader	844	7.63 (1.59)	6.27 (2.18)	7.88 (1.60)	74
irritate	235	3.11 (1.67)	5.76 (2.15)	5.03 (2.05)	.	learn	252	7.15 (1.49)	5.39 (2.22)	6.34 (2.17)	84
item	825	5.26 (0.86)	3.24 (2.08)	5.26 (1.67)	54	legend	845	6.39 (1.34)	4.88 (1.76)	5.54 (1.64)	26
jail	236	1.95 (1.27)	5.49 (2.67)	3.81 (2.71)	21	leisurely	253	6.88 (1.81)	3.80 (2.38)	5.15 (1.90)	5
jealousy	237	2.51 (1.83)	6.36 (2.66)	3.80 (2.41)	4	leprosy	254	2.09 (1.40)	6.29 (2.23)	4.00 (2.30)	1
jelly	238	5.66 (1.44)	3.70 (2.29)	4.53 (1.77)	3	lesbian	597	4.67 (2.45)	5.12 (2.27)	5.35 (2.20)	.
jewel	239	7.00 (1.72)	5.38 (2.54)	5.59 (2.19)	1	letter	846	6.61 (1.59)	4.90 (2.37)	5.73 (1.48)	145
joke	826	8.10 (1.36)	6.74 (1.84)	6.15 (1.86)	22	liberty	255	7.98 (1.22)	5.60 (2.65)	6.29 (2.44)	46
jolly	827	7.41 (1.92)	5.57 (2.80)	6.39 (1.72)	4	lice	256	2.31 (1.78)	5.00 (2.26)	3.95 (2.29)	2
journal	828	5.14 (1.49)	4.05 (1.96)	5.26 (1.42)	42	lie	257	2.79 (1.92)	5.96 (2.63)	3.30 (2.42)	59
joy	240	8.60 (0.71)	7.22 (2.13)	6.28 (2.15)	40	life	258	7.27 (1.88)	6.02 (2.62)	5.72 (2.51)	715
joyful	241	8.22 (1.22)	5.98 (2.54)	6.60 (1.80)	1	lightbulb	566	5.61 (1.28)	4.10 (2.02)	5.82 (1.56)	.
jug	829	5.24 (1.65)	3.88 (2.15)	5.05 (1.62)	6	lighthouse	847	5.89 (2.08)	4.41 (2.44)	5.25 (2.02)	.
justice	242	7.78 (1.35)	5.47 (2.54)	6.47 (2.26)	114	lightning	598	4.57 (2.66)	6.61 (1.77)	3.67 (2.19)	14
kerchief	830	5.11 (1.33)	3.43 (2.08)	5.25 (1.28)	1	limber	848	5.68 (1.49)	4.57 (2.26)	5.34 (1.84)	2
kerosene	243	4.80 (1.59)	4.34 (2.51)	4.63 (1.99)	6	lion	518	5.57 (1.99)	6.20 (2.16)	4.12 (2.33)	17
ketchup	831	5.60 (1.35)	4.09 (2.08)	5.29 (1.81)	1	listless	259	4.12 (1.73)	4.10 (2.31)	4.14 (1.73)	1

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
lively	849	7.20 (1.97)	5.53 (2.90)	6.09 (1.95)	26	memories	871	7.48 (1.61)	6.10 (2.10)	5.88 (1.92)	15
locker	850	5.19 (1.31)	3.38 (2.13)	5.36 (1.87)	9	memory	274	6.62 (1.50)	5.42 (2.25)	5.11 (2.12)	76
loneliness	260	1.61 (1.02)	4.56 (2.97)	2.51 (2.27)	9	menace	275	2.88 (1.64)	5.52 (2.45)	4.98 (2.25)	9
lonely	261	2.17 (1.76)	4.51 (2.68)	2.95 (2.12)	25	merry	872	7.90 (1.49)	5.90 (2.42)	6.64 (1.66)	8
loser	851	2.25 (1.48)	4.95 (2.57)	3.02 (2.17)	1	messy	873	3.15 (1.73)	3.34 (2.37)	4.75 (2.15)	3
lost	852	2.82 (1.83)	5.82 (2.62)	2.86 (1.64)	173	metal	874	4.95 (1.17)	3.79 (1.96)	5.38 (1.40)	61
lottery	853	6.57 (2.04)	5.36 (2.45)	4.81 (2.11)	1	method	875	5.56 (1.76)	3.85 (2.58)	5.67 (1.58)	142
louse	262	2.81 (1.92)	4.98 (2.03)	3.57 (2.26)	3	mighty	276	6.54 (2.19)	5.61 (2.38)	7.23 (2.11)	29
love	263	8.72 (0.70)	6.44 (3.35)	7.11 (2.56)	232	mildew	277	3.17 (1.36)	4.08 (1.79)	4.40 (1.79)	1
loved	264	8.64 (0.71)	6.38 (2.68)	6.62 (2.53)	56	milk	876	5.95 (2.16)	3.68 (2.57)	5.83 (1.50)	49
loyal	265	7.55 (1.90)	5.16 (2.42)	6.91 (2.23)	18	millionaire	278	8.03 (1.42)	6.14 (2.70)	6.97 (2.40)	2
lucky	266	8.17 (1.06)	6.53 (2.34)	6.05 (2.25)	21	mind	877	6.68 (1.84)	5.00 (2.68)	6.37 (2.19)	325
lump	854	4.16 (2.34)	4.80 (2.82)	4.32 (2.18)	7	miracle	279	8.60 (0.71)	7.65 (1.67)	5.35 (2.58)	16
luscious	267	7.50 (1.08)	5.34 (2.51)	5.68 (1.84)	2	mischief	878	5.57 (2.05)	5.76 (1.95)	5.56 (1.88)	5
lust	519	7.12 (1.62)	6.88 (1.85)	5.49 (2.27)	5	misery	879	1.93 (1.60)	5.17 (2.69)	2.55 (1.45)	15
luxury	268	7.88 (1.49)	4.75 (2.91)	6.40 (2.45)	21	mistake	880	2.86 (1.79)	5.18 (2.42)	3.86 (2.42)	34
machine	855	5.09 (1.67)	3.82 (2.40)	5.23 (2.06)	103	mobility	881	6.83 (1.79)	5.00 (2.18)	6.43 (1.48)	8
mad	856	2.44 (1.72)	6.76 (2.26)	5.86 (2.20)	39	modest	280	5.76 (1.28)	3.98 (2.24)	4.96 (2.16)	29
madman	857	3.91 (2.49)	5.56 (2.78)	4.79 (2.55)	2	mold	882	3.55 (1.70)	4.07 (1.98)	4.33 (1.83)	45
maggot	269	2.06 (1.47)	5.28 (2.96)	4.03 (2.09)	2	moment	281	5.76 (1.65)	3.83 (2.29)	4.81 (1.92)	246
magical	858	7.46 (1.64)	5.95 (2.36)	5.73 (2.19)	12	money	282	7.59 (1.40)	5.70 (2.66)	6.25 (2.33)	265
mail	859	6.88 (1.74)	5.63 (2.36)	5.67 (1.79)	47	month	283	5.15 (1.09)	4.03 (1.77)	4.85 (1.14)	130
malaria	860	2.40 (1.38)	4.40 (2.54)	3.22 (1.90)	3	moody	883	3.20 (1.58)	4.18 (2.38)	4.39 (1.71)	5
malice	270	2.69 (1.84)	5.86 (2.75)	4.74 (2.72)	2	moral	884	6.20 (1.85)	4.49 (2.28)	5.90 (2.20)	142
man	537	6.73 (1.70)	5.24 (2.31)	5.53 (2.23)	1207	morbid	284	2.87 (2.14)	5.06 (2.68)	4.34 (2.50)	1
mangle	861	3.90 (2.01)	5.44 (2.10)	4.61 (1.84)	.	morgue	285	1.92 (1.32)	4.84 (2.96)	3.61 (1.94)	1
maniac	862	3.76 (2.00)	5.39 (2.46)	4.22 (2.07)	4	mosquito	885	2.80 (1.91)	4.78 (2.72)	4.51 (2.15)	1
manner	863	5.64 (1.34)	4.56 (1.78)	5.05 (1.83)	124	mother	286	8.39 (1.15)	6.13 (2.71)	5.74 (2.37)	216
mantel	864	4.93 (1.40)	3.27 (2.23)	4.95 (1.61)	3	mountain	287	6.59 (1.66)	5.49 (2.43)	5.46 (2.36)	33
manure	865	3.10 (1.74)	4.17 (2.09)	4.67 (1.36)	6	movie	288	6.86 (1.81)	4.93 (2.54)	5.00 (1.79)	29
market	866	5.66 (1.02)	4.12 (1.83)	5.27 (1.40)	155	mucus	886	3.34 (2.29)	3.41 (2.17)	4.80 (1.83)	2
massacre	867	2.28 (1.74)	5.33 (2.63)	3.50 (2.26)	1	muddy	887	4.44 (2.07)	4.13 (2.13)	4.73 (1.77)	10
masterful	271	7.09 (1.78)	5.20 (2.85)	7.18 (2.56)	2	muffin	888	6.57 (2.04)	4.76 (2.42)	5.51 (1.63)	.
masturbate	599	5.45 (2.02)	5.67 (2.18)	5.63 (2.25)	.	murderer	289	1.53 (0.96)	7.47 (2.18)	3.77 (3.06)	19
material	868	5.26 (1.29)	4.05 (2.34)	5.12 (1.45)	174	muscular	290	6.82 (1.63)	5.47 (2.20)	6.58 (2.28)	16
measles	272	2.74 (1.97)	5.06 (2.44)	4.13 (2.16)	2	museum	889	5.54 (1.86)	3.60 (2.13)	5.32 (1.68)	32
medicine	869	5.67 (2.06)	4.40 (2.36)	4.70 (1.91)	30	mushroom	567	5.78 (2.22)	4.72 (2.33)	5.52 (2.10)	2
mEEK	273	3.87 (1.69)	3.80 (2.13)	3.67 (2.23)	10	music	291	8.13 (1.09)	5.32 (3.19)	6.39 (2.44)	216
melody	870	7.07 (1.79)	4.98 (2.52)	5.46 (1.78)	21	mutation	890	3.91 (2.44)	4.84 (2.52)	4.07 (2.10)	.

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
mutilate	292	1.82 (1.45)	6.41 (2.94)	3.41 (2.71)	3	orchestra	299	6.02 (1.89)	3.52 (2.29)	5.17 (2.14)	60
mystic	891	6.00 (2.21)	4.84 (2.57)	5.52 (1.93)	3	orgasm	920	8.32 (1.31)	8.10 (1.45)	6.83 (2.18)	7
naked	892	6.34 (2.42)	5.80 (2.80)	6.00 (2.05)	32	outdoors	521	7.47 (1.80)	5.92 (2.55)	6.27 (2.24)	6
name	893	5.55 (2.24)	4.25 (2.47)	5.16 (2.08)	294	outrage	921	3.52 (2.12)	6.83 (2.26)	5.26 (2.72)	4
narcotic	894	4.29 (2.30)	4.93 (2.57)	4.44 (2.43)	2	outstanding	922	7.75 (1.75)	6.24 (2.59)	6.40 (2.29)	37
nasty	895	3.58 (2.38)	4.89 (2.50)	5.00 (2.17)	5	overcast	923	3.65 (1.61)	3.46 (1.92)	4.20 (1.79)	9
natural	896	6.59 (1.57)	4.09 (2.37)	5.57 (1.69)	156	overwhelmed	300	4.19 (2.61)	7.00 (2.37)	3.89 (2.58)	4
nature	293	7.65 (1.37)	4.37 (2.51)	4.95 (2.72)	191	owl	522	5.80 (1.31)	3.98 (1.87)	5.82 (1.62)	2
nectar	294	6.90 (1.53)	3.89 (2.48)	4.54 (2.06)	3	pain	301	2.13 (1.81)	6.50 (2.49)	3.71 (2.53)	88
needle	897	3.82 (1.73)	5.36 (2.89)	3.95 (2.17)	15	paint	924	5.62 (1.72)	4.10 (2.36)	5.75 (1.71)	37
neglect	898	2.63 (1.64)	4.83 (2.31)	3.85 (2.29)	12	palace	302	7.19 (1.78)	5.10 (2.75)	5.69 (2.17)	38
nervous	899	3.29 (1.47)	6.59 (2.07)	3.56 (1.73)	24	pamphlet	925	4.79 (1.05)	3.62 (2.02)	4.63 (1.48)	3
neurotic	900	4.45 (2.23)	5.13 (2.76)	4.41 (2.05)	10	pancakes	523	6.08 (1.83)	4.06 (2.13)	5.76 (1.61)	.
news	901	5.30 (1.67)	5.17 (2.11)	4.60 (1.88)	102	panic	601	3.12 (1.84)	7.02 (2.02)	3.20 (1.67)	22
nice	902	6.55 (2.44)	4.38 (2.69)	5.58 (2.20)	75	paper	303	5.20 (1.21)	2.50 (1.85)	4.47 (1.67)	157
nightmare	295	1.91 (1.54)	7.59 (2.23)	3.68 (2.76)	9	paradise	304	8.72 (0.60)	5.12 (3.38)	6.03 (2.79)	12
nipple	903	6.27 (1.81)	5.56 (2.55)	5.57 (2.00)	.	paralysis	926	1.98 (1.44)	4.73 (2.83)	2.56 (1.82)	6
noisy	904	5.02 (2.02)	6.38 (1.78)	4.93 (1.76)	6	part	927	5.11 (1.78)	3.82 (2.24)	4.75 (1.59)	500
nonchalant	296	4.74 (1.11)	3.12 (1.93)	4.31 (1.54)	1	party	305	7.86 (1.83)	6.69 (2.84)	5.83 (2.46)	216
nonsense	905	4.61 (1.63)	4.17 (2.02)	4.90 (1.55)	13	passage	928	5.28 (1.44)	4.36 (2.13)	5.02 (1.62)	49
noose	906	3.76 (1.64)	4.39 (2.08)	4.17 (1.92)	3	passion	306	8.03 (1.27)	7.26 (2.57)	6.13 (2.24)	28
nourish	907	6.46 (1.69)	4.29 (2.51)	5.80 (1.62)	.	pasta	524	6.69 (1.64)	4.94 (2.04)	5.80 (1.47)	.
nude	520	6.82 (1.63)	6.41 (2.09)	5.96 (2.29)	20	patent	307	5.29 (1.08)	3.50 (1.84)	4.90 (1.79)	35
nuisance	908	3.27 (1.86)	4.49 (2.69)	4.36 (1.73)	5	patient	929	5.29 (1.89)	4.21 (2.37)	4.90 (2.31)	86
nun	909	4.93 (1.89)	2.93 (1.80)	4.93 (1.69)	2	patriot	930	6.71 (1.69)	5.17 (2.53)	5.90 (1.54)	10
nurse	538	6.08 (2.08)	4.84 (2.04)	4.84 (2.20)	17	peace	308	7.72 (1.75)	2.95 (2.55)	5.45 (2.84)	198
nursery	910	5.73 (2.30)	4.04 (2.74)	5.18 (2.23)	13	penalty	931	2.83 (1.56)	5.10 (2.31)	3.95 (1.97)	14
obesity	911	2.73 (1.85)	3.87 (2.82)	3.74 (2.45)	5	pencil	309	5.22 (0.68)	3.14 (1.90)	4.78 (1.73)	34
obey	912	4.52 (1.88)	4.23 (1.72)	4.26 (2.40)	8	penis	932	5.90 (1.72)	5.54 (2.63)	5.92 (2.54)	.
obnoxious	913	3.50 (2.18)	4.74 (2.42)	5.39 (2.20)	5	penthouse	933	6.81 (1.64)	5.52 (2.49)	6.52 (1.82)	1
obscene	914	4.23 (2.30)	5.04 (2.30)	4.48 (1.91)	2	people	525	7.33 (1.70)	5.94 (2.09)	6.14 (2.02)	847
obsession	915	4.52 (2.13)	6.41 (2.13)	4.77 (2.38)	5	perfection	310	7.25 (2.05)	5.95 (2.73)	6.71 (2.26)	11
ocean	297	7.12 (1.72)	4.95 (2.79)	5.53 (2.75)	34	perfume	934	6.76 (1.48)	5.05 (2.36)	5.93 (1.69)	10
odd	916	4.82 (2.04)	4.27 (2.46)	4.77 (1.89)	44	person	311	6.32 (1.74)	4.19 (2.45)	5.35 (2.02)	175
offend	917	2.76 (1.50)	5.56 (2.06)	3.73 (2.03)	4	pervert	312	2.79 (2.12)	6.26 (2.61)	4.72 (2.83)	1
office	568	5.24 (1.59)	4.08 (1.92)	5.59 (1.89)	255	pest	313	3.13 (1.82)	5.62 (2.15)	5.29 (2.13)	4
opinion	298	6.28 (1.45)	4.89 (2.46)	5.53 (1.93)	96	pet	935	6.79 (2.32)	5.10 (2.59)	5.85 (2.28)	8
optimism	918	6.95 (2.24)	5.34 (2.58)	6.61 (2.06)	15	phase	936	5.17 (0.79)	3.98 (1.82)	4.65 (1.72)	72
option	919	6.49 (1.31)	4.74 (2.23)	6.34 (1.80)	5	pie	314	6.41 (1.89)	4.20 (2.40)	5.35 (1.78)	14

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pig	937	5.07 (1.97)	4.20 (2.42)	5.34 (1.88)	8	quality	950	6.25 (1.59)	4.48 (2.12)	5.64 (1.59)	114
pillow	315	7.92 (1.40)	2.97 (2.52)	4.56 (2.17)	8	quarrel	338	2.93 (2.06)	6.29 (2.56)	4.02 (2.16)	20
pinch	938	3.83 (1.70)	4.59 (2.10)	4.76 (1.73)	6	quart	951	5.39 (2.01)	3.59 (2.51)	5.20 (1.86)	3
pistol	939	4.20 (2.58)	6.15 (2.19)	5.05 (2.77)	27	queen	952	6.44 (1.43)	4.76 (2.18)	5.49 (2.12)	41
pity	940	3.37 (1.57)	3.72 (2.02)	4.12 (1.82)	14	quick	953	6.64 (1.61)	6.57 (1.78)	6.57 (1.91)	68
pizza	526	6.65 (2.23)	5.24 (2.09)	5.69 (1.90)	3	quiet	339	5.58 (1.83)	2.82 (2.13)	4.42 (2.30)	76
plain	941	4.39 (1.46)	3.52 (2.05)	4.71 (1.68)	48	rabbit	527	6.57 (1.92)	4.02 (2.19)	6.08 (1.72)	11
plane	539	6.43 (1.98)	6.14 (2.39)	4.78 (2.19)	114	rabies	340	1.77 (0.97)	6.10 (2.62)	3.85 (2.34)	1
plant	316	5.98 (1.83)	3.62 (2.25)	4.71 (2.12)	125	radiant	954	6.73 (2.17)	5.39 (2.82)	5.61 (2.17)	8
pleasure	317	8.28 (0.92)	5.74 (2.81)	6.15 (2.31)	62	radiator	955	4.67 (1.05)	4.02 (1.94)	4.81 (1.38)	4
poetry	318	5.86 (1.91)	4.00 (2.85)	5.31 (1.81)	88	radio	341	6.73 (1.47)	4.78 (2.82)	5.28 (1.85)	120
poison	319	1.98 (1.44)	6.05 (2.82)	3.10 (2.44)	10	rage	342	2.41 (1.86)	8.17 (1.40)	5.68 (3.01)	16
politeness	320	7.18 (1.50)	3.74 (2.37)	5.74 (1.70)	5	rain	569	5.08 (2.51)	3.65 (2.35)	4.78 (1.68)	70
pollute	321	1.85 (1.11)	6.08 (2.42)	4.92 (2.51)	1	rainbow	343	8.14 (1.23)	4.64 (2.88)	4.72 (2.37)	4
poster	942	5.34 (1.75)	3.93 (2.56)	4.91 (1.87)	4	rancid	956	4.34 (2.28)	5.04 (2.27)	4.59 (1.86)	.
poverty	322	1.67 (0.90)	4.87 (2.66)	3.21 (2.21)	20	rape	344	1.25 (0.91)	6.81 (3.17)	2.97 (2.94)	5
power	323	6.54 (2.21)	6.67 (1.87)	7.28 (2.35)	342	rat	345	3.02 (1.66)	4.95 (2.36)	4.55 (2.14)	6
powerful	324	6.84 (1.80)	5.83 (2.69)	7.19 (2.52)	63	rattle	346	5.03 (1.23)	4.36 (2.18)	4.17 (1.56)	5
prairie	325	5.75 (1.43)	3.41 (2.17)	4.62 (2.13)	21	razor	957	4.81 (2.16)	5.36 (2.44)	4.91 (1.95)	15
present	943	6.95 (1.85)	5.12 (2.39)	5.83 (1.78)	377	red	570	6.41 (1.61)	5.29 (2.04)	5.78 (1.59)	197
pressure	944	3.38 (1.61)	6.07 (2.26)	3.45 (2.07)	185	refreshment	347	7.44 (1.29)	4.45 (2.70)	5.00 (1.92)	2
prestige	945	7.26 (1.90)	5.86 (2.08)	6.90 (1.96)	29	regretful	348	2.28 (1.42)	5.74 (2.32)	3.43 (2.52)	1
pretty	326	7.75 (1.26)	6.03 (2.22)	5.50 (1.97)	107	rejected	349	1.50 (1.09)	6.37 (2.56)	2.72 (2.58)	33
prick	946	3.98 (1.73)	4.70 (2.59)	4.47 (1.88)	2	relaxed	350	7.00 (1.77)	2.39 (2.13)	5.55 (1.90)	14
pride	327	7.00 (2.11)	5.83 (2.48)	7.06 (2.15)	42	repentant	351	5.53 (1.86)	4.69 (1.98)	5.42 (2.06)	1
priest	328	6.42 (2.00)	4.41 (2.71)	4.88 (2.07)	16	reptile	958	4.77 (2.00)	5.18 (2.19)	4.77 (2.02)	.
prison	329	2.05 (1.34)	5.70 (2.56)	4.20 (2.58)	42	rescue	352	7.70 (1.24)	6.53 (2.56)	6.45 (2.29)	15
privacy	330	5.88 (1.50)	4.12 (1.83)	5.66 (1.78)	12	resent	959	3.76 (1.90)	4.47 (2.12)	4.46 (2.09)	8
profit	331	7.63 (1.30)	6.68 (1.78)	5.85 (2.47)	28	reserved	353	4.88 (1.83)	3.27 (2.05)	4.30 (1.93)	27
progress	947	7.73 (1.34)	6.02 (2.58)	6.76 (2.05)	120	respect	354	7.64 (1.29)	5.19 (2.39)	6.89 (2.11)	125
promotion	332	8.20 (1.15)	6.44 (2.58)	6.79 (2.28)	26	respectful	355	7.22 (1.27)	4.60 (2.67)	5.67 (2.38)	4
protected	333	7.29 (1.79)	4.09 (2.77)	5.80 (2.54)	31	restaurant	960	6.76 (1.85)	5.41 (2.55)	5.73 (1.41)	41
proud	334	8.03 (1.56)	5.56 (3.01)	6.74 (2.73)	50	reunion	961	6.48 (2.45)	6.34 (2.35)	5.64 (1.95)	11
pungent	948	3.95 (2.09)	4.24 (2.17)	4.78 (1.52)	4	reverent	356	5.35 (1.21)	4.00 (1.60)	4.67 (1.68)	3
punishment	335	2.22 (1.41)	5.93 (2.40)	3.50 (2.43)	21	revolt	357	4.13 (1.78)	6.56 (2.34)	6.18 (2.11)	8
puppy	336	7.56 (1.90)	5.85 (2.78)	5.51 (2.39)	2	revolver	962	4.02 (2.44)	5.55 (2.39)	4.39 (2.47)	14
pus	602	2.86 (1.91)	4.82 (2.06)	4.35 (1.82)	.	reward	358	7.53 (1.67)	4.95 (2.62)	6.00 (2.14)	15
putrid	337	2.38 (1.71)	5.74 (2.26)	4.89 (2.09)	.	riches	359	7.70 (1.95)	6.17 (2.70)	6.74 (2.43)	2
python	949	4.05 (2.48)	6.18 (2.25)	4.52 (2.56)	14	ridicule	360	3.13 (2.24)	5.83 (2.73)	3.87 (2.70)	5

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rifle	603	4.02 (2.76)	6.35 (2.04)	4.16 (2.71)	63	seat	380	4.95 (0.98)	2.95 (1.72)	4.84 (1.88)	54
rigid	963	3.66 (2.12)	4.66 (2.47)	4.61 (2.04)	24	secure	381	7.57 (1.76)	3.14 (2.47)	5.93 (2.57)	30
riot	361	2.96 (1.93)	6.39 (2.63)	4.18 (2.47)	7	selfish	382	2.42 (1.62)	5.50 (2.62)	4.64 (2.31)	8
river	362	6.85 (1.69)	4.51 (2.42)	5.10 (1.86)	165	sentiment	977	5.98 (1.71)	4.41 (2.30)	5.09 (1.46)	23
roach	363	2.35 (1.70)	6.64 (2.64)	4.82 (2.94)	2	serious	383	5.08 (1.59)	4.00 (1.87)	5.12 (1.65)	116
robber	964	2.61 (1.69)	5.62 (2.72)	3.62 (2.38)	2	severe	978	3.20 (1.74)	5.26 (2.36)	3.83 (1.91)	39
rock	965	5.56 (1.38)	4.52 (2.37)	5.15 (2.01)	75	sex	384	8.05 (1.53)	7.36 (1.91)	5.75 (2.25)	84
rollercoaster	528	8.02 (1.63)	8.06 (1.71)	5.10 (2.76)	.	sexy	530	8.02 (1.12)	7.36 (1.91)	6.82 (2.13)	2
romantic	364	8.32 (1.00)	7.59 (2.07)	6.08 (2.29)	32	shadow	385	4.35 (1.23)	4.30 (2.26)	4.19 (1.82)	36
rotten	365	2.26 (1.37)	4.53 (2.38)	4.32 (2.09)	2	shamed	386	2.50 (1.34)	4.88 (2.27)	2.98 (1.94)	1
rough	966	4.74 (2.00)	5.33 (2.04)	4.81 (1.70)	41	shark	606	3.65 (2.47)	7.16 (1.96)	2.63 (2.16)	.
rude	366	2.50 (2.11)	6.31 (2.47)	4.91 (2.49)	6	sheltered	387	5.75 (1.92)	4.28 (1.77)	3.76 (1.91)	4
runner	571	5.67 (1.91)	4.76 (2.40)	5.47 (1.84)	1	ship	388	5.55 (1.40)	4.38 (2.29)	5.12 (2.31)	83
rusty	367	3.86 (1.47)	3.77 (2.16)	4.53 (1.62)	8	shotgun	979	4.37 (2.75)	6.27 (1.94)	5.29 (2.67)	8
sad	368	1.61 (0.95)	4.13 (2.38)	3.45 (2.18)	35	shriek	980	3.93 (2.22)	5.36 (2.91)	4.30 (1.86)	5
safe	967	7.07 (1.90)	3.86 (2.72)	5.81 (2.06)	58	shy	389	4.64 (1.83)	3.77 (2.29)	3.44 (1.96)	13
sailboat	529	7.25 (1.71)	4.88 (2.73)	5.86 (1.71)	1	sick	607	1.90 (1.14)	4.29 (2.45)	3.04 (1.65)	51
saint	968	6.49 (1.70)	4.49 (1.90)	5.37 (2.11)	16	sickness	390	2.25 (1.71)	5.61 (2.67)	3.84 (2.50)	6
salad	369	5.74 (1.62)	3.81 (2.29)	5.47 (1.68)	9	silk	391	6.90 (1.27)	3.71 (2.51)	4.81 (1.93)	12
salute	370	5.92 (1.57)	5.31 (2.23)	5.46 (2.05)	3	silly	981	7.41 (1.80)	5.88 (2.38)	6.00 (2.09)	15
sapphire	371	7.00 (1.88)	5.00 (2.72)	5.55 (2.24)	.	sin	392	2.80 (1.67)	5.78 (2.21)	3.62 (2.29)	53
satisfied	372	7.94 (1.19)	4.94 (2.63)	6.14 (2.37)	36	sinful	393	2.93 (2.15)	6.29 (2.43)	4.24 (2.73)	3
save	969	6.45 (1.93)	4.95 (2.19)	6.00 (1.79)	62	sissy	394	3.14 (1.96)	5.17 (2.57)	3.58 (2.74)	.
savior	373	7.73 (1.56)	5.80 (3.01)	6.64 (2.18)	6	skeptical	395	4.52 (1.63)	4.91 (1.92)	4.50 (1.61)	7
scalding	970	2.82 (2.12)	5.95 (2.55)	3.82 (2.30)	1	skijump	531	7.06 (1.73)	7.06 (2.10)	4.90 (2.32)	.
scandal	971	3.32 (1.81)	5.12 (2.22)	4.34 (1.73)	8	skull	608	4.27 (1.83)	4.75 (1.85)	4.86 (1.62)	3
scapegoat	972	3.67 (1.65)	4.53 (2.13)	3.52 (1.70)	1	sky	572	7.37 (1.40)	4.27 (2.17)	5.16 (2.00)	58
scar	973	3.38 (1.70)	4.79 (2.11)	3.88 (1.71)	10	skyscraper	573	5.88 (1.87)	5.71 (2.17)	4.33 (2.36)	2
scared	604	2.78 (1.99)	6.82 (2.03)	2.94 (2.19)	21	slap	396	2.95 (1.79)	6.46 (2.58)	4.21 (2.29)	2
scholar	374	7.26 (1.42)	5.12 (2.46)	6.59 (2.02)	15	slaughter	397	1.64 (1.18)	6.77 (2.42)	3.82 (2.75)	10
scissors	974	5.05 (0.96)	4.47 (1.76)	5.16 (1.84)	1	slave	398	1.84 (1.13)	6.21 (2.93)	3.29 (2.76)	30
scorching	975	3.76 (1.83)	5.00 (2.74)	4.10 (2.01)	.	sleep	399	7.20 (1.77)	2.80 (2.66)	5.41 (2.41)	65
scorn	375	2.84 (2.07)	5.48 (2.52)	3.93 (2.64)	4	slime	400	2.68 (1.66)	5.36 (2.63)	4.17 (1.82)	1
scornful	376	3.02 (2.03)	5.04 (2.56)	4.59 (2.18)	5	slow	982	3.93 (1.60)	3.39 (2.22)	4.35 (1.61)	60
scorpion	976	3.69 (2.63)	5.38 (3.08)	3.98 (2.44)	.	slum	401	2.39 (1.25)	4.78 (2.52)	3.83 (2.18)	8
scream	605	3.88 (2.07)	7.04 (1.96)	4.75 (2.21)	13	slush	983	4.66 (1.88)	3.73 (2.23)	4.91 (1.48)	.
scum	377	2.43 (1.56)	4.88 (2.36)	4.26 (1.99)	.	smallpox	402	2.52 (2.08)	5.58 (2.13)	4.29 (2.17)	2
scurvy	378	3.19 (2.00)	4.71 (2.72)	4.48 (2.48)	1	smooth	984	6.58 (1.78)	4.91 (2.57)	5.09 (2.09)	42
seasick	379	2.05 (1.20)	5.80 (2.88)	3.41 (2.39)	.	snake	609	3.31 (2.20)	6.82 (2.10)	3.78 (2.05)	44

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
snob	403	3.36 (1.81)	5.65 (2.36)	5.11 (2.25)	1	sun	532	7.55 (1.85)	5.04 (2.66)	6.16 (2.09)	112
snow	575	7.08 (1.83)	5.75 (2.47)	5.80 (1.97)	59	sunlight	1003	7.76 (1.43)	6.10 (2.30)	5.63 (2.15)	17
snuggle	404	7.92 (1.24)	4.16 (2.80)	5.66 (2.47)	4	sunrise	420	7.86 (1.35)	5.06 (3.05)	5.29 (2.41)	10
social	985	6.88 (1.82)	4.98 (2.59)	5.91 (2.07)	380	sunset	421	7.68 (1.72)	4.20 (2.99)	5.66 (2.08)	14
soft	986	7.12 (1.34)	4.63 (2.61)	6.00 (1.80)	61	surgery	612	2.86 (2.19)	6.35 (2.32)	2.75 (1.86)	6
solemn	405	4.32 (1.51)	3.56 (1.95)	4.61 (1.87)	12	surprised	422	7.47 (1.56)	7.47 (2.09)	6.11 (2.19)	58
song	987	7.10 (1.97)	6.07 (2.42)	5.85 (2.12)	70	suspicious	423	3.76 (1.42)	6.25 (1.59)	4.47 (1.99)	13
soothe	988	7.30 (1.85)	4.40 (3.08)	5.36 (2.24)	2	swamp	1004	5.14 (2.24)	4.86 (2.36)	5.29 (1.63)	5
sour	989	3.93 (1.98)	5.10 (1.95)	4.64 (1.50)	3	sweetheart	424	8.42 (0.83)	5.50 (2.73)	6.03 (2.24)	9
space	574	6.78 (1.66)	5.14 (2.54)	5.20 (2.44)	184	swift	1005	6.46 (1.76)	5.39 (2.53)	6.29 (1.85)	32
spanking	990	3.55 (2.54)	5.41 (2.73)	3.91 (2.51)	.	swimmer	576	6.54 (1.64)	4.82 (2.49)	5.96 (1.91)	.
sphere	991	5.33 (0.87)	3.88 (1.99)	5.00 (0.92)	22	syphilis	425	1.68 (1.23)	5.69 (3.25)	3.33 (2.67)	.
spider	610	3.33 (1.72)	5.71 (2.21)	4.75 (2.11)	2	table	426	5.22 (0.72)	2.92 (2.16)	4.47 (1.66)	198
spirit	406	7.00 (1.32)	5.56 (2.62)	5.82 (2.42)	182	talent	427	7.56 (1.25)	6.27 (1.80)	6.49 (1.75)	40
spouse	407	7.58 (1.48)	5.21 (2.75)	5.53 (1.97)	3	tamper	1006	4.10 (1.88)	4.95 (2.01)	4.58 (2.10)	1
spray	992	5.45 (1.63)	4.14 (2.28)	5.12 (1.43)	16	tank	613	5.16 (1.87)	4.88 (1.86)	4.78 (1.93)	12
spring	993	7.76 (1.51)	5.67 (2.51)	6.26 (1.98)	127	taste	1007	6.66 (1.57)	5.22 (2.38)	5.50 (1.65)	59
square	408	4.74 (1.02)	3.18 (1.76)	4.51 (1.45)	143	taxi	1008	5.00 (1.96)	3.41 (2.14)	4.64 (1.83)	16
stagnant	994	4.15 (1.57)	3.93 (1.94)	4.71 (1.36)	5	teacher	1009	5.68 (2.12)	4.05 (2.61)	5.11 (2.20)	80
star	409	7.27 (1.66)	5.83 (2.44)	4.68 (2.15)	25	tease	1010	4.84 (2.51)	5.87 (2.56)	4.67 (2.37)	6
startled	410	4.50 (1.67)	6.93 (2.24)	4.48 (1.57)	21	tender	1011	6.93 (1.28)	4.88 (2.30)	5.33 (1.75)	11
starving	611	2.39 (1.82)	5.61 (2.53)	3.63 (2.10)	6	tennis	540	6.02 (1.97)	4.61 (2.60)	5.61 (2.12)	15
statue	995	5.17 (0.70)	3.46 (1.72)	4.95 (1.40)	17	tense	428	3.56 (1.36)	6.53 (2.10)	5.22 (2.02)	15
stench	996	2.19 (1.37)	4.36 (2.46)	4.29 (1.91)	1	termite	429	3.58 (2.08)	5.39 (2.43)	3.87 (1.87)	.
stiff	997	4.68 (1.97)	4.02 (2.41)	4.93 (2.04)	21	terrible	430	1.93 (1.44)	6.27 (2.44)	3.58 (2.34)	45
stink	411	3.00 (1.79)	4.26 (2.10)	4.16 (1.98)	3	terrific	431	8.16 (1.12)	6.23 (2.73)	6.60 (2.15)	5
stomach	998	4.82 (2.06)	3.93 (2.49)	4.68 (1.85)	37	terrified	432	1.72 (1.14)	7.86 (2.27)	3.08 (2.75)	7
stool	999	4.56 (1.72)	4.00 (2.14)	4.98 (1.85)	8	terrorist	614	1.69 (1.42)	7.27 (2.38)	2.65 (2.30)	.
storm	1000	4.95 (2.22)	5.71 (2.34)	4.54 (2.04)	26	thankful	433	6.89 (2.29)	4.34 (2.31)	5.32 (2.00)	6
stove	1001	4.98 (1.69)	4.51 (2.14)	5.36 (1.87)	15	theory	434	5.30 (1.49)	4.62 (1.94)	4.88 (1.81)	129
street	412	5.22 (0.72)	3.39 (1.87)	4.81 (1.21)	244	thermometer	1012	4.73 (1.05)	3.79 (2.02)	4.39 (1.51)	.
stress	413	2.09 (1.41)	7.45 (2.38)	3.93 (2.75)	107	thief	435	2.13 (1.69)	6.89 (2.13)	3.79 (2.55)	8
strong	414	7.11 (1.48)	5.92 (2.28)	6.92 (2.43)	202	thorn	436	3.64 (1.76)	5.14 (2.14)	4.45 (1.50)	3
stupid	415	2.31 (1.37)	4.72 (2.71)	2.98 (2.18)	24	thought	1013	6.39 (1.58)	4.83 (2.46)	6.02 (1.70)	515
subdued	416	4.67 (1.31)	2.90 (1.81)	4.08 (1.56)	8	thoughtful	437	7.65 (1.03)	5.72 (2.30)	5.61 (2.11)	11
success	417	8.29 (0.93)	6.11 (2.65)	6.89 (2.40)	93	thrill	438	8.05 (1.48)	8.02 (1.65)	6.54 (2.30)	5
suffocate	418	1.56 (0.96)	6.03 (3.19)	3.44 (2.81)	1	tidy	1014	6.30 (1.56)	3.98 (2.22)	5.49 (1.93)	1
sugar	1002	6.74 (1.73)	5.64 (2.18)	5.50 (1.50)	34	time	439	5.31 (2.02)	4.64 (2.75)	4.63 (2.24)	1599
suicide	419	1.25 (0.69)	5.73 (3.14)	3.58 (3.02)	17	timid	440	3.86 (1.55)	4.11 (2.09)	3.09 (1.91)	5



Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
tobacco	441	3.28 (2.16)	4.83 (2.90)	4.08 (2.27)	19	useful	466	7.14 (1.60)	4.26 (2.47)	5.93 (2.10)	58
tomb	442	2.94 (1.88)	4.73 (2.72)	3.72 (2.05)	11	useless	467	2.13 (1.42)	4.87 (2.58)	3.92 (2.62)	17
tool	1015	5.19 (1.27)	4.33 (1.78)	5.67 (1.62)	40	utensil	1024	5.14 (1.39)	3.57 (1.98)	5.40 (1.47)	.
toothache	443	1.98 (1.15)	5.55 (2.51)	3.90 (1.85)	.	vacation	468	8.16 (1.36)	5.64 (2.99)	6.80 (2.08)	47
tornado	444	2.55 (1.78)	6.83 (2.49)	4.30 (2.42)	1	vagina	1025	6.14 (1.77)	5.55 (2.55)	5.88 (1.74)	10
torture	445	1.56 (0.79)	6.10 (2.77)	3.33 (2.37)	3	valentine	469	8.11 (1.35)	6.06 (2.91)	5.81 (2.45)	2
tower	1016	5.46 (1.75)	3.95 (2.28)	5.78 (2.14)	13	vampire	470	4.26 (1.86)	6.37 (2.35)	5.05 (2.27)	1
toxic	446	2.10 (1.48)	6.40 (2.41)	4.42 (2.51)	3	vandal	471	2.71 (1.91)	6.40 (1.88)	3.91 (2.49)	1
toy	1017	7.00 (2.01)	5.11 (2.84)	6.09 (1.84)	4	vanity	472	4.30 (1.91)	4.98 (2.31)	4.80 (2.03)	7
tragedy	447	1.78 (1.31)	6.24 (2.64)	3.50 (2.34)	49	vehicle	473	6.27 (2.34)	4.63 (2.81)	5.77 (2.61)	35
traitor	448	2.22 (1.69)	5.78 (2.47)	4.61 (2.71)	2	venom	474	2.68 (1.81)	6.08 (2.44)	3.94 (2.23)	2
trash	615	2.67 (1.45)	4.16 (2.16)	5.24 (1.85)	2	vest	1026	5.25 (1.33)	3.95 (2.09)	5.09 (1.24)	4
trauma	616	2.10 (1.49)	6.33 (2.45)	2.84 (1.87)	1	victim	618	2.18 (1.48)	6.06 (2.32)	2.69 (2.04)	27
travel	1018	7.10 (2.00)	6.21 (2.51)	6.31 (2.08)	61	victory	475	8.32 (1.16)	6.63 (2.84)	7.26 (2.14)	61
treasure	449	8.27 (0.90)	6.75 (2.30)	6.36 (2.42)	4	vigorous	476	6.79 (1.54)	5.90 (2.66)	5.41 (2.22)	29
treat	1019	7.36 (1.38)	5.62 (2.25)	5.78 (1.82)	26	village	477	5.92 (1.34)	4.08 (1.87)	4.94 (1.74)	72
tree	450	6.32 (1.56)	3.42 (2.21)	5.08 (2.29)	59	violent	478	2.29 (1.78)	6.89 (2.47)	5.16 (2.86)	33
triumph	451	7.80 (1.83)	5.78 (2.60)	6.98 (2.20)	22	violin	579	5.43 (1.98)	3.49 (2.26)	5.18 (2.01)	11
triumphant	452	8.82 (0.73)	6.78 (2.58)	6.95 (2.55)	5	virgin	1027	6.45 (1.76)	5.51 (2.06)	6.24 (2.48)	35
trophy	453	7.78 (1.22)	5.39 (2.44)	6.44 (2.32)	8	virtue	479	6.22 (2.06)	4.52 (2.52)	6.13 (2.09)	30
trouble	454	3.03 (2.09)	6.85 (2.03)	4.85 (2.39)	134	vision	480	6.62 (1.84)	4.66 (2.43)	6.02 (1.96)	56
troubled	455	2.17 (1.21)	5.94 (2.36)	3.91 (2.33)	31	volcano	619	4.84 (2.14)	6.33 (2.21)	3.25 (1.97)	2
truck	577	5.47 (1.88)	4.84 (2.17)	5.33 (1.83)	57	vomit	481	2.06 (1.57)	5.75 (2.84)	3.58 (2.45)	3
trumpet	456	5.75 (1.38)	4.97 (2.13)	4.57 (1.72)	7	voyage	1028	6.25 (1.91)	5.55 (2.23)	5.18 (1.98)	17
trunk	1020	5.09 (1.57)	4.18 (2.19)	5.14 (1.90)	8	wagon	1029	5.37 (0.97)	3.98 (2.04)	5.05 (1.20)	55
trust	457	6.68 (2.71)	5.30 (2.66)	6.61 (2.04)	52	war	482	2.08 (1.91)	7.49 (2.16)	4.50 (3.00)	464
truth	458	7.80 (1.29)	5.00 (2.77)	6.47 (2.11)	126	warmth	483	7.41 (1.81)	3.73 (2.40)	5.61 (1.67)	28
tumor	459	2.36 (2.04)	6.51 (2.85)	3.58 (2.42)	17	wasp	484	3.37 (1.63)	5.50 (2.17)	3.76 (1.82)	2
tune	1021	6.93 (1.47)	4.71 (2.09)	5.74 (1.82)	10	waste	485	2.93 (1.76)	4.14 (2.30)	4.72 (1.94)	35
twilight	1022	7.23 (1.80)	4.70 (2.41)	5.59 (1.82)	4	watch	580	5.78 (1.51)	4.10 (2.12)	5.37 (1.75)	81
ugly	460	2.43 (1.27)	5.38 (2.23)	4.26 (2.33)	21	water	486	6.61 (1.78)	4.97 (2.49)	5.08 (1.99)	442
ulcer	461	1.78 (1.17)	6.12 (2.68)	4.17 (2.22)	5	waterfall	487	7.88 (1.03)	5.37 (2.84)	5.20 (2.18)	2
umbrella	578	5.16 (1.57)	3.68 (1.99)	5.42 (1.91)	8	wealthy	488	7.70 (1.34)	5.80 (2.73)	6.77 (2.57)	12
unfaithful	462	2.05 (1.55)	6.20 (2.70)	3.02 (2.54)	1	weapon	489	3.97 (1.92)	6.03 (1.89)	5.19 (2.61)	42
unhappy	463	1.57 (0.96)	4.18 (2.50)	3.34 (2.35)	26	weary	490	3.79 (2.12)	3.81 (2.29)	4.00 (1.91)	17
unit	1023	5.59 (1.87)	3.75 (2.49)	5.11 (1.74)	103	wedding	491	7.82 (1.56)	5.97 (2.85)	6.68 (2.08)	32
untroubled	464	7.62 (1.41)	3.89 (2.54)	5.53 (2.54)	.	whistle	1030	5.81 (1.21)	4.69 (1.99)	5.27 (1.87)	4
upset	465	2.00 (1.18)	5.86 (2.40)	4.08 (2.31)	14	white	542	6.47 (1.59)	4.37 (2.14)	5.98 (1.73)	365
urine	617	3.25 (1.71)	4.20 (2.18)	5.24 (1.86)	1	whore	492	2.30 (2.11)	5.85 (2.93)	4.61 (2.73)	2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
wicked	493	2.96 (2.37)	6.09 (2.44)	4.36 (2.65)	9	world	500	6.50 (2.03)	5.32 (2.39)	5.26 (2.47)	787
wife	1031	6.33 (1.97)	4.93 (2.22)	5.57 (1.68)	228	wounds	620	2.51 (1.58)	5.82 (2.01)	3.92 (1.57)	8
win	494	8.38 (0.92)	7.72 (2.16)	7.39 (2.36)	55	writer	1036	5.52 (1.90)	4.33 (2.45)	4.73 (1.84)	73
windmill	1032	5.60 (1.65)	3.74 (2.13)	5.24 (1.04)	1	yacht	1037	6.95 (1.79)	5.61 (2.72)	6.10 (2.13)	4
window	495	5.91 (1.38)	3.97 (2.01)	4.91 (1.60)	119	yellow	545	5.61 (1.94)	4.43 (2.05)	5.47 (1.58)	55
wine	496	5.95 (2.19)	4.78 (2.34)	5.31 (2.15)	72	young	1038	6.89 (2.12)	5.64 (2.51)	5.30 (2.49)	385
wink	1033	6.93 (1.83)	5.44 (2.68)	5.70 (1.77)	7	youth	1039	6.75 (2.29)	5.67 (2.52)	5.11 (2.55)	82
wise	497	7.52 (1.23)	3.91 (2.64)	6.70 (2.39)	36	zest	1040	6.79 (2.04)	5.59 (2.66)	6.00 (1.99)	5
wish	1034	7.09 (2.00)	5.16 (2.62)	5.28 (2.09)	110						
wit	1035	7.32 (1.90)	5.42 (2.44)	6.38 (2.01)	20						
woman	498	6.64 (1.76)	5.32 (2.59)	6.33 (1.52)	224						
wonder	499	6.03 (1.58)	5.00 (2.23)	5.32 (2.17)	67						

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
abduction	621	3.19 (1.94)	4.95 (1.99)	4.25 (2.05)	1	angry	18	3.87 (1.55)	6.67 (2.09)	6.21 (2.81)	45
abortion	622	4.00 (2.11)	4.72 (2.22)	5.44 (2.33)	6	anguished	19	2.70 (1.89)	4.45 (2.33)	3.70 (2.18)	2
absurd	623	3.86 (2.14)	4.09 (2.43)	4.76 (2.00)	17	ankle	638	5.63 (1.42)	4.53 (2.09)	4.68 (1.95)	8
abundance	624	6.62 (2.16)	5.90 (2.72)	6.05 (2.24)	13	annoy	20	3.00 (1.41)	6.50 (1.45)	5.09 (1.58)	2
abuse	1	2.78 (1.30)	6.67 (2.40)	3.33 (2.45)	18	answer	639	7.00 (1.70)	5.68 (2.21)	6.11 (2.21)	152
acceptance	625	7.75 (1.25)	6.00 (2.25)	6.75 (1.86)	49	anxious	21	4.80 (1.93)	6.70 (2.06)	5.80 (1.81)	29
accident	2	2.00 (1.06)	5.94 (3.27)	3.53 (2.15)	33	applause	640	7.33 (1.37)	5.83 (2.57)	6.89 (1.91)	14
ace	626	7.70 (1.34)	6.35 (2.62)	6.45 (2.58)	15	appliance	641	5.05 (1.62)	4.23 (2.33)	5.09 (1.60)	5
ache	627	3.00 (1.76)	5.26 (2.28)	3.89 (1.82)	4	arm	642	5.50 (1.79)	4.40 (2.74)	5.05 (2.01)	94
achievement	3	7.58 (1.73)	4.42 (2.61)	6.67 (2.10)	65	army	23	4.90 (1.52)	4.65 (2.01)	5.20 (2.38)	132
activate	4	5.89 (0.93)	4.44 (2.70)	5.56 (2.19)	2	aroused	24	8.00 (1.15)	6.22 (3.07)	6.10 (2.69)	20
addict	581	2.84 (2.53)	5.64 (2.56)	3.76 (2.59)	1	arrogant	25	4.69 (2.80)	5.12 (2.74)	5.88 (2.53)	2
addicted	628	2.75 (1.33)	4.50 (2.24)	3.65 (2.03)	3	art	643	5.70 (2.36)	4.60 (2.60)	4.75 (2.49)	208
admired	5	7.60 (1.45)	6.40 (1.99)	7.73 (1.22)	17	assassin	26	4.33 (2.19)	5.73 (2.74)	4.86 (2.57)	6
adorable	6	7.35 (1.37)	5.38 (2.39)	5.31 (2.27)	3	assault	27	2.55 (1.86)	7.17 (2.25)	5.73 (2.65)	15
adult	546	6.48 (1.53)	4.72 (2.25)	5.92 (1.85)	25	astonished	28	6.50 (1.55)	6.44 (2.34)	5.18 (1.94)	6
advantage	629	7.26 (1.45)	5.37 (1.98)	6.37 (2.36)	73	astronaut	501	6.79 (1.64)	4.92 (2.10)	5.33 (1.83)	2
adventure	630	7.23 (1.69)	6.91 (2.43)	6.38 (1.77)	14	athletics	644	6.76 (2.05)	6.71 (2.08)	6.19 (1.99)	9
affection	7	7.90 (0.99)	6.10 (2.56)	5.20 (2.35)	18	autumn	29	5.93 (1.83)	4.87 (2.45)	4.93 (1.62)	22
afraid	8	2.42 (1.56)	6.67 (2.35)	5.25 (3.08)	57	avalanche	645	3.62 (2.16)	5.29 (2.22)	4.00 (1.90)	1
aggressive	9	5.58 (1.31)	6.17 (2.48)	6.50 (1.68)	17	avenue	646	5.15 (1.23)	4.40 (1.85)	5.05 (1.57)	46
agility	22	7.10 (1.52)	4.20 (1.81)	6.10 (2.18)	3	awed	30	6.35 (1.50)	6.05 (2.16)	4.75 (2.27)	5
agony	10	2.47 (2.29)	5.47 (2.77)	4.60 (2.16)	9	baby	31	7.71 (1.49)	6.25 (2.49)	4.56 (2.94)	62
agreement	631	6.74 (1.52)	4.89 (1.94)	6.47 (1.98)	106	bake	647	6.32 (1.25)	4.70 (2.54)	5.22 (1.63)	12
air	632	6.47 (1.61)	4.68 (2.36)	5.21 (1.93)	257	bandage	648	4.00 (1.81)	3.80 (1.77)	4.30 (1.98)	4
alcoholic	582	3.72 (2.81)	5.36 (2.60)	4.84 (2.54)	3	bankrupt	32	2.24 (1.52)	5.71 (2.82)	2.94 (2.43)	5
alert	11	5.55 (1.64)	6.65 (2.60)	6.55 (1.64)	33	banner	649	5.35 (0.67)	3.65 (1.73)	4.80 (1.77)	8
alien	633	6.36 (1.65)	5.77 (1.93)	4.32 (2.10)	16	bar	650	7.00 (2.08)	5.50 (2.70)	5.85 (2.21)	82
alimony	634	3.21 (1.55)	3.67 (2.13)	4.00 (2.00)	2	barrel	651	5.30 (1.66)	3.75 (2.71)	4.90 (2.10)	24
alive	635	6.60 (2.48)	5.35 (2.72)	6.80 (1.94)	57	basket	547	5.60 (1.22)	3.36 (2.04)	5.92 (1.29)	17
allergy	636	3.20 (1.79)	4.60 (2.23)	2.95 (1.93)	1	bastard	33	3.20 (2.11)	6.38 (2.50)	4.50 (2.18)	12
alley	637	4.76 (1.76)	4.62 (1.91)	4.38 (1.28)	8	bath	502	7.24 (1.36)	4.76 (1.85)	5.72 (1.49)	26
alone	12	3.07 (2.34)	4.13 (2.72)	3.87 (2.45)	195	bathroom	548	5.92 (1.38)	3.84 (1.89)	5.72 (1.70)	18
aloof	13	5.24 (1.92)	3.88 (1.80)	4.82 (1.67)	5	bathtub	652	6.64 (1.68)	5.36 (2.26)	5.73 (1.88)	4
ambition	14	5.95 (1.99)	5.85 (2.70)	6.20 (2.26)	19	beach	34	8.47 (0.87)	6.88 (2.19)	5.81 (2.56)	61
ambulance	15	3.00 (1.33)	6.60 (1.78)	3.80 (2.49)	6	beast	653	5.10 (2.51)	6.00 (2.29)	5.65 (2.39)	7
angel	16	6.80 (2.35)	5.30 (2.83)	4.40 (2.07)	18	beautiful	654	7.23 (2.00)	6.36 (2.46)	6.10 (1.61)	127
anger	17	2.87 (1.25)	6.73 (2.31)	5.47 (2.23)	48	beauty	35	7.47 (1.13)	5.60 (2.16)	5.33 (1.50)	71

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
bed	549	7.88 (1.09)	4.04 (2.85)	7.00 (1.87)	127	bright	671	7.05 (1.61)	5.45 (2.21)	6.15 (1.14)	87
bees	583	3.24 (2.07)	6.72 (2.30)	4.56 (2.31)	15	broken	672	3.50 (2.26)	5.39 (2.45)	4.17 (1.98)	63
beggar	36	3.95 (2.04)	4.00 (1.92)	4.60 (2.19)	2	brother	52	6.83 (1.53)	5.55 (2.07)	5.36 (1.36)	73
bench	655	4.56 (1.34)	3.33 (1.78)	5.06 (1.59)	35	brutal	53	3.25 (1.94)	5.65 (2.60)	5.20 (2.09)	7
bereavement	656	4.63 (1.54)	4.26 (2.16)	3.95 (1.72)	4	building	550	5.56 (1.23)	4.08 (2.12)	5.24 (1.54)	160
betray	37	1.85 (1.14)	7.17 (2.08)	5.75 (1.91)	4	bullet	673	4.20 (1.96)	5.45 (1.99)	5.20 (2.40)	28
beverage	657	6.80 (1.54)	5.55 (2.37)	5.80 (2.04)	5	bunny	54	6.71 (1.05)	4.38 (2.60)	4.88 (2.06)	1
bird	38	6.92 (1.38)	2.67 (2.02)	4.58 (2.47)	31	burdened	55	2.71 (0.91)	5.46 (2.26)	5.62 (2.14)	4
birthday	39	7.40 (2.82)	6.60 (2.13)	5.40 (2.64)	18	burial	56	2.62 (1.85)	4.64 (2.56)	3.92 (1.98)	11
black	543	5.92 (1.38)	4.54 (2.21)	5.88 (1.57)	203	burn	586	3.12 (1.99)	6.40 (1.85)	4.52 (1.98)	15
blackmail	40	3.00 (1.56)	5.20 (2.78)	3.00 (2.26)	2	bus	541	4.72 (1.28)	3.32 (1.99)	5.04 (1.93)	34
bland	658	4.10 (1.02)	3.45 (2.19)	4.95 (1.23)	3	busybody	674	4.81 (1.21)	4.29 (1.93)	4.57 (1.60)	.
blase	41	5.00 (1.32)	4.35 (1.69)	4.38 (1.93)	7	butter	57	5.40 (0.97)	3.30 (1.77)	4.50 (1.08)	27
blasphemy	659	3.65 (2.11)	4.55 (2.37)	4.75 (1.83)	4	butterfly	58	6.58 (1.00)	3.45 (2.02)	4.55 (2.30)	2
bless	42	6.35 (2.18)	4.12 (2.29)	5.29 (2.05)	9	cabinet	675	5.10 (0.31)	3.45 (1.70)	4.70 (1.81)	17
blind	43	2.71 (1.83)	3.69 (2.18)	3.06 (1.91)	47	cake	59	7.27 (1.16)	5.13 (2.26)	5.20 (2.14)	9
bliss	660	7.17 (1.79)	5.06 (3.06)	6.50 (2.23)	4	cancer	60	1.75 (0.97)	6.83 (2.37)	3.33 (3.06)	25
blister	661	3.48 (1.91)	3.81 (2.11)	4.38 (1.99)	3	candy	61	6.00 (1.34)	4.10 (2.27)	5.00 (1.84)	16
blond	662	6.64 (2.44)	6.05 (2.79)	6.00 (2.05)	11	cane	677	3.58 (1.95)	4.42 (1.87)	4.47 (2.17)	12
bloody	584	3.76 (2.30)	6.32 (2.36)	4.32 (1.91)	8	cannon	678	5.71 (2.39)	5.14 (2.85)	5.48 (2.40)	7
blossom	44	7.53 (1.41)	5.67 (3.02)	5.53 (2.29)	7	capable	62	7.00 (1.31)	5.60 (1.68)	5.73 (1.98)	66
blubber	663	3.83 (2.09)	4.56 (2.15)	4.50 (1.92)	1	car	551	7.84 (1.28)	5.64 (2.16)	6.60 (2.10)	274
blue	544	7.16 (1.52)	4.00 (2.08)	5.92 (1.38)	143	carcass	679	4.21 (1.81)	5.11 (1.79)	5.53 (1.65)	7
board	664	4.58 (1.22)	3.26 (1.94)	4.63 (2.01)	239	carefree	63	7.75 (1.36)	2.67 (2.42)	5.33 (2.71)	9
body	665	5.75 (2.47)	5.60 (2.78)	5.25 (2.22)	276	caress	64	7.58 (1.31)	4.50 (3.32)	6.08 (1.93)	1
bold	45	6.25 (1.71)	4.75 (2.53)	6.92 (1.38)	21	cash	503	8.28 (0.94)	7.08 (2.77)	6.76 (2.31)	36
bomb	46	2.70 (1.16)	6.70 (2.41)	4.60 (1.35)	36	casino	680	6.90 (1.79)	6.76 (1.97)	5.14 (2.22)	2
book	47	5.90 (1.83)	4.15 (2.30)	5.15 (1.84)	193	cat	504	5.33 (2.60)	4.08 (2.32)	6.54 (2.00)	.
bored	48	2.82 (1.47)	2.88 (2.28)	4.06 (1.48)	14	cell	587	3.33 (1.93)	3.67 (2.44)	4.12 (2.36)	65
bottle	666	6.09 (1.54)	5.45 (1.90)	4.68 (1.78)	76	cellar	681	4.45 (1.57)	4.30 (2.45)	4.90 (1.94)	26
bouquet	667	6.52 (1.99)	5.10 (2.41)	6.24 (1.41)	4	cemetery	65	3.42 (1.38)	4.45 (2.25)	4.73 (2.05)	15
bowl	49	4.80 (0.63)	3.40 (2.12)	5.00 (1.56)	23	chair	66	5.30 (0.95)	3.40 (1.84)	4.70 (0.67)	66
boxer	585	6.12 (1.51)	5.20 (2.25)	5.48 (1.90)	1	champ	682	7.22 (1.40)	6.22 (1.48)	6.28 (1.87)	1
boy	50	5.40 (0.74)	3.73 (2.09)	4.33 (2.02)	242	champion	67	8.42 (1.08)	4.83 (3.43)	6.08 (3.45)	23
brave	668	6.76 (2.02)	5.95 (2.60)	7.14 (1.90)	24	chance	683	6.42 (1.61)	5.63 (2.43)	4.74 (1.76)	131
breast	51	8.13 (1.30)	6.80 (2.21)	6.07 (2.22)	11	chaos	684	4.50 (2.16)	6.30 (1.81)	4.00 (1.59)	17
breeze	669	6.52 (1.97)	4.29 (2.15)	5.57 (1.63)	14	charm	68	6.67 (1.63)	5.47 (2.42)	5.87 (1.96)	26
bride	670	6.70 (1.92)	4.70 (2.56)	5.84 (2.14)	33	cheer	69	7.70 (1.38)	5.95 (2.37)	5.55 (1.99)	8

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
child	70	6.15 (2.23)	5.75 (1.77)	5.35 (2.25)	213	corrupt	702	4.15 (2.54)	5.05 (2.35)	4.90 (2.22)	8
chin	685	5.36 (1.43)	3.64 (2.11)	5.41 (1.71)	27	cottage	87	5.87 (0.99)	4.20 (2.60)	4.93 (1.58)	19
chocolate	505	6.80 (1.83)	4.88 (2.67)	5.36 (2.06)	9	couple	506	6.84 (1.77)	5.36 (2.40)	6.08 (1.91)	122
christmas	686	7.58 (1.61)	6.05 (2.68)	5.37 (2.27)	27	cow	554	5.72 (1.62)	3.12 (2.13)	5.80 (1.41)	29
church	71	5.29 (2.67)	4.69 (3.09)	4.62 (2.90)	348	coward	703	2.75 (1.77)	3.90 (2.10)	2.75 (1.52)	8
circle	687	5.30 (1.17)	3.65 (1.93)	5.16 (1.30)	60	cozy	88	7.53 (1.36)	3.73 (2.34)	4.67 (2.23)	1
circus	72	6.76 (1.52)	5.38 (2.47)	5.00 (2.10)	7	crash	89	2.60 (1.51)	7.00 (2.26)	4.00 (2.11)	20
city	73	5.67 (1.50)	4.53 (2.07)	4.53 (1.73)	393	crime	704	3.55 (2.44)	5.00 (2.96)	4.68 (2.38)	34
cliff	553	4.96 (2.23)	5.88 (2.30)	5.04 (1.84)	11	criminal	705	3.25 (1.65)	3.86 (2.33)	3.65 (1.73)	24
clock	688	4.86 (1.73)	3.95 (2.38)	4.59 (1.76)	20	crisis	706	4.17 (2.43)	4.89 (2.79)	4.72 (1.96)	82
clothing	74	5.93 (2.16)	4.15 (2.91)	5.33 (2.06)	20	crown	90	6.20 (1.40)	3.40 (2.59)	5.10 (2.13)	19
clouds	533	6.42 (2.19)	3.46 (2.28)	5.46 (1.79)	38	crucify	91	2.53 (1.68)	5.80 (2.98)	3.80 (2.11)	2
clumsy	689	4.06 (2.07)	4.78 (2.29)	4.06 (1.73)	6	crude	707	3.74 (1.59)	5.00 (2.11)	4.84 (1.77)	15
coarse	690	4.65 (1.09)	4.50 (1.57)	5.05 (1.32)	10	cruel	92	2.64 (2.41)	5.27 (2.46)	4.93 (2.79)	15
coast	691	6.06 (1.70)	4.83 (2.46)	5.71 (1.79)	61	crushed	93	2.83 (2.29)	5.73 (2.69)	4.73 (3.10)	10
cockroach	75	3.73 (2.05)	5.33 (2.66)	5.47 (2.50)	2	crutch	708	3.94 (1.63)	4.50 (1.76)	3.67 (1.78)	1
coffin	76	3.00 (2.11)	4.30 (2.79)	4.20 (2.53)	7	cuddle	94	7.30 (2.15)	5.10 (2.69)	5.75 (2.29)	.
coin	692	5.76 (2.32)	4.48 (2.75)	5.86 (1.96)	10	cuisine	709	6.89 (1.64)	4.83 (1.95)	5.50 (1.34)	1
cold	693	3.90 (1.94)	5.40 (1.85)	4.65 (1.76)	171	curious	95	6.80 (1.23)	5.80 (2.10)	5.70 (1.95)	46
color	694	7.05 (1.65)	4.63 (2.71)	6.32 (1.97)	141	curtains	710	5.00 (0.58)	3.65 (1.98)	5.11 (1.49)	8
column	695	5.15 (1.04)	3.70 (2.05)	5.25 (1.71)	71	custom	96	5.53 (1.41)	4.67 (2.23)	4.87 (2.03)	14
comedy	77	8.00 (0.95)	6.36 (2.06)	4.82 (1.99)	39	cut	711	3.70 (1.89)	4.75 (2.49)	4.90 (2.17)	192
comfort	696	6.45 (2.21)	4.35 (2.87)	5.70 (2.08)	43	cute	97	7.24 (0.97)	6.38 (2.16)	4.88 (2.53)	5
computer	552	6.12 (1.92)	4.52 (2.06)	5.08 (2.06)	13	cyclone	98	4.35 (2.18)	6.20 (2.95)	5.10 (2.31)	.
concentrate	78	4.83 (1.11)	4.73 (1.62)	4.82 (1.47)	11	dagger	99	4.53 (1.81)	5.47 (2.87)	4.47 (1.84)	1
confident	79	7.73 (1.28)	6.53 (2.50)	7.20 (2.40)	16	damage	712	3.70 (1.75)	5.05 (2.26)	4.20 (1.99)	33
confused	80	3.27 (0.65)	5.55 (1.92)	4.33 (1.61)	44	dancer	507	6.80 (1.53)	5.32 (2.30)	5.64 (1.73)	31
consoled	81	5.71 (1.65)	4.94 (2.02)	4.81 (1.83)	2	danger	713	4.56 (2.33)	7.17 (1.65)	4.56 (2.33)	70
contempt	82	4.20 (1.87)	4.90 (0.88)	5.50 (1.18)	15	dark	714	4.90 (1.81)	4.48 (1.81)	4.38 (1.72)	185
contents	83	4.73 (1.03)	4.07 (2.28)	4.87 (1.19)	16	dawn	715	6.10 (2.49)	4.35 (2.78)	4.95 (2.72)	28
context	84	5.20 (1.47)	4.35 (1.87)	4.90 (0.91)	2	daylight	716	6.56 (2.28)	5.17 (2.04)	5.61 (2.15)	15
controlling	85	4.53 (2.26)	5.60 (2.13)	6.07 (2.84)	23	dazzle	717	7.33 (1.06)	6.38 (2.01)	5.19 (2.16)	1
cook	697	6.05 (1.22)	4.21 (1.72)	5.42 (1.43)	47	dead	588	2.48 (2.29)	5.40 (2.84)	2.96 (2.42)	174
cord	698	4.95 (1.31)	3.84 (1.95)	5.00 (1.46)	6	death	100	1.69 (1.14)	4.41 (2.87)	4.62 (2.25)	277
cork	699	5.16 (1.34)	3.89 (1.94)	4.89 (0.94)	9	debt	101	2.40 (1.12)	4.33 (2.66)	3.00 (2.20)	13
corner	700	4.33 (1.32)	3.62 (1.99)	3.86 (1.85)	115	deceit	718	3.26 (1.63)	5.63 (2.45)	4.63 (1.89)	2
corpse	86	2.50 (1.18)	4.20 (2.53)	2.60 (1.65)	7	decompose	102	3.95 (1.73)	4.20 (2.40)	4.45 (1.96)	1
corridor	701	4.86 (1.28)	3.62 (2.48)	5.10 (1.73)	17	decorate	719	6.50 (1.36)	5.00 (2.68)	5.90 (2.02)	2

*Affective Norms for English Words. Male Subjects*

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defeated	103	2.42 (1.50)	4.35 (2.70)	3.00 (2.10)	15	divorce	128	2.40 (1.85)	5.30 (2.98)	3.75 (2.47)	29
defiant	104	4.64 (1.86)	5.27 (2.87)	4.91 (1.22)	3	doctor	129	4.67 (2.29)	5.53 (2.64)	5.07 (2.63)	100
deformed	720	2.95 (1.75)	3.62 (2.18)	4.29 (2.43)	.	dog	511	7.68 (1.65)	5.40 (2.99)	6.44 (2.08)	75
delayed	721	3.15 (2.01)	5.10 (2.17)	3.40 (1.60)	25	doll	728	5.05 (1.65)	3.37 (2.11)	4.16 (2.19)	10
delight	105	7.92 (1.31)	5.73 (2.49)	5.09 (2.02)	29	dollar	729	7.24 (2.05)	6.43 (2.27)	6.86 (2.20)	46
demon	106	3.20 (1.61)	5.93 (3.01)	5.07 (2.52)	9	door	130	5.16 (1.50)	4.32 (2.38)	4.79 (1.58)	312
dentist	589	3.56 (2.22)	5.60 (2.55)	3.60 (2.04)	12	dove	730	6.45 (1.47)	4.55 (1.79)	6.00 (1.62)	4
depressed	107	2.33 (1.45)	4.00 (2.33)	2.87 (1.68)	11	dreadful	131	2.38 (2.00)	5.71 (2.69)	5.06 (1.84)	10
depression	108	2.60 (2.21)	4.55 (3.05)	2.90 (2.07)	24	dream	132	6.47 (1.65)	4.42 (2.50)	4.84 (1.74)	64
derelict	722	4.45 (1.93)	4.10 (1.68)	4.95 (1.73)	1	dreary	731	3.24 (1.45)	3.05 (2.13)	3.81 (1.60)	6
deserter	109	3.53 (2.13)	4.80 (2.31)	4.80 (2.31)	.	dress	133	5.87 (0.99)	4.67 (1.72)	4.60 (1.64)	67
desire	508	7.72 (1.31)	7.24 (1.92)	6.20 (1.94)	79	drown	591	1.96 (1.72)	6.68 (2.64)	2.76 (1.98)	3
despairing	110	2.93 (2.05)	5.60 (2.41)	4.07 (2.25)	4	dummy	732	3.00 (1.34)	4.38 (2.18)	3.48 (1.86)	3
despise	111	2.08 (1.19)	5.86 (2.35)	5.38 (2.40)	7	dump	733	3.71 (2.03)	4.38 (2.48)	4.05 (1.80)	4
destroy	112	4.00 (2.75)	6.30 (2.91)	6.10 (2.42)	48	dustpan	555	4.24 (1.74)	3.36 (1.82)	5.40 (1.68)	.
destruction	723	4.78 (2.46)	6.17 (2.53)	5.11 (2.00)	38	earth	134	6.79 (1.72)	4.08 (2.10)	6.69 (2.10)	150
detached	113	3.82 (2.04)	4.19 (2.51)	3.73 (1.91)	12	easy	734	7.09 (2.11)	5.55 (2.39)	7.18 (1.59)	125
detail	724	5.73 (1.49)	4.36 (2.36)	5.45 (1.60)	72	easygoing	135	6.75 (1.42)	4.00 (2.56)	5.08 (1.83)	1
detest	114	2.80 (1.55)	5.80 (2.20)	5.80 (2.10)	1	eat	136	8.00 (1.32)	6.60 (2.29)	6.00 (2.17)	61
devil	115	2.59 (2.12)	5.06 (2.73)	5.82 (2.60)	25	ecstasy	735	8.14 (1.13)	7.82 (1.44)	7.10 (1.79)	6
devoted	116	7.10 (1.45)	5.70 (1.77)	4.90 (2.64)	51	education	137	6.55 (1.36)	5.60 (2.44)	5.85 (1.81)	214
diamond	117	7.92 (1.38)	5.00 (2.97)	5.36 (2.76)	8	egg	736	5.11 (1.63)	3.63 (2.54)	4.26 (2.38)	12
dignified	118	6.82 (1.01)	3.41 (1.97)	6.06 (2.49)	7	elated	138	7.47 (1.51)	6.20 (2.11)	5.53 (2.72)	3
dinner	509	7.48 (1.19)	5.52 (2.40)	6.48 (1.78)	91	elbow	737	4.90 (0.45)	3.70 (2.00)	4.80 (1.77)	10
diploma	119	7.64 (1.12)	5.64 (2.25)	6.42 (2.47)	.	elegant	139	7.08 (1.56)	4.92 (2.97)	5.50 (2.35)	14
dirt	725	4.41 (1.92)	3.41 (2.34)	4.95 (2.36)	43	elevator	738	5.10 (0.64)	3.57 (2.09)	4.00 (1.59)	12
dirty	590	3.88 (2.44)	5.21 (2.75)	4.83 (2.50)	36	embarrassed	140	3.93 (2.12)	5.87 (2.42)	3.47 (2.67)	8
disappoint	120	2.60 (1.50)	4.60 (2.59)	3.53 (2.20)	.	embattled	141	5.00 (2.16)	5.90 (2.23)	5.10 (2.38)	1
disaster	121	2.25 (1.33)	6.05 (2.54)	3.65 (1.90)	26	employment	147	5.73 (2.05)	5.33 (2.02)	4.60 (1.59)	47
discomfort	726	2.41 (1.50)	3.73 (2.29)	3.68 (2.57)	7	engaged	143	7.33 (1.50)	6.07 (1.91)	6.20 (1.66)	47
discouraged	122	3.00 (1.00)	4.00 (2.33)	3.20 (1.52)	15	engine	148	5.27 (1.49)	4.93 (2.19)	5.13 (1.41)	50
disdainful	123	3.93 (1.71)	4.67 (1.76)	4.87 (1.81)	2	enjoyment	145	7.70 (1.22)	5.70 (2.70)	6.35 (1.42)	21
disgusted	124	2.60 (1.45)	4.47 (2.47)	4.80 (1.66)	6	ennui	146	5.17 (1.64)	3.92 (2.43)	5.00 (1.65)	.
disloyal	125	2.38 (1.50)	5.82 (2.63)	4.81 (2.46)	2	enraged	149	2.30 (1.64)	7.90 (2.13)	7.70 (2.45)	1
displeased	126	2.76 (2.17)	4.81 (2.40)	4.75 (1.98)	7	erotic	512	8.16 (1.07)	7.72 (1.81)	7.04 (1.90)	8
distressed	127	2.00 (0.63)	6.42 (2.15)	5.00 (1.90)	4	errand	150	4.36 (1.78)	4.00 (1.91)	5.62 (1.45)	7
disturb	727	3.67 (1.75)	5.72 (1.96)	4.06 (1.35)	10	event	740	6.41 (1.92)	5.59 (2.52)	5.73 (2.03)	81
diver	510	6.60 (1.63)	4.96 (2.49)	5.20 (1.91)	1	evil	741	4.33 (2.70)	6.56 (2.36)	6.17 (1.58)	72

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

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excellence	151	8.30 (0.82)	4.70 (2.26)	7.40 (2.17)	15	foam	756	5.45 (1.67)	4.25 (2.24)	5.10 (1.59)	37
excitement	152	6.87 (2.36)	6.93 (2.43)	5.60 (1.84)	32	food	514	7.88 (0.97)	5.40 (2.47)	6.72 (2.03)	147
excuse	153	3.82 (1.88)	4.88 (2.64)	3.71 (2.31)	27	foot	757	5.06 (0.80)	3.50 (1.86)	5.17 (1.72)	70
execution	154	3.27 (2.46)	5.53 (2.77)	4.27 (2.22)	15	fork	560	5.48 (1.08)	4.04 (2.21)	5.83 (1.27)	14
exercise	155	6.93 (1.91)	7.13 (2.20)	6.07 (2.74)	58	foul	169	2.94 (1.14)	5.18 (2.53)	4.71 (1.69)	4
fabric	742	5.21 (1.44)	3.95 (1.82)	4.79 (1.44)	15	fragrance	170	6.24 (1.35)	5.75 (2.46)	5.62 (1.82)	6
face	556	6.12 (1.76)	4.76 (2.37)	5.28 (1.51)	371	fraud	171	2.70 (1.70)	5.30 (1.89)	4.70 (2.63)	8
failure	156	2.27 (1.22)	4.00 (2.54)	2.67 (1.95)	89	free	172	7.83 (1.85)	5.09 (3.02)	5.73 (2.57)	260
fall	743	3.86 (2.22)	4.81 (2.54)	4.29 (2.15)	147	freedom	173	7.53 (1.62)	6.25 (2.05)	6.38 (2.06)	128
FALSE	744	3.24 (1.58)	3.27 (2.23)	4.38 (1.66)	29	friend	174	7.18 (1.07)	6.38 (1.96)	6.25 (2.02)	133
fame	157	7.92 (1.31)	5.17 (3.01)	6.50 (2.28)	18	friendly	175	8.29 (0.99)	4.77 (2.42)	6.15 (2.48)	61
family	158	7.50 (1.79)	5.00 (2.64)	6.00 (1.86)	331	frigid	758	3.44 (1.34)	4.61 (2.62)	4.44 (1.85)	5
famous	745	7.39 (1.20)	6.11 (2.47)	6.61 (2.06)	89	frog	176	5.87 (1.25)	4.80 (2.18)	5.60 (1.59)	1
fantasy	746	7.39 (1.50)	6.00 (2.45)	6.72 (1.93)	14	frustrated	177	2.70 (1.56)	5.55 (2.61)	3.70 (1.98)	10
farm	557	5.40 (1.98)	3.60 (1.94)	5.68 (1.70)	125	fun	759	8.21 (1.36)	7.11 (2.00)	6.79 (1.84)	44
fascinate	159	7.13 (2.23)	6.07 (2.60)	5.67 (1.63)	3	funeral	178	1.64 (0.84)	4.00 (2.77)	2.71 (2.30)	33
fat	160	2.94 (2.11)	2.82 (1.47)	5.56 (2.76)	60	fungus	179	3.83 (1.19)	4.18 (2.09)	4.36 (1.80)	2
father	161	6.80 (2.18)	5.47 (2.97)	3.80 (2.91)	383	fur	180	5.50 (1.68)	3.55 (2.38)	4.82 (2.14)	13
fatigued	162	3.56 (1.26)	2.69 (1.99)	4.35 (2.21)	3	game	760	7.58 (0.77)	6.32 (2.11)	5.74 (1.82)	123
fault	747	3.14 (1.58)	3.73 (1.91)	4.09 (2.00)	22	gangrene	181	2.73 (2.15)	5.93 (2.91)	3.60 (2.38)	.
favor	748	6.58 (1.54)	4.89 (1.91)	5.44 (1.89)	78	garbage	182	3.45 (1.99)	4.30 (2.54)	4.75 (1.74)	7
fear	592	3.75 (2.45)	6.71 (2.48)	3.88 (2.36)	127	garden	761	6.43 (1.91)	4.76 (2.26)	6.19 (1.54)	60
fearful	163	2.10 (0.99)	5.50 (2.32)	3.50 (1.78)	13	garment	762	5.47 (1.26)	3.95 (2.17)	4.84 (2.03)	6
feeble	164	3.59 (1.70)	3.94 (2.44)	2.88 (1.65)	8	garter	534	6.92 (1.53)	6.08 (2.14)	6.04 (1.54)	2
festive	749	7.26 (1.33)	6.63 (2.14)	5.67 (2.40)	2	gender	763	5.60 (1.05)	4.35 (2.18)	5.58 (1.92)	2
fever	750	3.05 (1.61)	3.80 (1.82)	3.68 (1.77)	19	gentle	183	6.90 (1.37)	2.90 (2.08)	4.70 (2.41)	27
field	558	6.08 (1.26)	4.04 (2.26)	5.68 (1.77)	274	germs	764	2.90 (1.30)	4.29 (2.24)	3.90 (1.51)	1
fight	751	4.81 (2.73)	6.90 (2.36)	5.71 (2.39)	98	gift	184	6.60 (2.82)	5.27 (2.87)	5.13 (2.85)	33
filth	165	3.12 (1.93)	3.94 (1.53)	4.50 (1.55)	2	girl	185	7.60 (1.57)	5.85 (2.52)	5.85 (1.98)	220
finger	752	5.29 (1.42)	4.05 (2.16)	5.24 (2.00)	40	glacier	186	5.67 (1.18)	4.53 (1.85)	4.80 (1.97)	1
fire	166	4.20 (1.48)	6.50 (2.32)	5.20 (1.40)	187	glamour	187	6.13 (1.77)	4.60 (2.23)	5.60 (2.23)	5
fireworks	513	7.80 (1.12)	6.56 (2.16)	5.56 (2.06)	5	glass	765	4.50 (1.72)	4.44 (2.18)	5.28 (1.84)	99
fish	559	6.20 (2.22)	3.84 (2.53)	6.48 (1.73)	35	gloom	188	2.08 (1.44)	4.17 (2.69)	4.00 (2.00)	14
flabby	167	4.16 (1.80)	3.68 (2.31)	4.37 (1.26)	.	glory	189	7.40 (1.59)	6.13 (2.39)	7.00 (2.00)	21
flag	753	5.90 (1.89)	5.40 (2.19)	5.65 (1.98)	16	god	190	8.35 (1.18)	6.10 (2.86)	5.85 (3.15)	318
flirt	754	7.48 (1.03)	6.90 (1.64)	6.45 (2.06)	1	gold	191	7.92 (1.00)	6.45 (2.16)	5.73 (2.10)	52
flood	755	3.75 (1.52)	5.90 (2.02)	3.90 (2.34)	19	golfer	535	5.76 (2.13)	3.84 (2.53)	5.68 (1.84)	3
flower	168	6.06 (1.53)	4.60 (2.23)	4.73 (1.75)	23	good	766	7.33 (1.28)	5.05 (3.09)	5.78 (1.99)	807

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

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gossip	767	3.75 (2.02)	5.10 (2.22)	3.90 (1.86)	13	heaven	205	7.07 (2.34)	6.53 (2.83)	6.20 (2.31)	43
graduate	192	8.00 (1.37)	7.56 (2.03)	6.69 (2.94)	30	hell	788	2.85 (1.69)	4.65 (2.37)	3.90 (2.36)	95
grass	768	5.85 (1.27)	4.85 (1.93)	5.55 (1.39)	53	helpless	206	2.20 (1.21)	4.87 (2.59)	2.53 (1.88)	21
grateful	193	7.33 (0.82)	4.27 (1.75)	6.20 (1.61)	25	heroin	789	3.85 (2.35)	4.45 (2.98)	4.20 (2.55)	2
greed	769	4.14 (2.22)	5.38 (2.33)	5.24 (2.51)	3	hide	207	5.07 (1.67)	4.47 (2.50)	4.27 (2.43)	22
green	194	5.30 (2.00)	4.80 (2.44)	4.20 (1.99)	116	highway	562	6.04 (1.67)	4.80 (2.60)	5.64 (1.98)	40
greet	770	6.95 (1.47)	5.29 (1.98)	6.24 (1.84)	7	hinder	790	3.86 (1.64)	4.09 (1.93)	4.18 (1.68)	.
grenade	771	3.90 (1.92)	5.48 (2.54)	4.76 (2.34)	3	history	208	6.00 (1.79)	4.12 (2.18)	5.19 (2.07)	286
grief	195	1.80 (1.40)	4.70 (2.83)	4.40 (2.41)	10	hit	594	5.44 (2.16)	5.40 (2.43)	5.67 (2.08)	115
grime	772	3.95 (1.18)	4.37 (2.31)	4.72 (1.41)	.	holiday	791	7.30 (2.36)	7.10 (2.29)	6.90 (1.80)	17
grin	773	6.89 (2.16)	5.70 (2.87)	6.32 (2.00)	13	home	209	7.71 (1.96)	4.29 (2.73)	6.35 (2.29)	547
gripe	774	3.25 (1.41)	4.95 (2.33)	4.25 (1.97)	.	honest	210	7.21 (1.53)	5.71 (1.44)	5.21 (2.19)	47
guillotined	196	4.00 (2.45)	6.25 (2.77)	5.00 (1.95)	.	honey	792	6.53 (1.87)	4.53 (2.14)	5.68 (1.42)	25
guilty	197	2.75 (1.29)	5.05 (2.80)	3.50 (1.70)	29	honor	211	7.60 (1.18)	6.13 (1.51)	6.14 (2.35)	66
gun	593	4.72 (2.57)	7.08 (1.96)	4.36 (2.97)	118	hooker	793	4.53 (2.46)	6.00 (2.13)	6.11 (2.23)	.
gymnast	515	6.44 (1.73)	4.48 (2.28)	5.32 (1.86)	1	hope	794	6.67 (1.57)	4.84 (2.57)	5.32 (2.26)	178
habit	775	4.15 (1.53)	3.85 (1.81)	4.40 (2.01)	23	hopeful	212	7.07 (1.03)	6.27 (1.22)	5.47 (1.92)	12
hairdryer	561	4.88 (0.78)	3.80 (1.66)	5.24 (0.78)	.	horror	213	3.18 (2.32)	6.44 (2.13)	4.62 (2.47)	17
hairpin	776	5.40 (1.57)	3.50 (2.48)	5.11 (1.56)	1	horse	214	5.60 (0.97)	3.50 (1.78)	4.20 (1.32)	117
hamburger	777	6.95 (1.51)	4.95 (2.24)	5.58 (0.96)	6	hospital	215	5.05 (1.85)	5.00 (2.41)	4.80 (1.67)	110
hammer	198	4.75 (1.25)	4.65 (2.35)	5.25 (2.20)	9	hostage	216	2.25 (1.59)	5.50 (3.00)	3.20 (2.46)	2
hand	778	5.84 (1.34)	4.60 (2.16)	5.84 (1.42)	431	hostile	217	3.33 (1.63)	6.80 (2.04)	5.73 (2.96)	19
handicap	779	3.62 (2.06)	3.68 (2.46)	4.14 (2.56)	6	hotel	795	6.67 (1.41)	5.26 (2.66)	5.33 (2.06)	126
handsome	199	7.50 (1.51)	4.42 (2.87)	5.58 (2.87)	40	house	563	7.29 (1.55)	4.04 (2.58)	6.38 (1.84)	591
haphazard	780	3.64 (1.50)	3.68 (2.17)	4.14 (1.98)	2	hug	218	7.67 (0.98)	5.55 (2.21)	5.27 (1.68)	3
happy	200	8.25 (1.39)	7.00 (2.73)	6.73 (2.28)	98	humane	796	6.17 (1.76)	4.83 (1.34)	5.67 (1.57)	5
hard	781	5.68 (2.00)	5.42 (2.19)	5.84 (2.09)	202	humble	219	6.00 (1.58)	3.53 (2.35)	5.06 (2.30)	18
hardship	782	3.00 (1.75)	4.70 (2.23)	5.15 (2.18)	9	humiliate	797	2.20 (1.15)	6.35 (2.30)	2.90 (1.92)	.
hat	783	5.58 (1.39)	4.53 (2.12)	5.47 (1.50)	56	humor	220	8.20 (0.92)	4.30 (2.45)	5.20 (2.15)	47
hate	201	2.92 (2.31)	7.33 (2.35)	5.42 (2.68)	42	hungry	221	3.67 (2.32)	5.20 (2.73)	4.67 (2.16)	23
hatred	202	2.53 (2.26)	6.47 (2.72)	4.60 (2.47)	20	hurricane	798	4.19 (2.34)	6.67 (2.15)	3.76 (2.07)	8
hawk	536	6.33 (1.61)	4.08 (2.34)	5.71 (1.76)	14	hurt	222	2.55 (1.51)	6.27 (2.76)	3.82 (2.23)	37
hay	784	5.19 (1.63)	4.81 (2.75)	5.81 (1.89)	19	hydrant	564	5.08 (0.86)	3.64 (1.78)	5.52 (0.96)	.
headache	203	2.24 (1.15)	5.18 (2.63)	4.24 (1.99)	5	icebox	799	5.00 (0.88)	4.84 (1.80)	5.00 (1.11)	3
headlight	785	5.05 (1.77)	3.77 (2.41)	4.76 (1.73)	.	idea	800	6.43 (1.12)	5.57 (1.78)	5.62 (1.72)	195
heal	786	6.71 (1.23)	4.86 (1.90)	5.29 (1.59)	2	identity	801	6.23 (2.16)	5.09 (2.33)	6.32 (1.78)	55
health	204	6.93 (1.33)	5.33 (2.79)	5.87 (1.77)	105	idiot	223	3.40 (2.32)	4.80 (2.37)	4.40 (2.29)	2
heart	787	6.90 (1.58)	6.14 (2.10)	5.48 (2.04)	173	idol	802	5.71 (1.74)	4.76 (2.23)	5.52 (2.06)	7



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Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
ignorance	803	2.90 (1.74)	3.85 (2.21)	4.45 (2.42)	16	jealousy	237	2.65 (1.23)	5.55 (2.68)	3.35 (1.87)	4
illness	804	2.70 (1.45)	4.60 (2.28)	3.70 (1.98)	20	jelly	238	5.75 (0.97)	4.08 (2.61)	5.08 (1.62)	3
imagine	805	7.10 (1.62)	5.60 (2.09)	6.50 (2.12)	61	jewel	239	6.30 (2.16)	5.60 (2.80)	4.80 (1.81)	1
immature	806	4.10 (1.73)	4.19 (2.02)	4.95 (2.13)	7	joke	826	8.19 (0.81)	6.67 (1.93)	6.24 (1.95)	22
immoral	807	3.75 (2.31)	4.75 (2.47)	4.65 (2.68)	5	jolly	827	7.38 (2.01)	5.68 (2.78)	6.33 (1.85)	4
impair	808	3.42 (1.43)	3.47 (1.81)	4.21 (1.84)	4	journal	828	4.95 (1.23)	4.45 (1.32)	4.85 (0.75)	42
impotent	224	3.24 (2.36)	4.69 (3.05)	4.25 (2.82)	2	joy	240	8.57 (0.76)	8.14 (0.86)	5.93 (2.20)	40
impressed	225	6.77 (2.05)	5.77 (2.49)	5.93 (1.82)	30	joyful	241	7.57 (1.65)	6.36 (2.17)	6.21 (1.31)	1
improve	226	7.35 (1.27)	5.56 (2.31)	5.94 (2.43)	39	jug	829	5.45 (2.15)	4.23 (2.25)	5.18 (1.94)	6
incentive	809	7.05 (1.47)	5.70 (2.23)	5.95 (1.54)	12	justice	242	7.42 (1.78)	4.92 (2.35)	6.25 (2.70)	114
indifferent	810	4.80 (1.51)	3.20 (1.74)	4.70 (1.84)	11	kerchief	830	5.56 (1.34)	3.67 (1.75)	5.39 (1.42)	1
industry	227	5.80 (1.32)	4.73 (2.37)	5.67 (1.91)	171	kerosene	243	4.86 (1.29)	4.31 (2.53)	4.31 (2.06)	6
infant	811	6.05 (2.15)	4.64 (2.70)	5.55 (2.44)	11	ketchup	831	5.52 (1.44)	3.86 (1.85)	5.19 (1.83)	1
infatuation	516	6.96 (1.95)	7.08 (2.02)	5.48 (2.37)	4	kettle	832	5.19 (1.08)	3.57 (2.44)	4.95 (1.70)	3
infection	228	1.93 (1.87)	4.73 (2.71)	4.00 (2.70)	8	key	833	5.35 (1.57)	3.95 (2.11)	5.15 (2.39)	88
inferior	812	3.09 (1.90)	3.27 (2.07)	3.00 (2.35)	7	kick	834	4.50 (1.99)	4.23 (2.43)	5.32 (1.94)	16
inhabitant	813	4.79 (1.36)	4.74 (1.52)	5.58 (1.26)	.	kids	835	6.84 (1.46)	5.26 (1.94)	4.79 (1.78)	32
injury	595	3.16 (2.03)	5.56 (2.29)	3.80 (1.94)	27	killer	244	2.64 (1.39)	7.07 (2.30)	4.57 (2.41)	21
ink	229	5.00 (1.11)	3.54 (1.85)	4.54 (2.40)	7	kind	245	7.50 (1.18)	3.80 (2.49)	5.30 (1.77)	313
innocent	814	6.25 (1.37)	4.65 (1.69)	5.16 (1.68)	37	kindness	246	7.05 (1.54)	5.00 (2.31)	5.11 (2.18)	5
insane	815	3.58 (1.89)	5.68 (2.29)	4.95 (2.17)	13	king	247	7.00 (1.70)	5.60 (2.63)	7.50 (1.84)	88
insect	816	4.50 (1.93)	4.15 (2.23)	4.90 (2.25)	14	kiss	248	8.29 (1.20)	6.87 (2.59)	6.57 (2.47)	17
insecure	230	2.20 (0.92)	3.90 (1.60)	2.50 (1.96)	3	kitten	517	6.72 (2.37)	5.00 (2.45)	6.92 (1.93)	5
insolent	231	4.71 (1.76)	5.69 (2.55)	4.88 (1.89)	2	knife	596	4.60 (2.14)	5.84 (1.77)	5.04 (2.09)	76
inspire	232	6.40 (2.59)	5.07 (1.94)	6.13 (1.92)	3	knot	836	4.45 (1.43)	3.71 (2.15)	4.85 (1.87)	8
inspired	233	6.60 (1.85)	6.00 (2.47)	6.45 (2.19)	25	knowledge	249	7.55 (1.50)	5.95 (2.33)	6.35 (2.62)	145
insult	817	3.00 (1.20)	5.37 (2.39)	4.44 (2.15)	7	lake	250	6.00 (1.41)	4.20 (1.75)	4.50 (1.51)	54
intellect	818	6.72 (2.19)	4.78 (1.90)	6.83 (1.82)	5	lamb	837	5.45 (1.85)	3.30 (2.43)	4.95 (2.37)	7
intercourse	819	7.70 (1.66)	7.35 (1.93)	6.75 (1.71)	9	lamp	838	5.10 (0.77)	3.71 (2.15)	5.00 (1.73)	18
interest	234	7.00 (1.48)	5.18 (2.32)	5.73 (2.33)	330	lantern	839	5.50 (1.10)	4.30 (2.18)	5.30 (2.03)	13
intimate	821	7.74 (1.05)	7.05 (1.90)	6.05 (2.09)	21	laughter	251	8.55 (0.83)	6.80 (2.67)	6.20 (2.71)	22
intruder	822	3.78 (2.18)	6.44 (2.33)	4.83 (2.28)	1	lavish	840	5.68 (2.17)	4.91 (2.27)	5.50 (1.79)	3
invader	823	3.75 (1.94)	4.30 (2.18)	3.95 (2.39)	1	lawn	841	5.26 (0.87)	4.21 (1.78)	5.47 (0.96)	15
invest	824	5.64 (2.30)	5.41 (2.09)	5.68 (2.17)	3	lawsuit	842	3.20 (1.67)	4.33 (2.33)	4.05 (2.14)	1
iron	565	5.28 (0.89)	4.00 (2.25)	5.25 (1.11)	43	lazy	843	4.43 (1.91)	2.29 (1.45)	4.14 (1.82)	9
irritate	235	2.87 (1.64)	5.13 (2.39)	5.20 (2.27)	.	leader	844	7.38 (1.72)	6.19 (1.94)	7.43 (1.80)	74
item	825	5.32 (0.78)	3.50 (2.20)	5.09 (1.66)	54	learn	252	6.93 (1.39)	5.13 (2.17)	6.00 (2.59)	84
jail	236	2.00 (1.41)	5.13 (2.90)	3.13 (2.45)	21	legend	845	6.37 (1.21)	5.58 (1.39)	5.79 (1.72)	26

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
leisurely	253	6.71 (1.93)	2.82 (1.81)	5.00 (2.06)	5	man	537	6.24 (1.69)	3.68 (1.86)	6.28 (1.72)	1207
leprosy	254	2.09 (1.81)	5.92 (2.11)	4.00 (1.61)	1	mangle	861	4.16 (1.77)	5.79 (1.62)	5.37 (1.80)	.
lesbian	597	6.00 (2.33)	5.76 (2.55)	5.80 (2.24)	.	maniac	862	4.29 (2.10)	5.24 (1.92)	4.24 (1.92)	4
letter	846	6.26 (1.52)	5.21 (2.20)	5.89 (1.45)	145	manner	863	5.67 (0.97)	4.71 (1.93)	4.57 (1.99)	124
liberty	255	7.67 (1.30)	5.92 (2.47)	6.17 (2.72)	46	mantel	864	4.90 (1.71)	3.75 (2.34)	5.00 (2.03)	3
lice	256	2.69 (2.32)	5.14 (2.18)	4.62 (2.40)	2	manure	865	2.95 (1.76)	4.05 (2.31)	4.85 (1.73)	6
lie	257	3.87 (2.23)	5.33 (2.82)	4.33 (2.53)	59	market	866	5.84 (1.01)	4.79 (1.51)	5.11 (1.29)	155
life	258	7.00 (2.37)	5.42 (2.97)	5.58 (2.57)	715	massacre	867	2.24 (1.41)	5.48 (2.32)	4.14 (2.15)	1
lightbulb	566	5.44 (1.12)	3.80 (1.89)	5.38 (1.17)	.	masterful	271	7.27 (1.39)	5.67 (2.32)	6.93 (2.19)	2
lighthouse	847	6.33 (1.61)	5.06 (2.26)	5.06 (2.26)	.	masturbate	599	6.60 (1.50)	6.08 (1.89)	5.88 (2.32)	.
lightning	598	5.16 (2.76)	6.52 (1.81)	3.72 (2.32)	14	material	868	5.27 (1.58)	4.50 (2.41)	5.18 (1.92)	174
limber	848	5.45 (1.23)	4.85 (1.90)	4.80 (1.67)	2	measles	272	3.33 (1.63)	4.40 (2.38)	4.73 (1.98)	2
lion	518	5.60 (2.10)	5.84 (2.43)	4.64 (2.43)	17	medicine	869	5.57 (1.91)	4.52 (2.34)	4.81 (1.63)	30
listless	259	4.41 (1.91)	4.94 (2.52)	4.94 (1.61)	1	meek	273	4.50 (1.64)	3.30 (1.75)	4.35 (2.03)	10
lively	849	6.89 (1.53)	5.47 (2.84)	6.11 (1.84)	26	melody	870	6.68 (2.03)	4.77 (2.84)	5.57 (1.89)	21
locker	850	4.95 (1.59)	3.41 (2.38)	5.05 (2.19)	9	memories	871	7.35 (1.63)	6.20 (2.26)	5.55 (1.88)	15
loneliness	260	1.67 (1.07)	4.67 (3.03)	2.75 (2.45)	9	memory	274	6.88 (1.50)	5.44 (2.56)	5.12 (2.33)	76
lonely	261	2.20 (1.26)	3.80 (2.43)	2.80 (1.74)	25	menace	275	3.18 (1.78)	5.24 (2.82)	5.24 (2.63)	9
loser	851	2.61 (1.54)	4.84 (2.65)	3.58 (2.24)	1	merry	872	7.70 (1.38)	6.35 (2.01)	6.85 (1.27)	8
lost	852	3.22 (1.70)	5.89 (2.35)	2.83 (1.69)	173	messy	873	3.14 (1.85)	3.10 (1.95)	5.43 (2.42)	3
lottery	853	6.72 (1.45)	5.11 (2.19)	5.22 (1.77)	1	metal	874	5.09 (1.31)	3.82 (1.97)	5.36 (1.73)	61
louse	262	3.88 (2.22)	4.47 (2.24)	4.19 (2.17)	3	method	875	5.90 (2.02)	4.43 (2.96)	6.30 (1.75)	142
love	263	8.60 (0.84)	6.50 (3.14)	7.10 (2.56)	232	mighty	276	6.10 (2.00)	5.35 (2.60)	7.00 (2.16)	29
loved	264	8.10 (0.99)	5.50 (2.32)	5.20 (2.94)	56	mildew	277	3.36 (1.22)	4.07 (1.82)	4.64 (1.65)	1
loyal	265	6.80 (2.24)	5.00 (2.27)	6.47 (2.72)	18	milk	876	6.43 (1.94)	4.52 (2.75)	6.14 (1.77)	49
lucky	266	7.94 (1.24)	7.00 (1.90)	6.24 (2.54)	21	millionaire	278	8.30 (1.34)	5.60 (3.13)	6.40 (3.27)	2
lump	854	4.95 (1.84)	4.32 (2.67)	4.47 (2.09)	7	mind	877	6.52 (2.11)	5.24 (2.74)	6.33 (2.44)	325
luscious	267	7.55 (1.13)	6.08 (2.11)	5.09 (2.17)	2	miracle	279	8.40 (0.83)	7.53 (1.46)	5.40 (2.75)	16
lust	519	7.32 (1.63)	6.92 (1.96)	6.12 (2.26)	5	mischief	878	5.40 (1.90)	5.75 (2.17)	5.55 (1.93)	5
luxury	268	7.50 (2.32)	4.08 (2.68)	6.33 (2.67)	21	misery	879	2.30 (1.53)	4.95 (2.68)	2.95 (1.57)	15
machine	855	4.65 (1.63)	3.80 (2.28)	4.95 (2.26)	103	mistake	880	3.25 (2.07)	5.15 (2.50)	4.70 (2.66)	34
mad	856	2.35 (1.23)	7.20 (1.77)	5.75 (2.20)	39	mobility	881	6.70 (1.92)	5.45 (2.06)	6.45 (1.54)	8
madman	857	4.79 (2.04)	5.11 (2.18)	5.37 (1.83)	2	modest	280	5.68 (1.29)	4.42 (2.12)	5.11 (1.88)	29
maggot	269	2.40 (1.84)	4.60 (3.17)	4.60 (1.43)	2	mold	882	3.90 (1.73)	4.00 (1.48)	4.52 (1.63)	45
magical	858	7.05 (1.75)	6.05 (2.04)	5.58 (2.27)	12	moment	281	5.53 (1.70)	4.56 (2.50)	4.94 (2.05)	246
mail	859	6.50 (1.76)	5.74 (2.45)	5.61 (2.03)	47	money	282	7.92 (1.51)	5.00 (2.98)	6.33 (2.61)	265
malaria	860	2.40 (1.35)	4.19 (2.56)	3.10 (1.59)	3	month	283	5.40 (0.84)	4.10 (1.66)	4.80 (0.63)	130
malice	270	3.56 (2.13)	5.22 (2.28)	4.67 (2.12)	2	moody	883	3.50 (1.57)	4.00 (2.29)	4.55 (1.90)	5

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
moral	884	5.95 (2.33)	4.57 (2.40)	5.81 (2.32)	142	nude	520	7.80 (1.66)	7.12 (2.33)	6.84 (2.25)	20
morbid	284	3.40 (2.13)	4.73 (2.55)	4.67 (2.02)	1	nuisance	908	3.84 (1.74)	4.58 (2.19)	4.63 (1.46)	5
morgue	285	2.27 (1.53)	4.20 (2.73)	4.47 (2.00)	1	nun	909	4.50 (1.58)	3.11 (1.75)	4.94 (1.51)	2
mosquito	885	3.29 (2.24)	4.71 (2.81)	4.71 (2.37)	1	nurse	538	6.42 (1.98)	4.88 (2.35)	5.04 (2.07)	17
mother	286	7.87 (1.46)	5.20 (3.00)	4.53 (2.47)	216	nursery	910	4.95 (1.87)	3.47 (2.09)	4.79 (1.96)	13
mountain	287	6.20 (1.82)	5.80 (2.54)	6.20 (2.70)	33	obesity	911	2.61 (1.38)	3.21 (2.32)	4.06 (2.34)	5
movie	288	6.73 (2.37)	5.07 (2.34)	4.67 (1.91)	29	obey	912	4.52 (2.02)	4.29 (1.82)	4.38 (2.42)	8
mucus	886	3.86 (2.37)	3.43 (1.91)	5.19 (1.89)	2	obnoxious	913	4.00 (1.69)	4.70 (1.81)	5.60 (1.54)	5
muddy	887	4.84 (1.86)	3.95 (1.81)	4.79 (1.51)	10	obscene	914	5.21 (2.20)	5.63 (2.29)	4.89 (1.76)	2
muffin	888	6.35 (1.95)	4.55 (2.14)	5.55 (1.61)	.	obsession	915	5.72 (1.90)	6.72 (1.60)	5.56 (2.43)	5
murderer	289	1.83 (1.27)	7.58 (2.35)	4.50 (3.32)	19	ocean	297	6.79 (1.48)	5.36 (2.65)	4.93 (3.05)	34
muscular	290	6.08 (2.11)	5.92 (2.35)	6.92 (2.64)	16	odd	916	5.25 (1.71)	4.45 (2.54)	4.75 (2.05)	44
museum	889	5.45 (2.11)	4.40 (2.19)	5.40 (1.73)	32	offend	917	3.37 (1.57)	5.74 (1.48)	4.06 (1.92)	4
mushroom	567	6.08 (2.26)	4.96 (2.49)	5.88 (2.05)	2	office	568	5.28 (1.90)	4.08 (1.82)	5.28 (1.74)	255
music	291	7.67 (1.23)	5.60 (2.77)	5.67 (2.32)	216	opinion	298	5.71 (1.27)	4.54 (2.63)	6.23 (1.69)	96
mutation	890	4.37 (2.56)	4.84 (2.46)	4.37 (1.95)	.	optimism	918	6.14 (2.41)	4.81 (2.52)	6.38 (2.20)	15
mutilate	292	1.40 (0.97)	7.50 (2.07)	4.60 (3.06)	3	option	919	6.20 (1.20)	4.75 (2.45)	5.89 (1.91)	5
mystic	891	5.95 (2.09)	4.20 (2.17)	5.45 (1.96)	3	orchestra	299	5.33 (2.57)	3.00 (2.04)	5.42 (2.64)	60
naked	892	6.95 (2.06)	6.10 (2.95)	6.58 (2.12)	32	orgasm	920	8.45 (1.28)	7.90 (1.77)	6.70 (2.36)	7
name	893	5.95 (1.90)	4.75 (2.49)	5.35 (2.37)	294	outdoors	521	7.36 (2.29)	5.48 (2.63)	6.32 (2.34)	6
narcotic	894	4.50 (1.99)	4.75 (2.31)	4.70 (2.15)	2	outrage	921	3.68 (2.23)	6.55 (2.34)	4.77 (2.76)	4
nasty	895	4.21 (2.27)	5.21 (2.27)	5.05 (1.81)	5	outstanding	922	7.47 (1.54)	6.32 (2.26)	6.42 (2.04)	37
natural	896	6.56 (1.58)	4.78 (2.24)	5.56 (1.72)	156	overcast	923	4.00 (1.53)	4.21 (1.78)	4.26 (2.00)	9
nature	293	7.43 (1.45)	4.62 (2.69)	5.00 (3.34)	191	overwhelmed	300	4.87 (2.50)	6.40 (3.02)	4.93 (2.71)	4
nectar	294	6.79 (1.81)	3.54 (2.82)	4.85 (2.91)	3	owl	522	6.04 (1.27)	4.00 (2.04)	6.00 (1.53)	2
needle	897	4.11 (1.57)	5.00 (2.61)	4.11 (2.17)	15	pain	301	2.90 (1.77)	5.70 (2.27)	4.32 (2.16)	88
neglect	898	3.33 (1.77)	4.52 (2.11)	3.95 (2.01)	12	paint	924	5.16 (1.54)	4.58 (2.17)	5.63 (1.50)	37
nervous	899	3.74 (1.28)	5.53 (1.95)	4.16 (1.46)	24	palace	302	6.47 (1.97)	4.82 (2.86)	6.00 (2.03)	38
neurotic	900	4.95 (1.99)	4.74 (2.60)	4.42 (1.80)	10	pamphlet	925	4.85 (1.14)	3.60 (1.88)	4.65 (1.73)	3
news	901	5.53 (1.43)	4.55 (2.35)	5.16 (1.86)	102	pancakes	523	6.56 (1.33)	3.92 (1.98)	6.20 (1.38)	.
nice	902	6.83 (1.65)	4.95 (2.82)	6.06 (1.89)	75	panic	601	3.52 (1.94)	6.52 (2.35)	3.56 (1.92)	22
nightmare	295	2.58 (1.38)	7.45 (1.69)	4.91 (1.64)	9	paper	303	5.33 (1.37)	2.45 (2.07)	4.45 (1.57)	157
nipple	903	7.32 (1.45)	6.68 (2.26)	5.79 (2.25)	.	paradise	304	8.60 (0.75)	5.85 (3.41)	6.50 (2.54)	12
noisy	904	5.10 (1.92)	6.15 (1.73)	4.95 (1.76)	6	paralysis	926	2.39 (1.72)	4.84 (2.81)	2.58 (1.84)	6
nonchalant	296	4.71 (1.45)	3.12 (2.00)	4.19 (1.72)	1	part	927	5.11 (1.60)	4.67 (1.68)	4.56 (1.46)	500
nonsense	905	5.11 (1.73)	4.89 (1.94)	5.47 (1.47)	13	party	305	7.12 (1.83)	6.59 (2.58)	5.59 (2.35)	216
noose	906	4.14 (1.62)	4.71 (2.19)	4.00 (1.97)	3	passage	928	5.53 (1.18)	4.44 (1.98)	5.28 (2.14)	49
nourish	907	6.24 (1.92)	4.43 (2.31)	5.67 (1.65)	.	passion	306	7.80 (1.14)	7.70 (1.89)	6.20 (2.30)	28

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
pasta	524	6.68 (1.70)	4.88 (2.13)	5.68 (1.07)	.	pressure	944	3.50 (1.19)	5.55 (2.31)	3.10 (1.62)	185
patent	307	5.75 (1.42)	3.08 (1.93)	5.42 (2.02)	35	prestige	945	7.45 (1.64)	6.15 (1.69)	7.05 (1.82)	29
patient	929	4.71 (1.82)	4.19 (2.25)	4.29 (2.03)	86	pretty	326	7.65 (1.42)	6.65 (1.98)	4.95 (1.70)	107
patriot	930	6.85 (1.84)	6.40 (2.16)	6.55 (1.73)	10	prick	946	4.55 (1.67)	4.10 (2.77)	4.74 (2.08)	2
peace	308	7.25 (2.10)	3.85 (2.74)	5.70 (2.27)	198	pride	327	6.53 (2.26)	5.80 (2.98)	6.60 (2.29)	42
penalty	931	3.09 (1.66)	4.68 (2.38)	4.23 (2.45)	14	priest	328	6.06 (2.46)	5.41 (2.45)	4.88 (2.29)	16
pencil	309	5.30 (0.67)	3.00 (1.94)	4.50 (0.97)	34	prison	329	2.25 (1.76)	5.92 (3.34)	4.58 (3.20)	42
penis	932	5.55 (1.70)	5.10 (2.77)	5.95 (3.22)	.	privacy	330	5.73 (1.58)	3.93 (2.09)	4.87 (2.00)	12
penthouse	933	6.90 (1.65)	6.20 (2.40)	6.90 (2.05)	1	profit	331	7.80 (1.47)	7.40 (1.55)	6.20 (2.68)	28
people	525	6.88 (1.69)	5.12 (1.72)	6.08 (1.63)	847	progress	947	7.45 (1.36)	6.05 (2.37)	6.30 (2.13)	120
perfection	310	8.00 (1.76)	5.00 (3.05)	7.09 (2.07)	11	promotion	332	8.00 (1.60)	5.67 (2.96)	6.83 (2.33)	26
perfume	934	6.21 (1.44)	5.21 (2.42)	6.00 (1.45)	10	protected	333	6.25 (1.97)	4.10 (2.00)	5.30 (1.81)	31
person	311	6.58 (1.44)	3.58 (1.78)	5.92 (1.93)	175	proud	334	8.08 (1.08)	5.91 (2.59)	6.73 (2.76)	50
pervert	312	4.15 (2.61)	6.21 (2.91)	5.46 (2.63)	1	pungent	948	4.38 (2.11)	4.19 (2.20)	5.10 (1.70)	4
pest	313	3.79 (2.08)	5.31 (2.32)	4.85 (2.51)	4	punishment	335	2.40 (1.50)	5.80 (2.54)	3.53 (2.59)	21
pet	935	5.86 (2.62)	5.05 (2.63)	5.62 (2.11)	8	puppy	336	7.30 (2.41)	6.10 (2.69)	4.80 (2.62)	2
phase	936	5.19 (0.40)	3.57 (1.86)	4.76 (1.70)	72	pus	602	2.84 (2.15)	4.92 (2.29)	4.40 (2.10)	.
pie	314	6.45 (1.54)	4.70 (2.18)	5.25 (1.21)	14	putrid	337	2.86 (1.83)	5.46 (2.37)	4.85 (2.12)	.
pig	937	5.10 (2.14)	4.71 (2.31)	6.10 (1.95)	8	python	949	5.39 (2.38)	5.56 (2.36)	6.33 (2.22)	14
pillow	315	7.88 (1.17)	3.62 (2.96)	4.50 (2.16)	8	quality	950	6.39 (1.72)	4.50 (1.92)	6.00 (1.46)	114
pinch	938	4.38 (1.72)	4.81 (2.34)	5.19 (1.72)	6	quarrel	338	3.50 (1.96)	6.10 (2.07)	4.05 (1.96)	20
pistol	939	5.89 (2.31)	6.21 (1.90)	6.95 (1.84)	27	quart	951	5.45 (1.85)	4.10 (2.40)	5.55 (1.90)	3
pity	940	3.71 (1.49)	3.48 (1.63)	4.43 (1.99)	14	queen	952	5.81 (1.08)	4.73 (1.96)	4.67 (1.83)	41
pizza	526	6.80 (2.36)	5.08 (2.22)	5.32 (2.01)	3	quick	953	6.70 (1.59)	6.65 (1.93)	6.65 (1.95)	68
plain	941	4.80 (1.24)	3.35 (1.63)	4.70 (1.30)	48	quiet	339	5.75 (1.54)	2.50 (1.73)	5.08 (2.50)	76
plane	539	6.32 (2.17)	6.08 (2.41)	4.80 (2.04)	114	rabbit	527	6.40 (1.78)	3.64 (1.98)	6.04 (1.72)	11
plant	316	6.12 (1.41)	3.31 (1.85)	4.44 (1.86)	125	rabies	340	1.58 (0.90)	6.08 (2.87)	4.00 (2.30)	1
pleasure	317	8.00 (1.05)	6.20 (2.39)	5.80 (2.39)	62	radiant	954	6.35 (2.08)	5.05 (2.82)	5.90 (2.10)	8
poetry	318	5.29 (2.17)	4.35 (3.18)	5.35 (1.41)	88	radiator	955	4.50 (1.36)	4.45 (2.09)	4.75 (1.83)	4
poison	319	2.27 (1.94)	5.07 (2.55)	2.80 (1.97)	10	radio	341	6.67 (1.59)	5.36 (2.90)	5.50 (2.03)	120
politeness	320	6.80 (2.01)	3.73 (2.43)	5.13 (1.25)	5	rage	342	2.55 (2.34)	8.33 (1.23)	7.18 (1.89)	16
pollute	321	2.00 (1.22)	6.14 (2.18)	5.77 (2.24)	1	rain	569	5.36 (2.64)	3.68 (2.38)	5.20 (1.87)	70
poster	942	5.45 (1.96)	4.65 (2.94)	4.95 (2.09)	4	rainbow	343	8.00 (1.37)	4.88 (2.68)	4.88 (2.25)	4
poverty	322	2.08 (1.04)	4.92 (2.60)	3.93 (2.06)	20	rancid	956	4.47 (2.37)	5.37 (2.22)	5.32 (1.67)	.
power	323	7.29 (1.59)	7.07 (1.44)	7.29 (2.81)	342	rape	344	1.70 (1.64)	5.30 (3.53)	3.30 (2.45)	5
powerful	324	6.88 (1.93)	5.88 (2.67)	7.29 (2.49)	63	rat	345	3.50 (1.51)	4.50 (2.11)	5.58 (2.23)	6
prairie	325	5.33 (1.61)	3.75 (2.70)	5.17 (2.62)	21	rattle	346	5.50 (1.72)	4.40 (1.65)	3.80 (1.48)	5
present	943	6.55 (2.01)	5.60 (2.11)	5.50 (1.88)	377	razor	957	5.00 (2.03)	6.22 (2.13)	5.28 (2.16)	15

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
red	570	6.36 (1.38)	4.96 (2.13)	5.33 (1.37)	197	salad	369	5.40 (1.50)	3.73 (2.46)	5.67 (1.05)	9
refreshment	347	7.83 (1.11)	3.92 (2.54)	5.00 (2.22)	2	salute	370	5.56 (1.55)	5.12 (2.19)	5.59 (2.18)	3
regretful	348	2.33 (1.18)	5.73 (2.43)	3.93 (2.52)	1	sapphire	371	6.60 (2.03)	5.13 (2.85)	5.47 (2.29)	.
rejected	349	1.83 (1.59)	6.67 (2.35)	3.42 (2.81)	33	satisfied	372	7.44 (1.59)	4.44 (2.01)	5.11 (2.89)	36
relaxed	350	6.40 (1.92)	3.20 (2.48)	5.60 (1.40)	14	save	969	6.27 (1.86)	5.09 (2.39)	6.23 (1.80)	62
repentant	351	5.00 (1.24)	4.14 (1.70)	5.00 (2.35)	1	savior	373	7.73 (1.49)	5.87 (3.11)	6.60 (2.35)	6
reptile	958	5.50 (1.82)	5.11 (2.08)	5.33 (2.33)	.	scalding	970	3.17 (2.20)	6.89 (2.05)	3.72 (2.40)	1
rescue	352	7.90 (1.07)	7.10 (2.25)	6.70 (2.41)	15	scandal	971	4.05 (1.65)	4.95 (2.01)	4.84 (1.71)	8
resent	959	3.90 (1.41)	4.24 (2.21)	3.80 (1.82)	8	scapegoat	972	3.81 (1.66)	4.57 (2.06)	3.57 (1.80)	1
reserved	353	4.92 (1.73)	3.00 (2.37)	5.25 (2.22)	27	scar	973	3.60 (1.31)	4.65 (1.73)	4.25 (1.77)	10
respect	354	7.25 (1.48)	5.12 (2.32)	6.25 (2.41)	125	scared	604	3.52 (2.24)	6.84 (2.10)	3.48 (2.28)	21
respectful	355	6.92 (1.78)	3.67 (2.77)	5.17 (2.33)	4	scholar	374	7.08 (1.38)	5.00 (2.19)	5.82 (2.04)	15
restaurant	960	6.62 (2.09)	6.14 (2.37)	6.29 (1.19)	41	scissors	974	5.14 (0.48)	4.14 (1.82)	4.95 (1.80)	1
reunion	961	6.45 (1.96)	6.05 (2.35)	5.80 (2.14)	11	scorching	975	3.55 (1.57)	4.67 (3.09)	4.14 (1.96)	.
reverent	356	5.50 (1.10)	4.20 (1.70)	4.84 (1.68)	3	scorn	375	3.07 (2.09)	5.53 (2.26)	4.40 (2.35)	4
revolt	357	3.80 (1.75)	7.00 (2.16)	6.70 (2.79)	8	scornful	376	4.00 (2.22)	4.20 (2.17)	4.80 (1.47)	5
revolver	962	5.65 (1.95)	5.25 (2.02)	5.75 (1.92)	14	scorpion	976	3.61 (2.03)	4.63 (2.99)	4.06 (2.29)	.
reward	358	7.13 (1.55)	4.53 (2.39)	5.80 (2.18)	15	scream	605	4.04 (2.03)	6.68 (2.36)	4.68 (2.04)	13
riches	359	7.47 (1.62)	6.50 (2.56)	6.50 (2.19)	2	scum	377	3.00 (1.84)	5.12 (2.34)	3.94 (2.05)	.
ridicule	360	3.80 (2.09)	4.90 (2.57)	4.05 (2.50)	5	scurvy	378	3.53 (2.10)	4.41 (2.85)	4.29 (2.31)	1
rifle	603	5.48 (2.74)	6.48 (1.92)	5.46 (2.70)	63	seasick	379	2.20 (1.15)	5.20 (2.98)	3.47 (2.03)	.
rigid	963	4.15 (2.43)	4.75 (2.73)	4.85 (2.21)	24	seat	380	4.60 (1.06)	2.60 (1.84)	4.60 (2.16)	54
riot	361	3.55 (1.64)	6.15 (2.46)	3.95 (2.01)	7	secure	381	6.94 (2.16)	3.00 (2.12)	5.65 (2.29)	30
river	362	6.60 (1.65)	4.00 (2.05)	4.40 (1.07)	165	selfish	382	3.25 (1.96)	5.33 (2.84)	5.33 (1.72)	8
roach	363	3.08 (1.73)	4.91 (2.63)	5.45 (2.84)	2	sentiment	977	5.76 (1.48)	4.28 (2.54)	4.71 (1.72)	23
robber	964	3.11 (1.59)	5.70 (2.45)	4.32 (2.33)	2	serious	383	5.67 (1.72)	4.00 (2.26)	5.58 (1.93)	116
rock	965	5.84 (1.57)	4.45 (2.35)	5.26 (2.08)	75	severe	978	4.05 (1.57)	5.30 (2.30)	4.20 (1.85)	39
rollercoaster	528	7.80 (1.83)	7.60 (2.14)	5.20 (2.83)	.	sex	384	8.65 (0.61)	8.00 (1.21)	6.38 (2.33)	84
romantic	364	8.13 (1.19)	7.93 (1.39)	6.13 (2.45)	32	sexy	530	8.16 (0.94)	7.48 (2.16)	7.28 (1.67)	2
rotten	365	2.67 (1.40)	4.27 (2.58)	4.47 (2.07)	2	shadow	385	4.50 (1.00)	3.58 (2.15)	4.00 (2.00)	36
rough	966	4.71 (1.79)	4.95 (1.77)	4.81 (1.72)	41	shamed	386	2.95 (1.32)	3.95 (1.85)	3.15 (1.73)	1
rude	366	2.82 (2.27)	6.42 (2.78)	5.55 (2.77)	6	shark	606	3.80 (2.65)	7.24 (1.94)	2.84 (2.54)	.
runner	571	5.64 (2.04)	3.88 (2.26)	5.80 (1.71)	1	sheltered	387	5.50 (1.93)	4.69 (1.85)	4.06 (1.64)	4
rusty	367	3.92 (1.08)	4.25 (2.38)	4.92 (1.44)	8	ship	388	5.35 (0.99)	4.00 (1.95)	4.85 (2.16)	83
sad	368	1.87 (1.06)	4.20 (2.31)	4.13 (2.20)	35	shotgun	979	6.16 (2.43)	6.11 (1.70)	6.79 (2.10)	8
safe	967	6.30 (2.20)	4.00 (2.55)	5.79 (1.75)	58	shriek	980	4.15 (2.32)	4.90 (2.92)	4.50 (1.76)	5
sailboat	529	6.52 (1.81)	4.76 (2.33)	5.80 (1.76)	1	shy	389	4.59 (1.23)	3.88 (2.32)	3.12 (1.32)	13
saint	968	5.84 (1.71)	5.05 (1.08)	5.11 (2.18)	16	sick	607	2.12 (1.20)	4.44 (2.27)	3.17 (1.69)	51

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
sickness	390	2.57 (2.21)	6.08 (2.50)	5.31 (2.32)	6	spring	993	7.50 (1.54)	6.95 (1.54)	6.35 (1.87)	127
silk	391	6.53 (0.94)	4.00 (2.40)	4.76 (1.71)	12	square	408	4.90 (1.20)	2.50 (1.65)	4.60 (0.70)	143
silly	981	7.05 (1.84)	6.32 (2.50)	5.74 (2.02)	15	stagnant	994	4.15 (1.14)	3.95 (1.61)	4.75 (1.21)	5
sin	392	3.36 (1.60)	5.07 (2.06)	4.21 (2.12)	53	star	409	7.33 (1.35)	6.00 (2.62)	5.07 (2.34)	25
sinful	393	3.00 (1.56)	6.33 (1.84)	4.13 (2.47)	3	startled	410	4.41 (1.12)	6.53 (2.58)	5.24 (1.79)	21
sissy	394	3.69 (2.30)	5.06 (2.49)	4.59 (2.83)	.	starving	611	2.80 (2.24)	6.00 (2.57)	3.64 (2.10)	6
skeptical	395	5.00 (1.87)	5.35 (1.90)	4.88 (1.69)	7	statue	995	5.11 (0.81)	3.89 (1.52)	5.53 (1.54)	17
skijump	531	7.04 (1.85)	6.75 (2.40)	5.38 (2.30)	.	stench	996	2.60 (1.27)	4.35 (2.18)	4.55 (1.67)	1
skull	608	4.60 (2.08)	5.40 (1.63)	4.96 (1.81)	3	stiff	997	5.10 (1.94)	4.20 (2.75)	5.00 (2.38)	21
sky	572	7.28 (1.40)	4.36 (2.38)	5.00 (2.24)	58	stink	411	2.80 (1.21)	4.27 (2.05)	4.07 (1.87)	3
skyscraper	573	6.04 (1.99)	5.60 (1.98)	4.36 (2.50)	2	stomach	998	4.95 (2.04)	4.00 (2.38)	4.70 (2.18)	37
slap	396	3.53 (2.18)	6.29 (2.57)	3.94 (2.19)	2	stool	999	4.10 (1.45)	3.67 (1.91)	5.29 (1.93)	8
slaughter	397	2.17 (1.64)	6.92 (2.23)	4.75 (2.09)	10	storm	1000	5.30 (2.20)	6.35 (2.06)	4.85 (1.79)	26
slave	398	2.18 (1.24)	5.06 (2.88)	4.06 (2.90)	30	stove	1001	5.47 (1.47)	4.26 (1.76)	5.00 (1.37)	15
sleep	399	7.53 (1.36)	2.33 (1.99)	4.67 (2.02)	65	street	412	5.30 (0.95)	3.90 (1.60)	5.20 (0.42)	244
slime	400	3.60 (1.40)	5.00 (2.48)	4.20 (1.26)	1	stress	413	2.33 (1.23)	7.42 (2.35)	4.83 (3.33)	107
slow	982	3.95 (1.68)	4.16 (2.27)	4.50 (1.62)	60	strong	414	7.40 (1.50)	6.07 (2.34)	6.67 (2.82)	202
slum	401	2.20 (1.03)	4.20 (2.78)	3.90 (2.47)	8	stupid	415	2.91 (1.70)	4.08 (2.91)	4.00 (2.66)	24
slush	983	4.65 (1.95)	3.50 (2.19)	4.85 (1.66)	.	subdued	416	5.00 (0.95)	2.83 (1.53)	5.00 (1.54)	8
smallpox	402	2.50 (2.35)	5.85 (2.30)	4.77 (2.24)	2	success	417	8.20 (0.94)	6.20 (2.43)	6.20 (2.34)	93
smooth	984	6.72 (1.32)	5.00 (2.58)	4.78 (2.24)	42	suffocate	418	1.64 (0.67)	5.00 (3.49)	4.36 (2.58)	1
snake	609	4.08 (2.43)	6.72 (2.32)	4.48 (2.14)	44	sugar	1002	6.40 (1.76)	6.20 (1.47)	5.30 (1.63)	34
snob	403	2.75 (1.29)	5.75 (2.63)	5.33 (2.42)	1	suicide	419	1.56 (0.96)	5.18 (3.00)	4.12 (2.92)	17
snow	575	6.88 (2.11)	5.36 (2.74)	5.92 (2.08)	59	sun	532	6.96 (2.03)	4.80 (2.40)	5.54 (2.28)	112
snuggle	404	7.80 (1.08)	4.47 (2.61)	5.80 (2.08)	4	sunlight	1003	7.00 (1.52)	5.60 (2.35)	5.40 (1.85)	17
social	985	6.42 (1.26)	5.26 (2.49)	5.16 (2.01)	380	sunrise	420	7.75 (1.14)	5.09 (2.84)	5.36 (2.42)	10
soft	986	6.84 (1.34)	5.00 (2.52)	6.16 (1.61)	61	sunset	421	6.80 (2.24)	4.13 (2.97)	5.67 (2.32)	14
solemn	405	4.88 (1.54)	3.88 (1.75)	4.50 (2.25)	12	surgery	612	3.12 (2.17)	5.68 (2.54)	2.92 (2.20)	6
song	987	6.38 (2.16)	5.38 (2.52)	5.67 (2.06)	70	surprised	422	7.07 (1.94)	7.80 (2.27)	5.87 (1.96)	58
soothe	988	7.42 (1.12)	4.53 (2.91)	4.68 (2.38)	2	suspicious	423	4.00 (1.58)	6.00 (1.37)	5.06 (1.84)	13
sour	989	3.65 (1.66)	4.95 (1.79)	4.80 (1.54)	3	swamp	1004	5.36 (2.46)	5.27 (2.60)	5.82 (1.89)	5
space	574	6.80 (1.68)	5.08 (2.90)	5.24 (2.68)	184	sweetheart	424	8.27 (0.96)	5.33 (2.79)	5.93 (2.22)	9
spanking	990	5.00 (2.53)	5.70 (2.58)	4.70 (2.60)	.	swift	1005	6.58 (1.92)	5.95 (2.53)	6.32 (1.67)	32
sphere	991	5.45 (1.15)	4.10 (2.22)	5.05 (1.19)	22	swimmer	576	6.25 (1.65)	4.12 (2.83)	5.75 (1.85)	.
spider	610	3.64 (1.89)	5.48 (2.47)	4.96 (2.17)	2	syphilis	425	1.90 (1.37)	4.45 (3.22)	3.10 (2.40)	.
spirit	406	7.00 (1.05)	5.50 (2.51)	4.80 (2.62)	182	table	426	5.30 (1.06)	3.10 (2.69)	3.90 (1.66)	198
spouse	407	7.57 (1.28)	6.38 (2.40)	5.85 (2.19)	3	talent	427	7.40 (1.24)	6.60 (1.45)	6.33 (2.02)	40
spray	992	5.45 (1.77)	4.45 (2.46)	5.14 (1.67)	16	tamper	1006	4.10 (1.51)	5.10 (1.67)	4.71 (1.79)	1

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
tank	613	5.92 (1.87)	4.92 (1.98)	5.58 (1.91)	12	treasure	449	8.47 (0.80)	7.50 (1.15)	6.31 (2.63)	4
taste	1007	6.68 (1.38)	5.37 (2.29)	5.53 (1.87)	59	treat	1019	7.20 (1.51)	5.80 (1.99)	5.35 (1.66)	26
taxi	1008	5.45 (1.96)	3.80 (2.19)	4.25 (2.10)	16	tree	450	6.42 (1.44)	2.67 (1.72)	5.75 (2.42)	59
teacher	1009	5.75 (2.22)	4.50 (2.74)	5.05 (2.28)	80	triumph	451	7.20 (2.19)	6.00 (2.25)	6.75 (1.89)	22
tease	1010	6.05 (2.34)	6.42 (2.46)	5.16 (1.95)	6	triumphant	452	8.80 (0.56)	6.36 (2.90)	6.87 (3.02)	5
tender	1011	6.57 (1.25)	5.10 (2.10)	5.33 (1.74)	11	trophy	453	7.90 (1.20)	5.80 (2.04)	5.90 (2.42)	8
tennis	540	5.88 (2.11)	4.40 (2.43)	5.72 (2.03)	15	trouble	454	3.75 (2.53)	5.91 (1.92)	4.64 (2.06)	134
tense	428	3.50 (1.18)	6.00 (2.54)	5.10 (1.52)	15	troubled	455	2.60 (1.17)	5.10 (2.69)	4.30 (2.36)	31
termite	429	3.95 (1.50)	4.05 (2.28)	4.25 (1.71)	.	truck	577	6.00 (1.68)	4.72 (2.34)	5.52 (1.78)	57
terrible	430	2.38 (1.78)	5.53 (2.33)	4.36 (1.65)	45	trumpet	456	5.81 (1.52)	5.19 (2.29)	4.59 (2.12)	7
terrific	431	8.25 (1.06)	5.92 (3.32)	7.00 (2.45)	5	trunk	1020	5.00 (1.53)	3.95 (2.09)	4.89 (2.08)	8
terrified	432	1.80 (0.92)	7.30 (2.41)	3.60 (2.63)	7	trust	457	5.67 (2.92)	5.27 (2.19)	5.73 (2.19)	52
terrorist	614	1.96 (1.81)	6.76 (2.74)	2.88 (2.47)	.	truth	458	7.50 (1.45)	4.92 (2.69)	6.54 (2.63)	126
thankful	433	6.33 (2.23)	4.40 (2.29)	5.67 (1.91)	6	tumor	459	3.16 (2.22)	5.68 (2.58)	4.05 (2.37)	17
theory	434	5.40 (1.54)	4.80 (2.12)	4.85 (1.84)	129	tune	1021	6.32 (1.53)	4.90 (2.05)	5.95 (2.09)	10
thermometer	1012	4.80 (0.89)	3.45 (1.99)	4.55 (1.57)	.	twilight	1022	6.83 (1.79)	4.94 (2.36)	5.56 (1.72)	4
thief	435	3.47 (2.00)	6.27 (2.43)	4.93 (2.66)	8	ugly	460	2.50 (1.24)	5.00 (2.05)	4.36 (1.69)	21
thorn	436	3.59 (1.87)	5.18 (2.24)	4.47 (1.77)	3	ulcer	461	1.92 (1.38)	6.33 (2.93)	4.33 (2.71)	5
thought	1013	6.00 (1.64)	4.81 (2.29)	5.67 (1.68)	515	umbrella	578	5.20 (1.50)	3.04 (2.13)	5.64 (1.75)	8
thoughtful	437	7.41 (0.94)	6.44 (1.71)	5.38 (2.09)	11	unfaithful	462	2.40 (1.72)	5.47 (2.26)	3.33 (2.23)	1
thrill	438	8.40 (1.59)	8.40 (1.06)	6.53 (2.80)	5	unhappy	463	1.93 (1.14)	4.07 (2.55)	2.80 (1.47)	26
tidy	1014	6.26 (0.93)	3.68 (2.16)	4.95 (1.47)	1	unit	1023	5.70 (2.20)	4.40 (2.72)	5.65 (2.21)	103
time	439	5.15 (1.95)	5.36 (2.92)	5.31 (2.21)	1599	untroubled	464	7.55 (1.57)	3.42 (2.78)	5.18 (2.48)	.
timid	440	3.80 (1.42)	3.07 (1.49)	3.20 (1.86)	5	upset	465	2.00 (1.22)	5.38 (2.87)	4.31 (2.24)	14
tobacco	441	3.40 (2.27)	4.60 (3.63)	3.60 (2.17)	19	urine	617	2.84 (1.68)	4.16 (2.41)	5.08 (1.80)	1
tomb	442	3.44 (1.90)	4.35 (2.76)	4.25 (2.11)	11	useful	466	6.76 (1.89)	4.35 (2.32)	5.82 (2.21)	58
tool	1015	5.50 (1.24)	4.80 (1.85)	6.40 (1.47)	40	useless	467	2.73 (1.62)	5.18 (2.82)	5.09 (2.07)	17
toothache	443	2.00 (1.13)	5.83 (2.62)	4.50 (2.43)	.	utensil	1024	4.91 (1.69)	3.73 (2.05)	5.82 (1.79)	.
tornado	444	3.17 (2.21)	6.33 (2.74)	5.42 (2.50)	1	vacation	468	7.73 (1.58)	4.73 (3.08)	6.40 (1.92)	47
torture	445	1.55 (0.83)	5.15 (2.85)	3.15 (1.81)	3	vagina	1025	7.27 (1.70)	7.00 (2.18)	6.27 (1.86)	10
tower	1016	5.57 (2.31)	4.38 (2.29)	6.33 (2.35)	13	valentine	469	7.80 (1.40)	5.90 (2.96)	4.90 (2.42)	2
toxic	446	2.00 (1.54)	5.92 (2.64)	4.25 (2.70)	3	vampire	470	4.76 (1.64)	6.24 (2.49)	5.24 (1.44)	1
toy	1017	7.00 (2.10)	5.75 (2.79)	6.60 (1.88)	4	vandal	471	3.20 (1.91)	5.95 (2.24)	4.75 (2.34)	1
tragedy	447	2.27 (1.79)	6.13 (2.10)	3.87 (2.00)	49	vanity	472	4.33 (2.27)	4.92 (2.39)	4.50 (2.07)	7
traitor	448	2.19 (1.56)	5.41 (2.50)	5.06 (2.79)	2	vehicle	473	6.42 (1.89)	4.95 (2.44)	6.05 (2.30)	35
trash	615	2.44 (1.33)	3.96 (2.47)	4.88 (1.90)	2	venom	474	3.71 (2.08)	5.50 (2.37)	4.38 (2.13)	2
trauma	616	2.44 (1.76)	6.12 (2.83)	2.80 (1.85)	1	vest	1026	4.94 (1.16)	4.33 (1.88)	5.11 (1.75)	4
travel	1018	6.64 (2.13)	6.09 (2.47)	6.41 (1.94)	61	victim	618	2.44 (1.61)	6.00 (2.45)	3.48 (2.47)	27

*Affective Norms for English Words. Male Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 2

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
victory	475	7.87 (1.41)	6.20 (2.62)	7.00 (2.31)	61	whistle	1030	5.75 (1.21)	4.70 (1.56)	5.15 (1.84)	4
vigorous	476	6.92 (1.44)	4.75 (2.67)	5.17 (2.08)	29	white	542	6.40 (1.50)	3.96 (1.97)	6.00 (1.53)	365
village	477	5.88 (1.22)	4.31 (2.21)	5.25 (2.29)	72	whore	492	3.92 (2.68)	6.58 (2.71)	5.83 (2.17)	2
violent	478	3.53 (2.17)	6.33 (2.74)	5.33 (3.20)	33	wicked	493	2.93 (1.98)	5.53 (2.45)	4.00 (2.04)	9
violin	579	4.88 (2.09)	3.56 (2.18)	4.80 (2.00)	11	wife	1031	6.05 (2.06)	5.65 (1.93)	5.65 (1.79)	228
virgin	1027	6.29 (1.87)	6.33 (2.18)	5.81 (2.60)	35	win	494	8.35 (0.86)	8.38 (0.89)	7.12 (2.66)	55
virtue	479	6.15 (1.69)	5.20 (2.33)	5.85 (2.39)	30	windmill	1032	5.14 (1.88)	4.00 (2.37)	5.24 (1.30)	1
vision	480	6.87 (1.60)	4.47 (2.36)	6.00 (1.46)	56	window	495	6.00 (1.60)	4.18 (2.04)	4.82 (1.40)	119
volcano	619	5.12 (2.24)	6.44 (2.38)	3.40 (2.16)	2	wine	496	5.60 (1.88)	4.85 (2.23)	5.00 (1.84)	72
vomit	481	2.30 (1.89)	6.10 (2.85)	4.00 (2.67)	3	wink	1033	6.67 (1.46)	4.79 (2.44)	5.89 (1.37)	7
voyage	1028	6.39 (1.58)	5.72 (2.42)	5.89 (2.08)	17	wise	497	7.00 (1.26)	4.17 (2.25)	5.64 (2.20)	36
wagon	1029	5.32 (0.89)	4.05 (2.35)	5.22 (1.73)	55	wish	1034	6.78 (1.59)	5.22 (2.29)	5.50 (1.89)	110
war	482	3.31 (2.78)	7.86 (1.56)	6.46 (2.37)	464	wit	1035	7.32 (1.29)	5.95 (2.09)	6.00 (1.94)	20
warmth	483	7.10 (1.59)	4.15 (2.52)	5.35 (1.27)	28	woman	498	6.95 (1.54)	6.37 (2.29)	6.11 (1.33)	224
wasp	484	3.40 (1.68)	5.40 (2.13)	3.87 (2.13)	2	wonder	499	5.67 (1.50)	5.27 (2.00)	5.82 (2.04)	67
waste	485	3.47 (2.18)	4.71 (2.80)	5.12 (2.12)	35	world	500	6.13 (1.68)	4.93 (2.46)	5.38 (2.63)	787
watch	580	6.04 (1.51)	4.08 (2.53)	5.40 (1.35)	81	wounds	620	2.96 (1.74)	5.80 (2.04)	4.00 (1.50)	8
water	486	6.93 (1.75)	5.13 (2.75)	5.00 (2.20)	442	writer	1036	4.95 (1.57)	3.45 (1.76)	4.55 (1.88)	73
waterfall	487	7.47 (1.13)	6.80 (2.08)	5.00 (2.51)	2	yacht	1037	7.33 (1.68)	5.86 (2.59)	6.29 (2.10)	4
wealthy	488	7.58 (1.38)	5.17 (3.04)	7.00 (2.45)	12	yellow	545	5.64 (1.89)	4.08 (2.10)	5.56 (1.29)	55
weapon	489	4.69 (1.74)	6.00 (1.62)	5.94 (2.11)	42	young	1038	6.74 (1.56)	5.79 (2.39)	5.63 (2.29)	385
weary	490	4.18 (2.19)	3.82 (2.16)	4.18 (1.67)	17	youth	1039	6.84 (1.61)	5.47 (2.32)	5.84 (2.12)	82
wedding	491	7.07 (1.98)	6.07 (2.60)	6.33 (2.09)	32	zest	1040	6.50 (1.34)	6.00 (1.88)	6.17 (1.42)	5



*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
abduction	621	2.33 (2.13)	6.09 (2.72)	2.76 (2.49)	1	angry	18	2.27 (1.51)	7.46 (2.04)	5.19 (2.68)	45
abortion	622	3.15 (2.39)	5.85 (3.09)	4.00 (2.55)	6	anguished	19	1.55 (0.83)	6.20 (2.80)	3.20 (2.59)	2
absurd	623	4.70 (1.30)	4.65 (1.93)	4.70 (1.42)	17	ankle	638	5.00 (1.60)	4.04 (1.86)	4.84 (1.60)	8
abundance	624	6.55 (1.90)	5.10 (2.53)	5.55 (2.11)	13	annoy	20	2.61 (1.99)	6.48 (2.50)	5.09 (2.25)	2
abuse	1	1.46 (1.03)	6.88 (2.83)	3.81 (3.12)	18	answer	639	6.32 (1.64)	5.18 (2.63)	5.64 (1.56)	152
acceptance	625	8.18 (1.56)	4.86 (3.00)	6.55 (1.99)	49	anxious	21	4.81 (2.04)	7.00 (1.74)	5.15 (1.83)	29
accident	2	2.08 (1.29)	6.48 (2.62)	3.92 (2.29)	33	applause	640	7.62 (1.60)	5.77 (2.98)	6.19 (2.23)	14
ace	626	6.14 (2.10)	4.95 (2.33)	6.33 (2.08)	15	appliance	641	5.15 (0.49)	3.85 (1.76)	5.00 (1.03)	5
ache	627	2.00 (1.11)	4.77 (2.62)	3.23 (1.63)	4	arm	642	5.21 (1.86)	2.92 (1.89)	5.08 (0.97)	94
achievement	3	8.00 (1.24)	5.97 (2.80)	6.52 (2.47)	65	army	23	4.55 (1.99)	5.42 (2.04)	4.85 (2.58)	132
activate	4	5.31 (0.97)	5.00 (2.55)	5.38 (1.75)	2	aroused	24	7.96 (0.96)	6.77 (2.61)	6.15 (1.69)	20
addict	581	2.12 (1.48)	5.68 (1.95)	3.68 (2.54)	1	arrogant	25	2.90 (1.71)	6.10 (1.62)	4.55 (2.76)	2
addicted	628	2.29 (1.49)	5.09 (2.67)	3.29 (2.43)	3	art	643	7.50 (1.44)	5.08 (3.13)	5.75 (2.13)	208
admired	5	7.81 (2.01)	5.97 (2.53)	7.44 (2.21)	17	assassin	26	2.50 (1.80)	6.53 (2.42)	4.09 (2.73)	6
adorable	6	8.12 (1.07)	4.96 (2.92)	6.00 (2.61)	3	assault	27	1.78 (1.35)	7.70 (2.32)	3.09 (2.98)	15
adult	546	6.50 (1.50)	4.81 (1.65)	5.58 (2.53)	25	astonished	28	6.60 (1.70)	6.70 (2.18)	5.15 (1.69)	6
advantage	629	6.72 (2.11)	4.48 (2.10)	6.35 (2.17)	73	astronaut	501	6.54 (1.58)	5.62 (2.10)	5.08 (2.08)	2
adventure	630	8.00 (1.17)	7.05 (1.85)	6.55 (1.61)	14	athletics	644	6.45 (2.16)	5.45 (2.37)	6.05 (2.31)	9
affection	7	8.57 (0.74)	6.25 (2.86)	6.39 (2.13)	18	autumn	29	6.47 (2.27)	4.34 (2.55)	5.25 (1.97)	22
afraid	8	1.83 (1.14)	6.68 (2.65)	3.43 (2.25)	57	avalanche	645	2.95 (1.70)	5.80 (2.55)	3.20 (2.07)	1
aggressive	9	4.89 (1.79)	5.68 (2.29)	5.21 (2.57)	17	avenue	646	5.82 (1.44)	3.86 (2.17)	5.73 (1.45)	46
agility	22	6.24 (1.55)	5.07 (1.77)	5.79 (1.26)	3	awed	30	7.05 (1.19)	5.42 (2.48)	5.85 (1.63)	5
agony	10	2.41 (2.15)	6.34 (2.62)	3.75 (2.62)	9	baby	31	8.65 (0.67)	4.95 (2.96)	5.35 (2.70)	62
agreement	631	7.38 (1.63)	5.14 (2.51)	6.00 (1.75)	106	bake	647	6.05 (2.06)	5.45 (2.06)	5.71 (2.08)	12
air	632	6.23 (1.54)	3.64 (2.19)	5.00 (1.20)	257	bandage	648	5.05 (1.56)	4.19 (2.23)	4.73 (1.83)	4
alcoholic	582	2.00 (1.36)	6.00 (2.12)	4.08 (2.56)	3	bankrupt	32	1.85 (1.16)	6.56 (2.77)	3.48 (2.38)	5
alert	11	6.69 (1.72)	7.00 (2.51)	5.50 (2.55)	33	banner	649	5.45 (0.96)	4.19 (2.02)	4.81 (1.40)	8
alien	633	4.75 (1.65)	5.10 (2.38)	5.00 (2.03)	16	bar	650	5.91 (1.93)	4.78 (2.81)	5.13 (1.66)	82
alimony	634	4.62 (2.16)	5.14 (2.10)	5.18 (2.44)	2	barrel	651	4.83 (1.27)	3.04 (1.85)	4.88 (0.99)	24
alive	635	7.79 (1.86)	5.62 (2.81)	6.04 (2.29)	57	basket	547	5.31 (1.09)	3.88 (2.01)	5.62 (1.60)	17
allergy	636	2.95 (1.53)	4.68 (2.48)	3.45 (1.63)	1	bastard	33	3.44 (2.21)	5.94 (2.02)	4.03 (2.51)	12
alley	637	4.19 (2.16)	5.43 (2.66)	3.64 (1.99)	8	bath	502	7.42 (1.55)	3.58 (2.58)	7.08 (1.98)	26
alone	12	2.10 (1.35)	5.16 (2.62)	3.61 (2.45)	195	bathroom	548	5.19 (1.27)	3.92 (1.57)	5.58 (1.50)	18
aloof	13	4.68 (1.93)	4.54 (2.27)	4.60 (2.10)	5	bathtub	652	6.75 (1.48)	3.25 (2.53)	5.80 (1.67)	4
ambition	14	7.88 (1.53)	5.42 (3.13)	7.50 (1.75)	19	beach	34	7.65 (1.95)	4.45 (3.28)	5.15 (2.52)	61
ambulance	15	2.27 (1.54)	7.62 (1.98)	3.00 (2.23)	6	beast	653	3.50 (2.11)	5.21 (2.84)	4.25 (2.05)	7
angel	16	7.81 (1.10)	4.65 (2.59)	5.19 (2.43)	18	beautiful	654	8.00 (1.03)	5.95 (2.24)	6.50 (2.01)	127
anger	17	2.00 (1.28)	8.22 (1.35)	5.52 (3.19)	48	beauty	35	8.04 (1.15)	4.52 (2.76)	5.65 (2.44)	71

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
bed	549	7.15 (1.54)	3.19 (2.23)	6.77 (1.73)	127	bright	671	7.91 (1.41)	5.62 (2.22)	6.52 (2.32)	87
bees	583	3.15 (2.11)	6.31 (2.00)	3.77 (1.86)	15	broken	672	2.73 (1.61)	5.46 (2.44)	4.12 (1.37)	63
beggar	36	2.65 (1.85)	5.62 (2.61)	3.68 (2.50)	2	brother	52	7.26 (2.45)	4.30 (2.88)	5.00 (2.66)	73
bench	655	4.65 (1.47)	3.77 (2.27)	4.42 (1.17)	35	brutal	53	2.46 (1.84)	7.36 (1.87)	4.12 (3.04)	7
bereavement	656	4.52 (1.85)	4.50 (1.89)	4.62 (1.71)	4	building	550	5.04 (1.04)	3.77 (1.77)	5.27 (1.64)	160
betray	37	1.60 (0.96)	7.28 (2.09)	4.54 (3.31)	4	bullet	673	2.45 (1.82)	5.48 (2.71)	2.67 (2.20)	28
beverage	657	6.86 (1.46)	5.14 (2.37)	5.48 (2.32)	5	bunny	54	7.70 (1.38)	3.80 (2.65)	5.05 (2.33)	1
bird	38	7.41 (1.35)	3.39 (2.31)	4.36 (2.21)	31	burdened	55	2.38 (1.50)	5.72 (2.01)	4.72 (2.44)	4
birthday	39	8.13 (0.97)	6.74 (2.14)	6.22 (2.59)	18	burial	56	1.77 (1.07)	5.32 (2.32)	3.36 (1.96)	11
black	543	4.88 (2.03)	4.68 (2.32)	4.44 (1.73)	203	burn	586	2.35 (1.35)	6.04 (1.99)	3.92 (1.65)	15
blackmail	40	2.93 (2.09)	6.31 (2.66)	3.72 (2.81)	2	bus	541	4.31 (1.81)	3.77 (1.61)	4.65 (1.57)	34
bland	658	4.09 (1.15)	3.14 (1.61)	4.82 (1.33)	3	busybody	674	5.52 (2.58)	5.36 (2.74)	6.33 (1.93)	.
blase	41	4.79 (1.03)	3.58 (1.77)	4.74 (0.87)	7	butter	57	5.31 (1.29)	3.12 (1.90)	4.73 (1.89)	27
blasphemy	659	3.83 (2.43)	5.25 (2.31)	4.75 (1.39)	4	butterfly	58	7.48 (1.20)	3.48 (2.59)	4.70 (2.30)	2
bless	42	7.73 (1.00)	4.00 (2.83)	5.68 (2.36)	9	cabinet	675	5.00 (0.31)	3.57 (1.91)	4.76 (1.55)	17
blind	43	3.35 (2.11)	4.95 (2.39)	3.45 (1.93)	47	cake	59	7.26 (1.36)	4.91 (2.48)	5.13 (2.03)	9
bliss	660	6.80 (2.53)	4.12 (2.79)	5.84 (2.10)	4	cancer	60	1.41 (0.80)	6.26 (3.01)	3.45 (3.01)	25
blister	661	2.25 (1.33)	4.40 (2.58)	3.55 (1.76)	3	candy	61	6.96 (2.47)	4.96 (2.47)	5.58 (1.96)	16
blond	662	6.20 (1.51)	4.00 (2.20)	5.45 (1.10)	11	cane	677	4.36 (1.62)	4.00 (2.00)	4.09 (1.77)	12
bloody	584	2.08 (1.16)	6.50 (1.63)	3.62 (1.83)	8	cannon	678	4.05 (1.64)	4.25 (2.83)	4.85 (2.18)	7
blossom	44	7.09 (1.00)	4.61 (2.35)	5.52 (2.21)	7	capable	62	7.26 (1.45)	4.74 (2.26)	6.96 (1.80)	66
blubber	663	3.31 (1.93)	4.58 (2.56)	3.42 (1.92)	1	car	551	7.62 (1.92)	6.81 (1.77)	7.35 (2.00)	274
blue	544	6.38 (1.96)	4.62 (2.32)	5.35 (1.83)	143	carcass	679	2.59 (1.71)	4.59 (2.30)	4.36 (1.76)	7
board	664	5.00 (1.23)	3.56 (2.22)	5.24 (1.56)	239	carefree	63	7.45 (1.40)	4.82 (2.79)	5.96 (2.43)	9
body	665	5.38 (2.32)	5.46 (2.55)	5.42 (2.08)	276	caress	64	7.94 (1.11)	5.39 (2.89)	5.73 (2.23)	1
bold	45	7.00 (1.55)	5.94 (2.02)	6.58 (1.96)	21	cash	503	8.46 (1.07)	7.65 (1.50)	7.15 (2.49)	36
bomb	46	1.90 (1.14)	7.31 (2.42)	4.52 (3.27)	36	casino	680	6.71 (1.55)	6.27 (2.27)	5.10 (2.14)	2
book	47	5.55 (1.19)	4.20 (2.73)	5.45 (2.28)	193	cat	504	6.08 (2.26)	4.65 (2.17)	5.81 (2.08)	.
bored	48	3.05 (1.28)	2.80 (2.40)	4.15 (1.90)	14	cell	587	4.27 (1.34)	4.46 (1.90)	4.12 (1.93)	65
bottle	666	6.21 (1.47)	4.26 (2.70)	4.89 (1.52)	76	cellar	681	4.21 (1.79)	4.46 (2.28)	4.46 (1.28)	26
bouquet	667	7.55 (1.54)	5.85 (2.54)	6.05 (2.16)	4	cemetery	65	2.22 (1.24)	5.00 (2.88)	4.05 (2.19)	15
bowl	49	5.54 (1.48)	3.50 (2.16)	4.58 (1.72)	23	chair	66	5.00 (1.00)	3.07 (1.77)	4.52 (1.82)	66
boxer	585	4.92 (1.90)	5.04 (2.31)	4.73 (1.28)	1	champ	682	7.15 (2.31)	5.85 (2.94)	7.12 (2.05)	1
boy	50	6.91 (1.73)	5.13 (2.42)	6.00 (2.09)	242	champion	67	8.45 (0.83)	6.29 (2.98)	6.68 (2.60)	23
brave	668	7.55 (1.00)	6.35 (2.32)	7.30 (1.87)	24	chance	683	5.72 (1.86)	5.40 (2.55)	4.58 (2.08)	131
breast	51	5.43 (1.12)	4.43 (2.04)	4.96 (2.25)	11	chaos	684	3.86 (2.53)	7.00 (2.25)	3.73 (2.25)	17
breeze	669	7.20 (1.36)	4.45 (2.54)	5.50 (1.76)	14	charm	68	6.83 (1.58)	5.00 (2.19)	5.41 (2.40)	26
bride	670	7.88 (1.33)	6.25 (2.74)	5.67 (2.57)	33	cheer	69	8.50 (0.76)	6.30 (2.58)	6.45 (2.09)	8

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
child	70	8.00 (1.12)	5.35 (2.74)	4.85 (2.37)	213	corrupt	702	2.52 (1.81)	4.52 (2.20)	4.41 (2.40)	8
chin	685	5.20 (1.11)	2.95 (1.82)	5.10 (1.21)	27	cottage	87	6.83 (1.70)	2.87 (2.42)	5.70 (1.87)	19
chocolate	505	6.96 (1.99)	5.69 (2.41)	5.00 (1.90)	9	couple	506	7.96 (2.03)	7.38 (1.75)	5.96 (2.63)	122
christmas	686	7.96 (1.51)	6.42 (2.52)	5.38 (2.00)	27	cow	554	5.42 (1.45)	3.85 (2.11)	4.84 (1.68)	29
church	71	6.81 (1.94)	4.16 (2.10)	5.20 (2.16)	348	coward	703	2.73 (1.55)	4.23 (2.31)	2.91 (1.72)	8
circle	687	6.00 (1.27)	4.24 (2.19)	4.90 (1.61)	60	cozy	88	7.30 (1.66)	3.04 (2.25)	5.04 (2.34)	1
circus	72	7.75 (2.00)	6.45 (2.65)	5.70 (2.36)	7	crash	89	2.21 (1.42)	6.93 (2.53)	3.24 (2.25)	20
city	73	6.26 (1.25)	5.70 (2.74)	6.52 (1.93)	393	crime	704	2.33 (1.52)	5.75 (2.45)	3.67 (2.06)	34
cliff	553	4.38 (1.92)	6.62 (1.98)	3.69 (2.19)	11	criminal	705	2.62 (1.66)	5.68 (2.40)	3.05 (1.72)	24
clock	688	5.45 (1.28)	4.10 (2.77)	4.75 (2.22)	20	crisis	706	1.72 (1.37)	6.08 (3.09)	2.75 (2.51)	82
clothing	74	6.88 (1.59)	5.12 (2.86)	5.33 (2.22)	20	crown	90	6.73 (1.43)	4.62 (2.47)	6.42 (2.08)	19
clouds	533	5.96 (2.20)	3.15 (1.91)	5.00 (1.52)	38	crucify	91	2.09 (1.75)	6.78 (2.18)	3.72 (2.67)	2
clumsy	689	3.96 (2.36)	5.46 (2.49)	3.73 (1.85)	6	crude	707	2.59 (1.53)	5.14 (2.62)	3.77 (1.97)	15
coarse	690	4.45 (1.68)	4.14 (1.90)	4.95 (1.56)	10	cruel	92	1.57 (0.84)	5.96 (2.79)	3.78 (2.84)	15
coast	691	5.92 (2.00)	4.42 (2.23)	5.65 (1.70)	61	crushed	93	1.86 (1.28)	5.41 (3.02)	2.68 (2.23)	10
cockroach	75	2.38 (2.03)	6.47 (2.81)	4.41 (2.59)	2	crutch	708	3.08 (1.55)	3.88 (2.23)	4.08 (1.81)	1
coffin	76	2.41 (1.92)	5.28 (2.79)	4.03 (2.58)	7	cuddle	94	8.15 (1.60)	3.70 (2.52)	5.95 (2.61)	.
coin	692	6.30 (1.49)	4.10 (2.22)	5.45 (1.36)	10	cuisine	709	6.46 (1.36)	4.08 (2.00)	5.35 (1.09)	1
cold	693	4.14 (2.08)	5.00 (2.56)	4.73 (1.75)	171	curious	95	5.82 (1.70)	5.82 (1.49)	5.32 (1.49)	46
color	694	7.00 (1.54)	4.82 (2.63)	6.05 (1.70)	141	curtains	710	4.68 (0.99)	3.68 (1.73)	5.00 (1.66)	8
column	695	5.18 (0.66)	3.55 (1.82)	4.41 (1.37)	71	custom	96	6.04 (1.59)	4.65 (2.10)	5.08 (1.81)	14
comedy	77	8.57 (0.90)	5.61 (3.12)	5.74 (2.09)	39	cut	711	3.58 (2.26)	5.21 (2.21)	4.54 (1.84)	192
comfort	696	7.61 (1.97)	3.74 (2.80)	5.70 (2.08)	43	cute	97	7.95 (0.94)	4.85 (2.96)	4.85 (2.21)	5
computer	552	6.35 (1.26)	4.96 (1.80)	5.50 (1.94)	13	cyclone	98	3.00 (2.40)	6.48 (2.90)	4.72 (2.78)	.
concentrate	78	5.39 (1.34)	4.61 (2.37)	5.04 (1.89)	11	dagger	99	2.60 (1.26)	6.58 (2.44)	4.56 (2.55)	1
confident	79	8.12 (1.31)	6.04 (2.39)	7.96 (1.61)	16	damage	712	2.45 (1.34)	6.05 (2.21)	3.59 (1.74)	33
confused	80	3.17 (1.80)	6.27 (1.86)	4.18 (2.08)	44	dancer	507	7.46 (1.56)	6.65 (1.92)	6.38 (2.08)	31
consoled	81	5.85 (1.66)	4.20 (2.38)	4.15 (1.84)	2	danger	713	1.85 (1.29)	7.42 (2.34)	2.92 (2.08)	70
contempt	82	3.72 (2.23)	5.41 (2.31)	5.00 (1.89)	15	dark	714	4.52 (2.84)	4.29 (2.45)	5.27 (2.45)	185
contents	83	4.97 (0.82)	4.44 (2.09)	4.84 (1.63)	16	dawn	715	6.21 (2.25)	4.42 (2.89)	5.33 (1.76)	28
context	84	5.19 (1.33)	4.12 (2.52)	5.38 (1.65)	2	daylight	716	6.96 (2.13)	4.50 (2.77)	5.38 (2.17)	15
controlling	85	3.38 (2.17)	6.38 (2.21)	4.65 (3.25)	23	dazzle	717	7.24 (1.14)	6.27 (2.07)	6.05 (1.28)	1
cook	697	6.24 (2.30)	4.62 (2.14)	4.92 (1.53)	47	dead	588	1.42 (0.76)	6.04 (2.63)	2.73 (2.25)	174
cord	698	5.23 (0.87)	3.27 (2.21)	5.00 (1.02)	6	death	100	1.55 (1.61)	4.75 (3.29)	2.55 (2.35)	277
cork	699	5.27 (0.94)	3.73 (2.41)	5.05 (1.13)	9	debt	101	2.12 (1.21)	6.46 (2.52)	3.04 (2.18)	13
corner	700	4.38 (1.12)	4.38 (1.66)	4.36 (1.47)	115	deceit	718	2.57 (1.60)	6.00 (2.24)	3.33 (2.18)	2
corpse	86	2.07 (1.58)	4.93 (3.09)	3.93 (2.59)	7	decompose	102	2.62 (1.68)	5.00 (2.37)	3.69 (1.85)	1
corridor	701	4.90 (1.02)	3.65 (2.39)	4.90 (1.21)	17	decorate	719	7.32 (1.13)	5.52 (1.81)	6.19 (1.72)	2

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
defeated	103	2.28 (1.79)	5.65 (3.14)	3.19 (2.55)	15	divorce	128	2.08 (1.94)	7.16 (2.19)	2.88 (2.01)	29
defiant	104	4.11 (2.23)	6.41 (2.34)	6.11 (2.67)	3	doctor	129	5.48 (2.65)	6.04 (2.76)	4.79 (2.85)	100
deformed	720	1.85 (1.39)	4.55 (2.46)	3.60 (1.88)	.	dog	511	7.46 (1.70)	6.12 (1.93)	6.08 (2.13)	75
delayed	721	3.00 (1.51)	6.09 (2.52)	3.86 (2.21)	25	doll	728	6.88 (1.83)	4.88 (2.49)	4.96 (1.95)	10
delight	105	8.43 (0.84)	5.30 (3.10)	6.13 (2.30)	29	dollar	729	7.74 (1.28)	6.00 (2.81)	5.74 (2.58)	46
demon	106	1.39 (1.03)	7.32 (2.34)	4.78 (3.16)	9	door	130	5.12 (1.42)	3.42 (2.19)	4.62 (1.83)	312
dentist	589	4.46 (2.20)	5.85 (1.67)	4.00 (2.30)	12	dove	730	7.32 (1.52)	3.09 (2.49)	5.00 (1.66)	4
depressed	107	1.58 (1.36)	5.06 (3.18)	2.68 (2.34)	11	dreadful	131	2.19 (1.90)	5.92 (2.62)	3.50 (2.47)	10
depression	108	1.27 (0.72)	4.54 (3.35)	2.92 (2.45)	24	dream	132	6.92 (1.83)	4.62 (2.91)	6.04 (2.03)	64
derelict	722	4.10 (1.77)	4.09 (2.18)	4.62 (1.40)	1	dreary	731	2.86 (1.71)	2.91 (2.27)	3.81 (1.72)	6
deserter	109	1.90 (1.32)	5.86 (2.63)	3.24 (2.13)	.	dress	133	6.77 (1.45)	3.65 (1.92)	5.26 (2.03)	67
desire	508	7.65 (1.50)	7.46 (1.63)	6.77 (1.70)	79	drown	591	1.88 (1.24)	6.46 (2.02)	2.96 (2.03)	3
despairing	110	2.19 (1.06)	5.72 (2.39)	3.12 (2.01)	4	dummy	732	3.76 (1.95)	4.32 (2.36)	3.86 (2.20)	3
despise	111	2.00 (1.50)	6.52 (2.49)	4.38 (2.97)	7	dump	733	2.73 (1.61)	4.05 (2.16)	3.62 (1.96)	4
destroy	112	2.12 (1.42)	7.04 (2.18)	4.50 (2.93)	48	dustpan	555	3.73 (1.61)	3.50 (2.20)	5.50 (1.96)	.
destruction	723	2.04 (1.71)	5.58 (2.86)	3.12 (2.14)	38	earth	134	7.35 (1.65)	4.32 (2.70)	5.04 (2.23)	150
detached	113	3.88 (1.82)	4.31 (2.65)	3.58 (2.32)	12	easy	734	7.11 (1.70)	3.47 (2.82)	6.79 (1.69)	125
detail	724	5.35 (1.69)	3.80 (2.12)	4.95 (1.61)	72	easygoing	135	7.38 (1.52)	4.43 (2.54)	5.32 (1.74)	1
detest	114	1.92 (1.13)	6.15 (2.49)	5.85 (2.81)	1	eat	136	7.05 (1.93)	5.00 (2.49)	5.30 (2.08)	61
devil	115	1.96 (1.91)	6.76 (2.33)	5.04 (2.85)	25	ecstasy	735	7.80 (1.88)	6.90 (2.29)	6.25 (2.31)	6
devoted	116	7.52 (1.35)	5.07 (2.34)	6.62 (2.13)	51	education	137	6.80 (2.06)	5.85 (2.52)	6.38 (2.70)	214
diamond	117	7.92 (1.13)	5.80 (2.97)	5.64 (2.02)	8	egg	736	5.42 (1.96)	4.00 (2.22)	4.67 (2.01)	12
dignified	118	7.29 (1.40)	4.62 (2.41)	6.15 (2.39)	7	elated	138	7.43 (1.95)	6.22 (2.47)	5.52 (2.13)	3
dinner	509	6.85 (1.71)	5.35 (1.90)	5.73 (1.91)	91	elbow	737	5.32 (1.17)	4.10 (2.19)	4.95 (1.28)	10
diploma	119	8.18 (1.50)	5.68 (3.09)	6.95 (2.55)	.	elegant	139	7.56 (1.13)	4.39 (2.55)	6.13 (2.00)	14
dirt	725	3.90 (1.59)	4.15 (2.16)	4.70 (0.98)	43	elevator	738	5.76 (1.48)	4.73 (1.75)	4.62 (1.77)	12
dirty	590	2.35 (1.26)	4.58 (1.77)	4.58 (1.75)	36	embarrassed	140	2.43 (1.41)	5.87 (2.69)	2.48 (1.31)	8
disappoint	120	2.26 (1.42)	5.13 (2.72)	3.13 (2.44)	.	embattled	141	4.15 (1.35)	5.15 (2.43)	4.69 (1.54)	1
disaster	121	1.20 (0.52)	6.60 (2.89)	3.40 (2.89)	26	employment	147	6.72 (1.70)	5.20 (2.16)	6.02 (2.22)	47
discomfort	726	1.95 (0.83)	4.65 (2.56)	4.05 (1.90)	7	engaged	143	8.34 (1.20)	7.14 (2.09)	6.64 (2.48)	47
discouraged	122	3.00 (2.68)	4.87 (1.94)	3.87 (2.26)	15	engine	148	5.09 (1.23)	3.66 (2.38)	4.97 (1.85)	50
disdainful	123	3.56 (2.00)	5.22 (2.30)	4.41 (1.98)	2	enjoyment	145	7.88 (1.20)	4.80 (2.72)	6.54 (2.02)	21
disgusted	124	2.35 (1.40)	6.04 (2.51)	4.04 (2.08)	6	ennui	146	5.06 (1.82)	4.58 (2.31)	4.55 (1.86)	.
disloyal	125	1.65 (1.65)	7.04 (1.78)	3.15 (2.77)	2	enraged	149	2.52 (1.68)	8.00 (2.22)	5.86 (2.96)	1
displeased	126	2.81 (2.32)	6.15 (2.43)	3.85 (2.27)	7	erotic	512	6.73 (1.59)	6.77 (2.03)	5.77 (2.25)	8
distressed	127	1.91 (1.28)	6.39 (2.54)	3.17 (2.44)	4	errand	150	4.88 (1.03)	4.08 (1.78)	4.24 (1.42)	7
disturb	727	3.65 (2.19)	5.85 (2.68)	4.88 (2.16)	10	event	740	6.00 (1.26)	4.55 (2.19)	5.30 (0.80)	81
diver	510	6.31 (1.49)	5.12 (1.68)	4.88 (1.93)	1	evil	741	2.46 (2.35)	6.27 (2.54)	4.62 (2.98)	72

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

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Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
excellence	151	8.41 (1.02)	5.83 (2.78)	7.24 (2.40)	15	foam	756	6.67 (2.20)	6.18 (2.48)	5.38 (2.31)	37
excitement	152	7.83 (2.09)	8.07 (1.46)	6.48 (2.29)	32	food	514	7.42 (1.65)	6.42 (1.58)	5.65 (2.78)	147
excuse	153	4.19 (1.02)	4.20 (2.02)	4.32 (1.95)	27	foot	757	5.00 (1.02)	3.12 (2.08)	4.85 (1.19)	70
execution	154	1.78 (1.54)	5.83 (2.77)	4.00 (2.95)	15	fork	560	5.12 (0.82)	3.88 (1.68)	5.65 (1.74)	14
exercise	155	7.26 (1.36)	6.65 (1.99)	5.43 (2.25)	58	foul	169	2.73 (1.73)	4.76 (2.05)	4.38 (2.04)	4
fabric	742	5.38 (0.97)	4.32 (2.15)	5.24 (1.76)	15	fragrance	170	5.96 (2.31)	4.19 (2.45)	4.85 (1.93)	6
face	556	6.65 (1.41)	5.31 (2.00)	6.04 (1.59)	371	fraud	171	2.65 (1.67)	5.92 (2.65)	3.15 (2.36)	8
failure	156	1.36 (0.81)	5.52 (2.86)	2.24 (2.33)	89	free	172	8.48 (0.90)	5.17 (3.11)	6.65 (2.31)	260
fall	743	4.32 (2.23)	4.81 (2.32)	3.71 (2.17)	147	freedom	173	7.62 (2.30)	5.08 (3.01)	7.00 (2.43)	128
FALSE	744	3.30 (1.22)	3.60 (1.96)	3.80 (1.44)	29	friend	174	8.12 (1.21)	5.35 (2.84)	7.04 (1.78)	133
fame	157	7.93 (1.31)	7.14 (1.96)	7.00 (2.11)	18	friendly	175	8.50 (1.14)	5.28 (3.23)	5.80 (2.43)	61
family	158	7.77 (1.37)	4.64 (2.81)	6.00 (1.92)	331	frigid	758	3.54 (2.16)	4.85 (2.57)	4.15 (2.09)	5
famous	745	6.69 (2.49)	5.68 (2.66)	6.12 (2.27)	89	frog	176	5.62 (1.98)	4.38 (1.96)	5.19 (2.15)	1
fantasy	746	7.42 (2.16)	4.54 (2.94)	6.23 (2.14)	14	frustrated	177	2.31 (1.72)	5.65 (2.92)	3.35 (2.24)	10
farm	557	5.65 (1.74)	4.19 (1.96)	5.50 (1.94)	125	fun	759	8.50 (0.86)	7.32 (2.06)	6.82 (1.89)	44
fascinate	159	7.44 (1.39)	5.72 (2.82)	6.38 (1.98)	3	funeral	178	1.23 (0.87)	5.55 (3.38)	3.14 (2.73)	33
fat	160	1.75 (1.62)	6.50 (2.54)	3.60 (3.07)	60	fungus	179	2.65 (1.87)	4.91 (2.45)	3.91 (2.02)	2
father	161	7.26 (2.24)	6.22 (2.35)	6.83 (2.21)	383	fur	180	4.00 (1.81)	4.48 (2.47)	4.09 (1.88)	13
fatigued	162	3.05 (1.54)	2.60 (2.39)	3.30 (1.66)	3	game	760	6.52 (2.45)	5.58 (2.53)	5.68 (1.55)	123
fault	747	3.75 (1.07)	4.45 (1.36)	3.95 (1.23)	22	gangrene	181	2.06 (1.78)	5.59 (3.03)	3.25 (2.36)	.
favor	748	6.36 (1.53)	4.23 (1.80)	5.86 (1.67)	78	garbage	182	2.62 (1.90)	5.64 (2.36)	3.85 (2.17)	7
fear	592	1.85 (1.22)	7.19 (1.86)	2.62 (1.88)	127	garden	761	7.00 (1.52)	4.00 (2.45)	5.85 (1.90)	60
fearful	163	2.31 (1.26)	6.65 (2.23)	3.69 (2.35)	13	garment	762	6.52 (1.71)	4.88 (2.69)	5.64 (1.87)	6
feeble	164	3.04 (1.28)	4.20 (1.83)	2.60 (1.66)	8	garter	534	5.54 (1.36)	4.88 (2.03)	5.62 (1.70)	2
festive	749	7.32 (2.79)	6.54 (2.44)	5.84 (2.34)	2	gender	763	5.86 (1.93)	4.41 (2.13)	5.62 (1.80)	2
fever	750	2.48 (1.66)	4.73 (2.64)	3.38 (2.48)	19	gentle	183	7.45 (1.27)	3.31 (2.74)	5.24 (2.10)	27
field	558	6.31 (1.49)	4.12 (2.58)	6.00 (2.12)	274	germs	764	2.81 (1.50)	4.68 (2.28)	3.67 (1.68)	1
fight	751	2.65 (2.06)	7.40 (2.01)	4.80 (2.97)	98	gift	184	8.38 (1.61)	6.59 (2.64)	5.72 (2.39)	33
filth	165	2.04 (1.37)	5.85 (2.44)	3.38 (2.25)	2	girl	185	6.31 (1.49)	3.04 (2.15)	5.77 (2.32)	220
finger	752	5.30 (1.45)	3.50 (2.70)	4.85 (1.35)	40	glacier	186	5.39 (1.31)	4.04 (2.57)	5.00 (2.26)	1
fire	166	2.85 (2.15)	7.44 (1.94)	4.20 (2.78)	187	glamour	187	7.17 (1.37)	4.74 (2.28)	5.87 (2.69)	5
fireworks	513	7.31 (1.78)	6.77 (2.12)	5.46 (1.94)	5	glass	765	4.92 (1.09)	4.15 (2.03)	4.81 (1.13)	99
fish	559	5.88 (1.66)	4.15 (1.85)	5.58 (1.53)	35	gloom	188	1.79 (1.15)	3.68 (2.20)	3.36 (2.11)	14
flabby	167	1.52 (0.82)	5.68 (2.90)	2.54 (1.94)	.	glory	189	7.62 (1.74)	5.97 (2.89)	6.78 (2.35)	21
flag	753	6.14 (1.46)	3.86 (2.29)	5.36 (1.33)	16	god	190	7.95 (1.36)	5.80 (2.88)	5.90 (2.69)	318
flirt	754	7.57 (1.36)	6.91 (1.77)	6.05 (2.60)	1	gold	191	7.35 (1.87)	5.43 (3.03)	5.91 (2.66)	52
flood	755	2.68 (1.64)	6.09 (2.07)	2.64 (1.79)	19	golfer	535	5.46 (1.75)	3.62 (2.02)	5.42 (1.77)	3
flower	168	7.00 (1.85)	3.65 (2.53)	5.12 (2.41)	23	good	766	7.59 (1.59)	6.05 (2.36)	6.95 (1.99)	807

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
gossip	767	3.23 (2.60)	6.32 (2.42)	3.27 (2.59)	13	heaven	205	7.41 (2.45)	5.16 (3.32)	6.12 (2.71)	43
graduate	192	8.35 (0.88)	7.00 (2.43)	7.15 (2.01)	30	hell	788	1.67 (1.35)	6.05 (2.72)	2.62 (2.25)	95
grass	768	6.38 (1.56)	3.67 (2.01)	5.33 (1.35)	53	helpless	206	2.19 (1.55)	5.62 (2.48)	2.12 (1.82)	21
grateful	193	7.39 (1.08)	4.78 (2.37)	6.17 (1.90)	25	heroin	789	4.79 (2.99)	5.67 (2.41)	5.29 (2.48)	2
greed	769	2.85 (1.31)	4.00 (2.00)	4.50 (1.32)	3	hide	207	3.97 (1.94)	5.66 (2.46)	3.00 (1.87)	22
green	194	6.48 (2.01)	4.10 (2.48)	5.03 (2.06)	116	highway	562	5.80 (1.80)	5.52 (2.26)	5.68 (1.68)	40
greet	770	7.05 (1.61)	5.25 (2.67)	5.65 (2.30)	7	hinder	790	3.75 (1.16)	4.15 (2.16)	4.25 (1.41)	.
grenade	771	3.32 (1.84)	5.91 (2.54)	3.81 (2.62)	3	history	208	4.77 (2.03)	3.81 (2.40)	4.62 (2.10)	286
grief	195	1.65 (0.89)	4.81 (2.90)	3.15 (2.27)	10	hit	594	3.27 (2.03)	6.04 (1.68)	4.15 (1.67)	115
grime	772	2.86 (1.28)	3.64 (2.26)	4.27 (1.16)	.	holiday	791	7.75 (1.96)	6.17 (3.03)	5.79 (2.36)	17
grin	773	7.79 (1.53)	4.92 (2.43)	5.75 (1.75)	13	home	209	8.04 (1.40)	4.16 (3.13)	5.60 (2.31)	547
gripe	774	3.05 (1.70)	5.05 (2.10)	5.05 (1.56)	.	honest	210	8.00 (1.31)	5.09 (2.15)	6.87 (1.87)	47
guillotine	196	1.82 (1.59)	6.69 (2.48)	4.48 (2.90)	.	honey	792	6.91 (1.57)	4.50 (2.39)	5.23 (1.51)	25
guilty	197	2.54 (2.40)	6.81 (2.51)	2.77 (2.53)	29	honor	211	7.69 (1.29)	5.77 (2.01)	7.00 (1.83)	66
gun	593	2.27 (1.71)	6.96 (1.75)	2.73 (2.22)	118	hooker	793	2.32 (1.62)	4.00 (3.06)	3.55 (2.06)	.
gymnast	515	6.27 (1.87)	5.54 (2.04)	5.31 (1.76)	1	hope	794	7.32 (2.19)	5.88 (2.36)	5.68 (2.19)	178
habit	775	4.08 (1.98)	4.04 (2.37)	4.21 (1.61)	23	hopeful	212	7.12 (1.68)	5.50 (2.44)	5.38 (1.96)	12
hairdryer	561	4.80 (0.91)	3.62 (1.86)	5.88 (1.56)	.	horror	213	2.48 (2.20)	7.69 (2.04)	4.64 (2.89)	17
hairpin	776	5.13 (1.36)	3.22 (2.35)	5.00 (1.13)	1	horse	214	6.00 (1.72)	4.04 (2.32)	4.85 (1.69)	117
hamburger	777	5.68 (1.25)	4.18 (2.04)	5.09 (1.38)	6	hospital	215	5.04 (2.86)	6.73 (2.43)	4.60 (2.52)	110
hammer	198	5.00 (1.08)	4.50 (1.70)	4.25 (1.37)	9	hostage	216	2.15 (1.97)	7.73 (1.85)	2.54 (2.21)	2
hand	778	6.05 (1.43)	4.43 (1.83)	4.90 (1.45)	431	hostile	217	2.38 (1.33)	6.23 (2.42)	4.35 (2.24)	19
handicap	779	2.95 (1.15)	3.95 (2.09)	3.85 (1.90)	6	hotel	795	5.52 (1.87)	4.46 (2.42)	4.96 (1.70)	126
handsome	199	8.09 (1.44)	6.55 (2.46)	5.03 (1.94)	40	house	563	7.23 (1.90)	5.04 (2.18)	5.81 (2.35)	591
haphazard	780	4.45 (1.19)	4.50 (2.16)	4.45 (1.28)	2	hug	218	8.17 (1.77)	5.26 (3.03)	6.04 (2.69)	3
happy	200	8.19 (2.06)	6.19 (2.80)	6.58 (2.55)	98	humane	796	7.38 (1.50)	4.27 (2.22)	5.73 (2.15)	5
hard	781	4.82 (1.59)	4.86 (2.21)	5.36 (1.09)	202	humble	219	5.76 (1.33)	3.88 (2.35)	4.56 (2.24)	18
hardship	782	1.95 (1.33)	5.05 (2.71)	3.33 (2.31)	9	humiliate	797	2.27 (1.52)	5.95 (2.55)	2.32 (1.96)	.
hat	783	5.36 (1.36)	3.73 (1.86)	5.32 (1.39)	56	humor	220	8.69 (0.74)	5.96 (2.99)	6.42 (2.08)	47
hate	201	1.79 (1.32)	6.79 (2.66)	4.90 (3.09)	42	hungry	221	3.52 (1.83)	5.09 (2.29)	4.70 (2.03)	23
hatred	202	1.69 (1.69)	6.76 (2.52)	4.14 (2.92)	20	hurricane	798	2.45 (1.43)	7.00 (2.00)	2.35 (2.11)	8
hawk	536	5.46 (1.56)	4.68 (2.25)	5.31 (1.64)	14	hurt	222	1.66 (1.08)	5.68 (2.40)	3.14 (2.22)	37
hay	784	5.30 (0.66)	3.05 (2.09)	4.90 (1.21)	19	hydrant	564	4.96 (1.00)	3.77 (1.75)	5.54 (1.58)	.
headache	203	1.88 (0.99)	5.00 (2.86)	3.16 (1.89)	5	icebox	799	4.91 (1.11)	3.59 (2.22)	5.09 (1.02)	3
headlight	785	5.45 (1.19)	3.85 (2.06)	5.00 (1.17)	.	idea	800	7.57 (1.33)	6.14 (1.83)	6.90 (2.10)	195
heal	786	7.45 (1.60)	4.90 (2.39)	6.29 (1.90)	2	identity	801	6.95 (1.76)	4.80 (2.19)	6.50 (2.04)	55
health	204	6.75 (2.11)	5.03 (2.15)	5.81 (2.01)	105	idiot	223	3.00 (1.62)	3.83 (2.52)	2.39 (1.62)	2
heart	787	7.90 (1.33)	6.55 (2.44)	5.50 (2.24)	173	idol	802	6.55 (1.93)	5.15 (2.08)	5.20 (2.31)	7

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
ignorance	803	3.21 (2.62)	4.83 (2.66)	4.38 (2.39)	16	jealousy	237	2.40 (2.22)	7.00 (2.50)	4.16 (2.75)	4
illness	804	2.27 (1.35)	4.82 (2.26)	2.77 (1.66)	20	jelly	238	5.62 (1.61)	3.54 (2.17)	4.29 (1.80)	3
imagine	805	7.52 (1.44)	6.32 (2.17)	7.62 (1.75)	61	jewel	239	7.24 (1.50)	5.31 (2.49)	5.86 (2.26)	1
immature	806	2.65 (1.35)	4.10 (1.94)	4.75 (2.31)	7	joke	826	8.00 (1.76)	6.82 (1.79)	6.05 (1.82)	22
immoral	807	3.29 (2.05)	5.17 (2.53)	4.67 (2.06)	5	jolly	827	7.45 (1.88)	5.45 (2.89)	6.45 (1.61)	4
impair	808	3.00 (2.14)	4.46 (2.30)	4.00 (2.43)	4	journal	828	5.32 (1.70)	3.68 (2.38)	5.64 (1.76)	42
impotent	224	2.54 (1.56)	4.50 (2.32)	2.92 (2.06)	2	joy	240	8.62 (0.70)	6.73 (2.44)	6.46 (2.14)	40
impressed	225	7.62 (1.70)	5.24 (2.76)	5.28 (2.41)	30	joyful	241	8.52 (0.85)	5.81 (2.70)	6.77 (1.98)	1
improve	226	7.90 (1.02)	5.80 (2.07)	6.20 (2.14)	39	jug	829	5.00 (0.79)	3.50 (2.04)	4.90 (1.21)	6
incentive	809	6.95 (1.96)	5.95 (2.44)	5.90 (2.43)	12	justice	242	7.93 (1.13)	5.71 (2.62)	6.57 (2.10)	114
indifferent	810	4.46 (1.06)	3.17 (1.97)	4.96 (1.55)	11	kerchief	830	4.81 (1.27)	3.27 (2.31)	5.15 (1.19)	1
industry	227	5.06 (1.70)	4.34 (2.48)	4.56 (2.03)	171	kerosene	243	4.77 (1.75)	4.36 (2.55)	4.80 (1.98)	6
infant	811	7.95 (1.50)	5.50 (2.61)	5.80 (2.57)	11	ketchup	831	5.68 (1.29)	4.52 (2.14)	5.38 (1.83)	1
infatuation	516	6.50 (2.21)	6.96 (1.75)	4.32 (2.08)	4	kettle	832	5.25 (0.72)	2.85 (1.98)	5.05 (1.05)	3
infection	228	1.48 (0.85)	5.22 (2.84)	3.35 (2.62)	8	key	833	5.96 (1.65)	3.50 (2.27)	4.83 (1.74)	88
inferior	812	3.05 (1.15)	4.45 (1.88)	2.55 (1.79)	7	kick	834	4.10 (2.40)	5.65 (2.06)	5.70 (1.95)	16
inhabitant	813	5.27 (1.32)	3.27 (2.10)	5.18 (1.56)	.	kids	835	6.96 (2.34)	5.27 (2.66)	5.28 (2.21)	32
injury	595	1.85 (1.16)	5.81 (1.86)	3.35 (1.23)	27	killer	244	1.43 (1.20)	8.35 (1.43)	4.52 (3.53)	21
ink	229	5.08 (0.63)	4.00 (1.91)	4.64 (2.02)	7	kind	245	7.62 (1.82)	4.69 (2.58)	6.17 (1.97)	313
innocent	814	6.76 (1.30)	3.82 (2.20)	5.38 (2.42)	37	kindness	246	8.38 (0.94)	3.76 (2.76)	6.08 (2.88)	5
insane	815	2.23 (1.80)	5.95 (2.63)	3.41 (2.06)	13	king	247	7.34 (1.67)	5.48 (2.86)	7.34 (2.21)	88
insect	816	3.68 (2.32)	4.19 (2.62)	4.24 (2.68)	14	kiss	248	8.24 (1.70)	7.55 (1.68)	7.10 (2.21)	17
insecure	230	2.41 (1.45)	6.14 (2.29)	2.28 (1.98)	3	kitten	517	7.00 (1.90)	5.15 (2.49)	6.81 (2.12)	5
insolent	231	4.12 (1.75)	5.19 (2.28)	4.27 (2.16)	2	knife	596	2.64 (1.78)	5.77 (2.23)	3.23 (1.90)	76
inspire	232	7.35 (1.23)	4.96 (2.88)	6.48 (2.25)	3	knot	836	4.82 (1.30)	4.62 (1.96)	4.50 (1.43)	8
inspired	233	7.58 (1.77)	6.04 (2.86)	6.85 (2.43)	25	knowledge	249	7.60 (1.14)	5.90 (2.38)	7.20 (2.17)	145
insult	817	1.68 (1.13)	6.55 (2.44)	2.95 (1.73)	7	lake	250	7.10 (1.50)	3.86 (2.66)	5.03 (2.28)	54
intellect	818	6.88 (1.82)	4.92 (2.77)	5.92 (2.04)	5	lamb	837	6.25 (1.57)	3.42 (2.00)	4.88 (1.60)	7
intercourse	819	7.05 (1.46)	6.68 (2.19)	6.09 (1.82)	9	lamp	838	5.75 (1.12)	3.90 (2.15)	5.55 (1.47)	18
interest	234	7.30 (1.82)	5.87 (2.62)	5.83 (1.70)	330	lantern	839	5.64 (1.29)	4.00 (2.30)	4.86 (1.62)	13
intimate	821	7.52 (1.81)	6.92 (2.45)	5.72 (2.46)	21	laughter	251	8.35 (1.31)	6.70 (2.39)	6.70 (2.20)	22
intruder	822	2.08 (2.19)	7.15 (2.46)	3.42 (2.82)	1	lavish	840	6.80 (1.74)	4.95 (2.61)	5.80 (1.40)	3
invader	823	2.46 (1.91)	6.50 (2.13)	4.04 (2.82)	1	lawn	841	5.23 (0.87)	3.82 (1.82)	5.27 (1.24)	15
invest	824	6.25 (1.86)	4.80 (2.76)	6.10 (1.71)	3	lawsuit	842	3.52 (2.29)	5.50 (2.46)	3.80 (1.94)	1
iron	565	4.54 (1.03)	3.54 (1.86)	4.96 (1.40)	43	lazy	843	4.33 (2.18)	3.00 (2.49)	4.00 (2.07)	9
irritate	235	3.26 (1.71)	6.17 (1.92)	4.91 (1.93)	.	leader	844	7.90 (1.45)	6.35 (2.46)	8.35 (1.23)	74
item	825	5.20 (0.95)	2.95 (1.96)	5.45 (1.70)	54	learn	252	7.27 (1.56)	5.54 (2.28)	6.54 (1.92)	84
jail	236	1.91 (1.19)	5.73 (2.55)	4.27 (2.83)	21	legend	845	6.41 (1.47)	4.27 (1.86)	5.32 (1.59)	26

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
leisurely	253	7.00 (1.76)	4.52 (2.52)	5.25 (1.82)	5	man	537	7.19 (1.60)	6.73 (1.61)	4.81 (2.45)	1207
leprosy	254	2.09 (1.20)	6.48 (2.31)	4.00 (2.59)	1	mangle	861	3.68 (2.21)	5.14 (2.44)	3.95 (1.65)	.
lesbian	597	3.38 (1.81)	4.50 (1.79)	4.92 (2.12)	.	maniac	862	3.20 (1.77)	5.55 (2.96)	4.20 (2.26)	4
letter	846	6.91 (1.63)	4.64 (2.54)	5.59 (1.53)	145	manner	863	5.62 (1.66)	4.41 (1.65)	5.52 (1.57)	124
liberty	255	8.10 (1.19)	5.47 (2.75)	6.33 (2.37)	46	mantel	864	4.96 (1.12)	2.88 (2.11)	4.92 (1.21)	3
lice	256	2.12 (1.45)	4.92 (2.34)	3.60 (2.20)	2	manure	865	3.23 (1.74)	4.27 (1.93)	4.50 (0.91)	6
lie	257	2.28 (1.55)	6.25 (2.53)	2.81 (2.25)	59	market	866	5.50 (1.01)	3.55 (1.92)	5.41 (1.50)	155
life	258	7.38 (1.70)	6.26 (2.49)	5.77 (2.53)	715	massacre	867	2.32 (2.03)	5.43 (2.79)	2.86 (2.22)	1
lightbulb	566	5.77 (1.42)	4.38 (2.14)	6.23 (1.77)	.	masterful	271	7.00 (1.96)	4.97 (3.10)	7.31 (2.77)	2
lighthouse	847	5.58 (2.34)	3.96 (2.51)	5.38 (1.88)	.	masturbate	599	4.35 (1.85)	5.27 (2.39)	5.38 (2.21)	.
lightning	598	4.00 (2.48)	6.69 (1.76)	3.62 (2.10)	14	material	868	5.25 (0.91)	3.55 (2.21)	5.05 (0.69)	174
limber	848	5.90 (1.70)	4.52 (2.44)	5.86 (1.88)	2	measles	272	2.47 (2.08)	5.38 (2.43)	3.84 (2.22)	2
lion	518	5.54 (1.92)	6.54 (1.86)	3.62 (2.16)	17	medicine	869	5.76 (2.23)	4.48 (2.29)	4.59 (2.17)	30
listless	259	3.92 (1.62)	3.58 (2.06)	3.65 (1.65)	1	meek	273	3.38 (1.60)	4.19 (2.33)	3.15 (2.27)	10
lively	849	7.42 (2.23)	5.80 (2.84)	6.08 (2.06)	26	melody	870	7.50 (1.40)	5.20 (2.17)	5.35 (1.69)	21
locker	850	5.45 (0.89)	3.35 (1.87)	5.70 (1.42)	9	memories	871	7.59 (1.62)	6.00 (2.00)	6.18 (1.94)	15
loneliness	260	1.59 (1.01)	4.52 (3.00)	2.42 (2.23)	9	memory	274	6.40 (1.50)	5.40 (2.04)	5.10 (2.00)	76
lonely	261	2.15 (2.01)	4.92 (2.78)	3.04 (2.34)	25	menace	275	2.68 (1.55)	5.72 (2.21)	4.81 (2.00)	9
loser	851	1.95 (1.40)	5.05 (2.55)	2.55 (2.04)	1	merry	872	8.09 (1.60)	5.50 (2.72)	6.45 (1.97)	8
lost	852	2.54 (1.90)	5.77 (2.83)	2.88 (1.63)	173	messy	873	3.16 (1.64)	3.79 (2.72)	4.00 (1.53)	3
lottery	853	6.46 (2.39)	5.76 (2.44)	4.52 (2.31)	1	metal	874	4.80 (1.01)	3.75 (2.00)	5.40 (0.94)	61
louse	262	2.15 (1.38)	5.31 (1.85)	3.19 (2.28)	3	method	875	5.20 (1.40)	3.25 (2.02)	5.05 (1.10)	142
love	263	8.77 (0.65)	6.42 (3.49)	7.12 (2.62)	232	mighty	276	6.88 (2.30)	5.81 (2.23)	7.40 (2.10)	29
loved	264	8.83 (0.47)	6.69 (2.77)	7.10 (2.23)	56	mildew	277	3.08 (1.44)	4.08 (1.81)	4.27 (1.89)	1
loyal	265	7.93 (1.60)	5.24 (2.53)	7.14 (1.94)	18	milk	876	5.45 (2.31)	2.80 (2.09)	5.50 (1.10)	49
lucky	266	8.35 (0.88)	6.15 (2.62)	5.90 (2.02)	21	millionaire	278	7.92 (1.47)	6.35 (2.54)	7.19 (2.00)	2
lump	854	3.58 (2.52)	5.36 (2.78)	4.20 (2.27)	7	mind	877	6.85 (1.53)	4.75 (2.67)	6.40 (1.96)	325
luscious	267	7.48 (1.08)	4.96 (2.65)	5.96 (1.64)	2	miracle	279	8.72 (0.61)	7.72 (1.81)	5.32 (2.53)	16
lust	519	6.92 (1.62)	6.85 (1.78)	4.88 (2.16)	5	mischief	878	5.73 (2.21)	5.77 (1.77)	5.57 (1.89)	5
luxury	268	8.03 (0.98)	5.04 (3.00)	6.43 (2.39)	21	misery	879	1.59 (1.62)	5.36 (2.74)	2.18 (1.26)	15
machine	855	5.46 (1.64)	3.83 (2.55)	5.46 (1.89)	103	mistake	880	2.54 (1.47)	5.21 (2.41)	3.17 (1.99)	34
mad	856	2.52 (2.11)	6.67 (2.24)	5.95 (2.26)	39	mobility	881	6.95 (1.70)	4.59 (2.24)	6.41 (1.47)	8
madman	857	3.24 (2.62)	5.88 (3.14)	4.33 (2.96)	2	modest	280	5.81 (1.30)	3.65 (2.31)	4.85 (2.38)	29
maggot	269	1.92 (1.32)	5.54 (2.90)	3.81 (2.28)	2	mold	882	3.19 (1.63)	4.14 (2.40)	4.14 (2.03)	45
magical	858	7.82 (1.50)	5.86 (2.64)	5.86 (2.17)	12	moment	281	5.92 (1.63)	3.38 (2.08)	4.73 (1.87)	246
mail	859	7.18 (1.71)	5.55 (2.34)	5.73 (1.61)	47	money	282	7.45 (1.35)	6.00 (2.51)	6.21 (2.25)	265
malaria	860	2.41 (1.44)	4.81 (2.40)	3.33 (2.20)	3	month	283	5.07 (1.16)	4.00 (1.83)	4.86 (1.27)	130
malice	270	2.38 (1.68)	6.08 (2.90)	4.77 (2.93)	2	moody	883	2.96 (1.57)	4.33 (2.50)	4.25 (1.57)	5



*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
moral	884	6.45 (1.15)	4.40 (2.21)	6.00 (2.13)	142	nude	520	5.88 (0.91)	5.73 (1.59)	5.12 (2.03)	20
morbid	284	2.62 (2.14)	5.22 (2.77)	4.19 (2.71)	1	nuisance	908	2.85 (1.87)	4.60 (2.96)	4.16 (1.91)	5
morgue	285	1.70 (1.15)	5.26 (3.09)	3.04 (1.72)	1	nun	909	5.23 (2.05)	2.81 (1.86)	4.92 (1.83)	2
mosquito	885	2.30 (1.38)	4.85 (2.68)	4.30 (1.92)	1	nurse	538	5.77 (2.16)	4.81 (1.77)	4.65 (2.33)	17
mother	286	8.74 (0.75)	6.74 (2.38)	6.52 (1.97)	216	nursery	910	6.31 (2.45)	4.64 (3.03)	5.48 (2.42)	13
mountain	287	6.86 (1.52)	5.27 (2.39)	4.95 (2.01)	33	obesity	911	2.81 (2.14)	4.52 (3.02)	3.52 (2.55)	5
movie	288	6.93 (1.49)	4.86 (2.67)	5.17 (1.73)	29	obey	912	4.52 (1.78)	4.38 (1.40)	4.14 (2.44)	8
mucus	886	2.80 (2.12)	3.40 (2.46)	4.40 (1.73)	2	obnoxious	913	3.05 (2.50)	5.00 (2.77)	5.19 (2.71)	5
muddy	887	4.15 (2.20)	4.44 (2.24)	4.68 (1.97)	10	obscene	914	3.48 (2.12)	4.62 (2.25)	4.16 (1.99)	2
muffin	888	6.77 (2.14)	5.19 (2.50)	5.48 (1.69)	.	obsession	915	3.69 (1.89)	6.19 (2.43)	4.23 (2.23)	5
murderer	289	1.42 (0.81)	7.42 (2.14)	3.50 (2.97)	19	ocean	297	7.28 (1.83)	4.76 (2.87)	5.83 (2.59)	34
muscular	290	7.09 (1.35)	5.29 (2.15)	6.45 (2.16)	16	odd	916	4.46 (2.25)	4.12 (2.44)	4.79 (1.79)	44
museum	889	5.62 (1.63)	3.00 (1.76)	5.24 (1.67)	32	offend	917	2.23 (1.23)	5.41 (2.48)	3.45 (2.11)	4
mushroom	567	5.50 (2.18)	4.50 (2.20)	5.19 (2.14)	2	office	568	5.19 (1.27)	4.08 (2.04)	5.88 (2.01)	255
music	291	8.43 (0.90)	5.13 (3.48)	6.87 (2.46)	216	opinion	298	6.58 (1.47)	5.08 (2.40)	5.16 (1.97)	96
mutation	890	3.56 (2.33)	4.85 (2.62)	3.84 (2.21)	.	optimism	918	7.80 (1.70)	5.90 (2.59)	6.85 (1.93)	15
mutilate	292	1.97 (1.57)	6.03 (3.13)	3.00 (2.51)	3	option	919	6.76 (1.37)	4.95 (1.83)	6.73 (1.64)	5
mystic	891	6.04 (2.35)	5.38 (2.79)	5.58 (1.95)	3	orchestra	299	6.31 (1.49)	3.75 (2.38)	5.07 (1.92)	60
naked	892	5.83 (2.62)	5.78 (2.49)	5.52 (1.90)	32	orgasm	920	8.19 (1.36)	8.27 (1.08)	6.95 (2.04)	7
name	893	5.21 (2.47)	3.83 (2.43)	5.00 (1.84)	294	outdoors	521	7.58 (1.21)	6.35 (2.45)	6.23 (2.18)	6
narcotic	894	4.09 (2.58)	5.33 (2.65)	4.19 (2.69)	2	outrage	921	3.35 (2.03)	7.15 (2.18)	5.80 (2.65)	4
nasty	895	3.12 (2.39)	4.84 (2.54)	4.96 (2.44)	5	outstanding	922	7.96 (1.90)	6.44 (2.60)	6.38 (2.50)	37
natural	896	6.62 (1.60)	3.62 (2.38)	5.58 (1.70)	156	overcast	923	3.33 (1.65)	2.95 (1.77)	4.14 (1.62)	9
nature	293	7.77 (1.34)	4.24 (2.45)	4.92 (2.41)	191	overwhelmed	300	3.88 (2.64)	7.29 (1.97)	3.41 (2.41)	4
nectar	294	6.96 (1.40)	4.08 (2.33)	4.38 (1.47)	3	owl	522	5.58 (1.33)	3.96 (1.73)	5.65 (1.72)	2
needle	897	3.62 (1.83)	5.62 (3.09)	3.85 (2.20)	15	pain	301	1.54 (1.63)	7.12 (2.52)	3.27 (2.72)	88
neglect	898	1.90 (1.12)	5.15 (2.52)	3.75 (2.59)	12	paint	924	6.05 (1.80)	3.86 (2.41)	5.86 (1.90)	37
nervous	899	2.91 (1.54)	7.50 (1.74)	3.05 (1.81)	24	palace	302	7.65 (1.50)	5.29 (2.71)	5.48 (2.28)	38
neurotic	900	4.08 (2.36)	5.42 (2.89)	4.40 (2.25)	10	pamphlet	925	4.73 (0.98)	3.81 (2.09)	4.62 (1.24)	3
news	901	5.10 (1.87)	5.73 (1.72)	4.10 (1.79)	102	pancakes	523	5.62 (2.14)	4.19 (2.30)	5.35 (1.72)	.
nice	902	6.35 (2.88)	4.12 (2.49)	5.24 (2.37)	75	panic	601	2.73 (1.69)	7.50 (1.56)	2.85 (1.35)	22
nightmare	295	1.57 (1.53)	7.65 (2.48)	3.09 (3.01)	9	paper	303	5.13 (1.14)	2.52 (1.78)	4.48 (1.75)	157
nipple	903	5.48 (1.66)	4.73 (2.46)	5.40 (1.83)	.	paradise	304	8.85 (0.37)	4.40 (3.28)	5.55 (3.00)	12
noisy	904	4.95 (2.15)	6.59 (1.84)	4.91 (1.80)	6	paralysis	926	1.64 (1.09)	4.64 (2.90)	2.55 (1.84)	6
nonchalant	296	4.77 (0.86)	3.12 (1.93)	4.38 (1.44)	1	part	927	5.12 (1.93)	3.23 (2.42)	4.88 (1.68)	500
nonsense	905	4.18 (1.44)	3.55 (1.92)	4.41 (1.47)	13	party	305	8.35 (1.70)	6.76 (3.06)	6.00 (2.57)	216
noose	906	3.35 (1.60)	4.05 (1.96)	4.35 (1.90)	3	passage	928	5.12 (1.58)	4.31 (2.26)	4.85 (1.16)	49
nourish	907	6.70 (1.42)	4.15 (2.76)	5.95 (1.61)	.	passion	306	8.10 (1.32)	7.10 (2.78)	6.10 (2.26)	28

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
pasta	524	6.69 (1.62)	5.00 (2.00)	5.92 (1.79)	.	pressure	944	3.27 (1.93)	6.55 (2.15)	3.77 (2.41)	185
patent	307	5.10 (0.86)	3.68 (1.81)	4.68 (1.68)	35	prestige	945	7.09 (2.14)	5.59 (2.38)	6.77 (2.11)	29
patient	929	5.86 (1.82)	4.23 (2.52)	5.52 (2.46)	86	pretty	326	7.85 (1.09)	5.37 (2.31)	6.05 (2.11)	107
patriot	930	6.59 (1.56)	4.05 (2.34)	5.32 (1.09)	10	prick	946	3.45 (1.65)	5.27 (2.31)	4.24 (1.70)	2
peace	308	8.20 (1.20)	2.05 (2.04)	5.20 (3.35)	198	pride	327	7.22 (2.03)	5.84 (2.26)	7.28 (2.08)	42
penalty	931	2.55 (1.43)	5.55 (2.21)	3.65 (1.27)	14	priest	328	6.65 (1.65)	3.71 (2.71)	4.88 (1.96)	16
pencil	309	5.19 (0.69)	3.19 (1.92)	4.88 (1.95)	34	prison	329	1.97 (1.15)	5.61 (2.22)	4.04 (2.32)	42
penis	932	6.25 (1.71)	6.00 (2.45)	5.90 (1.68)	.	privacy	330	5.96 (1.48)	4.23 (1.70)	6.12 (1.51)	12
penthouse	933	6.73 (1.67)	4.91 (2.47)	6.18 (1.56)	1	profit	331	7.54 (1.21)	6.27 (1.80)	5.65 (2.37)	28
people	525	7.77 (1.63)	6.73 (2.15)	6.19 (2.37)	847	progress	947	8.00 (1.30)	6.29 (2.53)	7.18 (1.92)	120
perfection	310	6.97 (2.10)	6.32 (2.56)	6.58 (2.33)	11	promotion	332	8.28 (0.96)	6.74 (2.41)	6.77 (2.31)	26
perfume	934	7.23 (1.38)	4.91 (2.35)	5.86 (1.91)	10	protected	333	8.12 (1.09)	4.08 (3.29)	6.19 (2.95)	31
person	311	6.22 (1.84)	4.42 (2.66)	5.13 (2.05)	175	proud	334	8.00 (1.78)	5.39 (3.23)	6.74 (2.78)	50
pervert	312	2.08 (1.41)	6.28 (2.49)	4.35 (2.90)	1	pungent	948	3.50 (2.01)	4.30 (2.18)	4.45 (1.28)	4
pest	313	2.76 (1.59)	5.77 (2.08)	5.52 (1.92)	4	punishment	335	2.12 (1.37)	6.00 (2.37)	3.48 (2.38)	21
pet	935	7.80 (1.40)	5.15 (2.62)	6.10 (2.47)	8	puppy	336	7.66 (1.74)	5.76 (2.85)	5.76 (2.31)	2
phase	936	5.14 (1.06)	4.57 (1.47)	4.55 (1.77)	72	pus	602	2.88 (1.68)	4.73 (1.85)	4.31 (1.54)	.
pie	314	6.38 (2.16)	3.81 (2.53)	5.42 (2.14)	14	putrid	337	2.12 (1.62)	5.88 (2.23)	4.92 (2.12)	.
pig	937	5.05 (1.82)	3.65 (2.48)	4.55 (1.47)	8	python	949	3.12 (2.12)	6.62 (2.12)	3.27 (1.97)	14
pillow	315	7.95 (1.61)	2.45 (2.04)	4.60 (2.23)	8	quality	950	6.15 (1.52)	4.46 (2.28)	5.38 (1.65)	114
pinch	938	3.25 (1.52)	4.35 (1.84)	4.30 (1.66)	6	quarrel	338	2.50 (2.06)	6.44 (2.92)	4.00 (2.35)	20
pistol	939	2.73 (1.80)	6.09 (2.45)	3.41 (2.36)	27	quart	951	5.33 (2.18)	3.17 (2.57)	4.92 (1.82)	3
pity	940	3.05 (1.62)	4.14 (2.22)	3.81 (1.63)	14	queen	952	7.10 (1.48)	4.80 (2.46)	6.35 (2.11)	41
pizza	526	6.50 (2.14)	5.38 (2.00)	6.04 (1.75)	3	quick	953	6.59 (1.65)	6.50 (1.68)	6.50 (1.92)	68
plain	941	4.00 (1.58)	3.68 (2.40)	4.71 (2.00)	48	quiet	339	5.52 (1.95)	2.94 (2.27)	4.16 (2.21)	76
plane	539	6.54 (1.82)	6.20 (2.42)	4.77 (2.37)	114	rabbit	527	6.73 (2.07)	4.38 (2.35)	6.12 (1.75)	11
plant	316	5.88 (2.08)	3.81 (2.48)	4.88 (2.29)	125	rabies	340	1.86 (1.01)	6.10 (2.55)	3.79 (2.39)	1
pleasure	317	8.38 (0.86)	5.59 (2.96)	6.28 (2.31)	62	radiant	954	7.04 (2.24)	5.67 (2.85)	5.38 (2.24)	8
poetry	318	6.23 (1.66)	3.76 (2.63)	5.28 (2.07)	88	radiator	955	4.82 (0.66)	3.64 (1.76)	4.86 (0.83)	4
poison	319	1.81 (1.06)	6.62 (2.86)	3.27 (2.69)	10	radio	341	6.77 (1.42)	4.46 (2.79)	5.15 (1.78)	120
politeness	320	7.43 (1.04)	3.74 (2.38)	6.13 (1.87)	5	rage	342	2.35 (1.64)	8.09 (1.50)	4.96 (3.21)	16
pollute	321	1.77 (1.07)	6.04 (2.59)	4.50 (2.57)	1	rain	569	4.81 (2.40)	3.62 (2.37)	4.38 (1.39)	70
poster	942	5.25 (1.59)	3.33 (2.08)	4.88 (1.70)	4	rainbow	343	8.25 (1.12)	4.45 (3.09)	4.60 (2.52)	4
poverty	322	1.46 (0.76)	4.84 (2.75)	2.80 (2.24)	20	rancid	956	4.24 (2.26)	4.81 (2.32)	4.04 (1.84)	.
power	323	6.12 (2.42)	6.44 (2.06)	7.28 (2.11)	342	rape	344	1.08 (0.27)	7.38 (2.89)	2.85 (3.15)	5
powerful	324	6.81 (1.74)	5.80 (2.75)	7.12 (2.59)	63	rat	345	2.82 (1.70)	5.14 (2.48)	4.11 (1.97)	6
prairie	325	5.93 (1.33)	3.26 (1.93)	4.39 (1.89)	21	rattle	346	4.85 (0.97)	4.35 (2.38)	4.31 (1.59)	5
present	943	7.32 (1.64)	4.68 (2.59)	6.14 (1.67)	377	razor	957	4.68 (2.29)	4.96 (2.35)	4.64 (1.78)	15

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red	570	6.46 (1.84)	5.62 (1.94)	6.19 (1.70)	197	salad	369	5.91 (1.67)	3.84 (2.24)	5.38 (1.91)	9
refreshment	347	7.28 (1.33)	4.68 (2.78)	5.00 (1.83)	2	salute	370	6.20 (1.58)	5.45 (2.31)	5.35 (1.98)	3
regretful	348	2.25 (1.55)	5.75 (2.30)	3.19 (2.52)	1	sapphire	371	7.21 (1.80)	4.93 (2.70)	5.59 (2.24)	.
rejected	349	1.38 (0.83)	6.26 (2.67)	2.45 (2.47)	33	satisfied	372	8.12 (0.99)	5.12 (2.83)	6.50 (2.10)	36
relaxed	350	7.39 (1.59)	1.87 (1.71)	5.52 (2.19)	14	save	969	6.65 (2.03)	4.80 (1.99)	5.75 (1.80)	62
repentant	351	5.86 (2.12)	5.05 (2.10)	5.68 (1.86)	1	savior	373	7.72 (1.62)	5.76 (3.01)	6.66 (2.13)	6
reptile	958	4.27 (1.99)	5.23 (2.30)	4.38 (1.72)	.	scalding	970	2.58 (2.06)	5.31 (2.69)	3.88 (2.27)	1
rescue	352	7.50 (1.40)	5.95 (2.78)	6.20 (2.19)	15	scandal	971	2.68 (1.73)	5.27 (2.41)	3.91 (1.66)	8
resent	959	3.64 (2.28)	4.90 (1.81)	5.10 (2.17)	8	scapegoat	972	3.52 (1.66)	4.50 (2.24)	3.48 (1.63)	1
reserved	353	4.87 (1.89)	3.38 (1.95)	3.94 (1.71)	27	scar	973	3.18 (1.99)	4.91 (2.45)	3.55 (1.63)	10
respect	354	7.95 (1.05)	5.25 (2.51)	7.40 (1.73)	125	scared	604	2.08 (1.44)	6.81 (2.00)	2.42 (2.00)	21
respectful	355	7.34 (1.01)	5.00 (2.57)	5.89 (2.41)	4	scholar	374	7.35 (1.47)	5.17 (2.62)	6.96 (1.94)	15
restaurant	960	6.90 (1.62)	4.65 (2.56)	5.15 (1.42)	41	scissors	974	4.95 (1.28)	5.00 (1.34)	5.36 (1.89)	1
reunion	961	6.50 (2.84)	6.58 (2.38)	5.50 (1.82)	11	scorching	975	3.95 (2.06)	5.32 (2.40)	4.05 (2.11)	.
reverent	356	5.20 (1.32)	3.80 (1.51)	4.50 (1.70)	3	scorn	375	2.72 (2.09)	5.45 (2.68)	3.69 (2.79)	4
revolt	357	4.24 (1.81)	6.41 (2.41)	6.00 (1.85)	8	scornful	376	2.27 (1.51)	5.69 (2.68)	4.42 (2.61)	5
revolver	962	2.48 (1.78)	5.82 (2.70)	3.10 (2.26)	14	scorpion	976	3.75 (3.04)	6.42 (2.67)	3.92 (2.60)	.
reward	358	7.78 (1.73)	5.23 (2.79)	6.13 (2.16)	15	scream	605	3.73 (2.13)	7.38 (1.44)	4.81 (2.40)	13
riches	359	7.85 (2.15)	5.96 (2.82)	6.88 (2.60)	2	scum	377	2.04 (1.24)	4.72 (2.41)	4.46 (1.96)	.
ridicule	360	2.62 (2.25)	6.54 (2.69)	3.73 (2.89)	5	scurvy	378	2.96 (1.95)	4.92 (2.66)	4.60 (2.63)	1
rifle	603	2.62 (1.96)	6.23 (2.18)	2.96 (2.14)	63	seasick	379	1.96 (1.25)	6.15 (2.82)	3.38 (2.61)	.
rigid	963	3.25 (1.78)	4.58 (2.28)	4.42 (1.91)	24	seat	380	5.17 (0.89)	3.17 (1.64)	5.00 (1.71)	54
riot	361	2.50 (2.04)	6.58 (2.79)	4.35 (2.78)	7	secure	381	8.00 (1.29)	3.24 (2.73)	6.12 (2.77)	30
river	362	6.93 (1.73)	4.69 (2.54)	5.34 (2.02)	165	selfish	382	2.04 (1.31)	5.58 (2.56)	4.33 (2.50)	8
roach	363	1.95 (1.59)	7.50 (2.24)	4.50 (3.00)	2	sentiment	977	6.12 (1.86)	4.50 (2.16)	5.35 (1.23)	23
robber	964	2.18 (1.68)	5.81 (2.80)	3.00 (2.30)	2	serious	383	4.82 (1.49)	4.00 (1.73)	4.93 (1.51)	116
rock	965	5.32 (1.17)	4.81 (2.27)	5.05 (1.99)	75	severe	978	2.38 (1.50)	5.48 (2.23)	3.50 (1.95)	39
rollercoaster	528	8.23 (1.42)	8.50 (1.03)	5.00 (2.74)	.	sex	384	7.55 (1.88)	6.85 (2.23)	5.25 (2.10)	84
romantic	364	8.45 (0.86)	7.36 (2.44)	6.05 (2.24)	32	sexy	530	7.88 (1.28)	7.24 (1.67)	6.38 (2.45)	2
rotten	365	2.00 (1.31)	4.70 (2.29)	4.22 (2.15)	2	shadow	385	4.29 (1.32)	4.56 (2.27)	4.26 (1.77)	36
rough	966	4.76 (2.23)	5.68 (2.25)	4.81 (1.72)	41	shamed	386	2.05 (1.23)	5.80 (2.31)	2.80 (2.17)	1
rude	366	2.35 (2.06)	6.26 (2.36)	4.61 (2.35)	6	shark	606	3.50 (2.34)	7.08 (2.02)	2.42 (1.75)	.
runner	571	5.69 (1.83)	5.62 (2.25)	5.15 (1.93)	1	sheltered	387	5.95 (1.93)	3.95 (1.67)	3.50 (2.12)	4
rusty	367	3.84 (1.61)	3.59 (2.08)	4.39 (1.69)	8	ship	388	5.75 (1.71)	4.75 (2.59)	5.40 (2.48)	83
sad	368	1.43 (0.84)	4.09 (2.48)	3.00 (2.09)	35	shotgun	979	2.82 (1.97)	6.41 (2.15)	4.00 (2.45)	8
safe	967	7.71 (1.33)	3.75 (2.91)	5.83 (2.32)	58	shriek	980	3.75 (2.17)	5.75 (2.91)	4.12 (1.96)	5
sailboat	529	7.96 (1.28)	5.00 (3.10)	5.92 (1.70)	1	shy	389	4.68 (2.17)	3.69 (2.31)	3.65 (2.28)	13
saint	968	7.05 (1.53)	4.00 (2.31)	5.59 (2.06)	16	sick	607	1.69 (1.05)	4.15 (2.65)	2.92 (1.65)	51

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
sickness	390	2.08 (1.38)	5.36 (2.77)	3.08 (2.27)	6	spring	993	8.00 (1.48)	4.50 (2.69)	6.18 (2.11)	127
silk	391	7.16 (1.40)	3.50 (2.62)	4.84 (2.10)	12	square	408	4.69 (0.97)	3.41 (1.76)	4.48 (1.64)	143
silly	981	7.73 (1.75)	5.50 (2.26)	6.23 (2.16)	15	stagnant	994	4.14 (1.93)	3.91 (2.24)	4.67 (1.53)	5
sin	392	2.50 (1.66)	6.15 (2.24)	3.31 (2.36)	53	star	409	7.23 (1.84)	5.73 (2.38)	4.46 (2.04)	25
sinful	393	2.88 (2.45)	6.27 (2.75)	4.31 (2.91)	3	startled	410	4.56 (1.98)	7.19 (2.00)	3.96 (1.17)	21
sissy	394	2.81 (1.67)	5.23 (2.67)	2.92 (2.53)	.	starving	611	2.00 (1.23)	5.23 (2.49)	3.62 (2.14)	6
skeptical	395	4.20 (1.38)	4.62 (1.92)	4.24 (1.54)	7	statue	995	5.23 (0.61)	3.09 (1.82)	4.45 (1.06)	17
skijump	531	7.08 (1.65)	7.35 (1.79)	4.46 (2.30)	.	stench	996	1.82 (1.37)	4.57 (2.62)	4.05 (2.13)	1
skull	608	3.96 (1.54)	4.12 (1.86)	4.77 (1.45)	3	stiff	997	4.29 (1.95)	3.86 (2.12)	4.86 (1.71)	21
sky	572	7.46 (1.42)	4.19 (2.00)	5.31 (1.78)	58	stink	411	3.13 (2.10)	4.26 (2.18)	4.22 (2.09)	3
skyscraper	573	5.73 (1.78)	5.81 (2.37)	4.31 (2.28)	2	stomach	998	4.71 (2.12)	4.04 (2.55)	4.67 (1.58)	37
slap	396	2.56 (1.39)	6.58 (2.64)	4.38 (2.38)	2	stool	999	5.00 (1.88)	4.52 (2.18)	4.67 (1.77)	8
slaughter	397	1.44 (0.91)	6.71 (2.52)	3.47 (2.91)	10	storm	1000	4.62 (2.25)	5.38 (2.25)	4.24 (2.26)	26
slave	398	1.62 (1.02)	7.00 (2.74)	2.76 (2.59)	30	stove	1001	4.62 (1.77)	4.69 (2.40)	5.64 (2.16)	15
sleep	399	7.03 (1.95)	3.03 (2.95)	5.79 (2.54)	65	street	412	5.19 (0.63)	3.19 (1.96)	4.65 (1.38)	244
slime	400	2.25 (1.61)	5.53 (2.72)	4.16 (2.05)	1	stress	413	2.00 (1.48)	7.47 (2.42)	3.58 (2.46)	107
slow	982	3.91 (1.57)	2.73 (2.00)	4.23 (1.63)	60	strong	414	6.91 (1.47)	5.83 (2.29)	7.09 (2.19)	202
slum	401	2.46 (1.33)	5.00 (2.43)	3.81 (2.12)	8	stupid	415	2.10 (1.19)	4.97 (2.64)	2.57 (1.85)	24
slush	983	4.67 (1.86)	3.92 (2.30)	4.96 (1.33)	.	subdued	416	4.54 (1.43)	2.93 (1.94)	3.68 (1.42)	8
smallpox	402	2.54 (1.96)	5.44 (2.06)	4.04 (2.13)	2	success	417	8.35 (0.93)	6.04 (2.84)	7.35 (2.39)	93
smooth	984	6.48 (2.06)	4.85 (2.62)	5.32 (1.99)	42	suffocate	418	1.52 (1.08)	6.57 (2.97)	3.00 (2.86)	1
snake	609	2.58 (1.68)	6.92 (1.92)	3.08 (1.73)	44	sugar	1002	7.05 (1.68)	5.14 (2.61)	5.68 (1.39)	34
snob	403	3.60 (1.94)	5.61 (2.29)	5.03 (2.22)	1	suicide	419	1.00 (0.00)	6.20 (3.25)	3.15 (3.10)	17
snow	575	7.27 (1.54)	6.12 (2.18)	5.69 (1.89)	59	sun	532	8.12 (1.48)	5.27 (2.92)	6.73 (1.76)	112
snuggle	404	8.00 (1.35)	3.96 (2.96)	5.57 (2.74)	4	sunlight	1003	8.45 (0.91)	6.86 (1.71)	5.86 (2.43)	17
social	985	7.25 (2.11)	5.17 (2.39)	6.48 (1.96)	380	sunrise	420	7.91 (1.47)	5.04 (3.21)	5.26 (2.45)	10
soft	986	7.38 (1.32)	4.32 (2.71)	5.86 (1.98)	61	sunset	421	8.19 (1.10)	4.23 (3.06)	5.65 (1.98)	14
solemn	405	3.85 (1.35)	3.30 (2.11)	4.70 (1.56)	12	surgery	612	2.62 (2.23)	7.00 (1.92)	2.58 (1.50)	6
song	987	7.85 (1.46)	6.80 (2.14)	6.05 (2.21)	70	surprised	422	7.66 (1.33)	7.31 (2.02)	6.22 (2.31)	58
soothe	988	7.20 (2.27)	4.31 (3.25)	5.88 (2.03)	2	suspicious	423	3.55 (1.28)	6.45 (1.76)	4.00 (2.03)	13
sour	989	4.18 (2.24)	5.23 (2.11)	4.50 (1.47)	3	swamp	1004	4.90 (2.00)	4.40 (2.04)	4.70 (1.03)	5
space	574	6.76 (1.67)	5.20 (2.18)	5.16 (2.23)	184	sweetheart	424	8.52 (0.73)	5.61 (2.74)	6.09 (2.29)	9
spanking	990	2.33 (1.83)	5.39 (2.73)	3.22 (2.28)	.	swift	1005	6.36 (1.65)	4.91 (2.49)	6.27 (2.03)	32
sphere	991	5.23 (0.53)	3.86 (1.62)	4.95 (0.59)	22	swimmer	576	6.81 (1.63)	5.46 (1.96)	6.15 (1.97)	.
spider	610	3.04 (1.51)	5.92 (1.96)	4.54 (2.06)	2	syphilis	425	1.45 (1.05)	7.00 (2.79)	3.55 (2.96)	.
spirit	406	7.00 (1.41)	5.59 (2.71)	6.17 (2.28)	182	table	426	5.19 (0.57)	2.85 (1.97)	4.69 (1.64)	198
sprout	407	7.58 (1.60)	4.60 (2.77)	5.36 (1.87)	3	talent	427	7.65 (1.26)	6.08 (1.98)	6.58 (1.60)	40
spray	992	5.45 (1.50)	3.80 (2.07)	5.10 (1.17)	16	tamper	1006	4.10 (2.23)	5.05 (2.11)	4.45 (2.39)	1

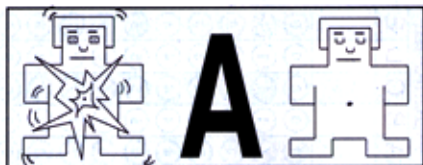
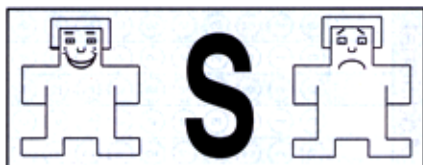
Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
tank	613	4.42 (1.58)	4.85 (1.78)	4.04 (1.66)	12	treasure	449	8.10 (0.97)	6.15 (2.80)	6.40 (2.30)	4
taste	1007	6.64 (1.73)	5.12 (2.49)	5.48 (1.50)	59	treat	1019	7.50 (1.26)	5.71 (2.24)	6.19 (1.91)	26
taxi	1008	4.62 (1.93)	3.08 (2.08)	4.96 (1.55)	16	tree	450	6.28 (1.62)	3.75 (2.34)	4.79 (2.22)	59
teacher	1009	5.62 (2.08)	3.67 (2.50)	5.17 (2.18)	80	triumph	451	8.28 (1.34)	5.62 (2.87)	7.15 (2.43)	22
tease	1010	3.96 (2.29)	5.68 (2.41)	4.29 (2.63)	6	triumphant	452	8.83 (0.83)	7.04 (2.40)	7.00 (2.26)	5
tender	1011	7.29 (1.23)	4.68 (2.51)	5.33 (1.80)	11	trophy	453	7.73 (1.25)	5.23 (2.60)	6.65 (2.30)	8
tennis	540	6.15 (1.87)	4.81 (2.79)	5.50 (2.23)	15	trouble	454	2.65 (1.77)	7.30 (1.96)	4.96 (2.57)	134
tense	428	3.58 (1.45)	6.73 (1.93)	5.27 (2.20)	15	troubled	455	2.00 (1.20)	6.28 (2.19)	3.76 (2.35)	31
termite	429	3.28 (2.44)	6.42 (2.02)	3.58 (1.96)	.	truck	577	4.96 (1.95)	4.96 (2.03)	5.15 (1.89)	57
terrible	430	1.65 (1.13)	6.69 (2.45)	3.15 (2.57)	45	trumpet	456	5.70 (1.30)	4.80 (2.04)	4.55 (1.36)	7
terrific	431	8.12 (1.16)	6.35 (2.52)	6.45 (2.05)	5	trunk	1020	5.16 (1.62)	4.35 (2.28)	5.32 (1.77)	8
terrified	432	1.69 (1.23)	8.08 (2.23)	2.88 (2.82)	7	trust	457	7.21 (2.48)	5.31 (2.92)	7.07 (1.83)	52
terrorist	614	1.42 (0.86)	7.77 (1.88)	2.42 (2.16)	.	truth	458	7.96 (1.18)	5.04 (2.86)	6.44 (1.85)	126
thankful	433	7.16 (2.30)	4.31 (2.35)	5.16 (2.05)	6	tumor	459	1.77 (1.70)	7.12 (2.93)	3.23 (2.44)	17
theory	434	5.20 (1.47)	4.45 (1.79)	4.90 (1.83)	129	tune	1021	7.45 (1.22)	4.55 (2.15)	5.55 (1.57)	10
thermometer	1012	4.67 (1.20)	4.09 (2.04)	4.24 (1.48)	.	twilight	1022	7.50 (1.79)	4.54 (2.47)	5.62 (1.92)	4
thief	435	1.50 (1.08)	7.19 (1.94)	3.25 (2.36)	8	ugly	460	2.39 (1.31)	5.57 (2.33)	4.22 (2.61)	21
thorn	436	3.68 (1.73)	5.12 (2.11)	4.44 (1.33)	3	ulcer	461	1.72 (1.10)	6.04 (2.62)	4.11 (2.02)	5
thought	1013	6.80 (1.44)	4.85 (2.68)	6.40 (1.67)	515	umbrella	578	5.12 (1.67)	4.32 (1.65)	5.20 (2.06)	8
thoughtful	437	7.85 (1.09)	5.15 (2.58)	5.80 (2.17)	11	unfaithful	462	1.85 (1.43)	6.62 (2.89)	2.85 (2.74)	1
thrill	438	7.85 (1.41)	7.81 (1.90)	6.54 (2.02)	5	unhappy	463	1.35 (0.78)	4.26 (2.53)	3.70 (2.75)	26
tidy	1014	6.32 (1.93)	4.36 (2.16)	5.88 (2.14)	1	unit	1023	5.50 (1.59)	3.21 (2.19)	4.67 (1.09)	103
time	439	5.38 (2.08)	4.24 (2.62)	4.28 (2.21)	1599	untroubled	464	7.65 (1.37)	4.13 (2.44)	5.70 (2.60)	.
timid	440	3.90 (1.63)	4.66 (2.18)	3.03 (1.97)	5	upset	465	2.00 (1.17)	6.25 (1.94)	3.90 (2.40)	14
tobacco	441	3.23 (2.16)	4.92 (2.65)	4.27 (2.32)	19	urine	617	3.65 (1.67)	4.23 (1.99)	5.38 (1.94)	1
tomb	442	2.55 (1.82)	5.05 (2.72)	3.30 (1.95)	11	useful	466	7.38 (1.36)	4.20 (2.61)	6.00 (2.06)	58
tool	1015	4.91 (1.27)	3.91 (1.63)	5.00 (1.48)	40	useless	467	1.89 (1.28)	4.75 (2.52)	3.44 (2.71)	17
toothache	443	1.97 (1.18)	5.43 (2.50)	3.64 (1.52)	.	utensil	1024	5.40 (0.94)	3.40 (1.93)	4.95 (0.83)	.
tornado	444	2.29 (1.54)	7.03 (2.40)	3.82 (2.26)	1	vacation	468	8.38 (1.21)	6.10 (2.88)	7.00 (2.15)	47
torture	445	1.58 (0.77)	7.11 (2.35)	3.50 (2.86)	3	vagina	1025	4.90 (0.72)	3.95 (1.90)	5.45 (1.54)	10
tower	1016	5.35 (0.88)	3.50 (2.24)	5.20 (1.77)	13	valentine	469	8.23 (1.34)	6.12 (2.94)	6.15 (2.41)	2
toxic	446	2.14 (1.48)	6.61 (2.31)	4.50 (2.47)	3	vampire	470	3.92 (1.96)	6.46 (2.30)	4.92 (2.72)	1
toy	1017	7.00 (1.98)	4.58 (2.83)	5.67 (1.74)	4	vandal	471	2.32 (1.86)	6.76 (1.48)	3.24 (2.45)	1
tragedy	447	1.50 (0.86)	6.31 (2.95)	3.28 (2.54)	49	vanity	472	4.29 (1.79)	5.00 (2.32)	4.91 (2.04)	7
traitor	448	2.25 (1.83)	6.10 (2.47)	4.25 (2.65)	2	vehicle	473	6.15 (2.65)	4.38 (3.10)	5.56 (2.86)	35
trash	615	2.88 (1.56)	4.35 (1.83)	5.58 (1.77)	2	venom	474	1.80 (0.89)	6.55 (2.46)	3.60 (2.30)	2
trauma	616	1.77 (1.11)	6.54 (2.04)	2.88 (1.93)	1	vest	1026	5.46 (1.42)	3.69 (2.22)	5.08 (0.74)	4
travel	1018	7.60 (1.76)	6.35 (2.62)	6.20 (2.26)	61	victim	618	1.92 (1.32)	6.12 (2.23)	1.92 (1.13)	27

*Affective Norms for English Words. Female Subjects*

Bradley, M.M., & Lang, P.J. (1999)

Table 3

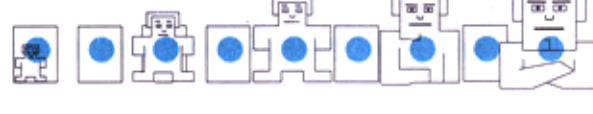
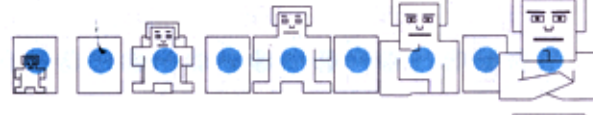
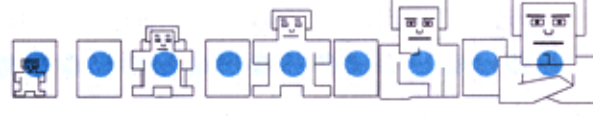
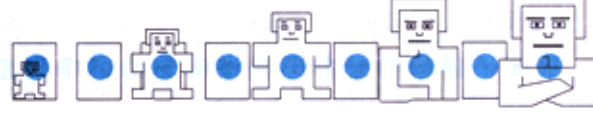
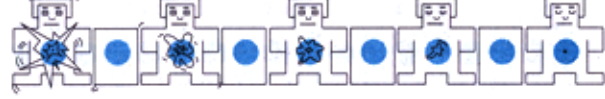
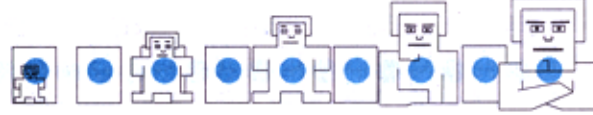
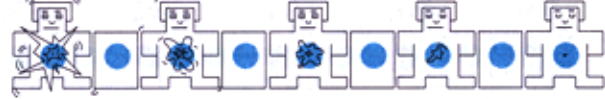
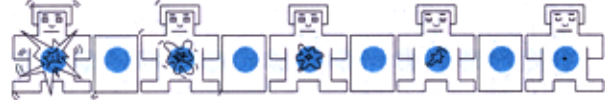
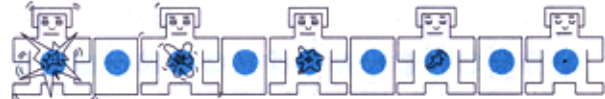
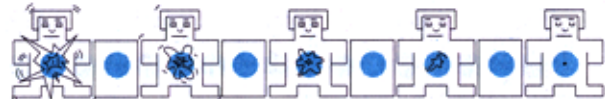
Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency	Description	Word No.	Valence Mean(SD)	Arousal Mean(SD)	Dominance Mean (SD)	Word Frequency
victory	475	8.60 (0.91)	6.88 (2.97)	7.42 (2.06)	61	world	500	6.69 (2.19)	5.52 (2.37)	5.21 (2.44)	787
vigorous	476	6.74 (1.61)	6.38 (2.56)	5.52 (2.31)	29	wounds	620	2.08 (1.29)	5.85 (2.01)	3.85 (1.67)	8
village	477	5.95 (1.47)	3.90 (1.59)	4.70 (1.13)	72	writer	1036	6.05 (2.06)	5.38 (2.54)	4.90 (1.84)	73
violent	478	1.48 (0.79)	7.26 (2.26)	5.04 (2.69)	33	yacht	1037	6.55 (1.85)	5.35 (2.89)	5.90 (2.20)	4
violin	579	5.96 (1.75)	3.42 (2.37)	5.54 (1.98)	11	yellow	545	5.58 (2.02)	4.77 (1.99)	5.38 (1.83)	55
virgin	1027	6.62 (1.66)	4.73 (1.64)	6.67 (2.33)	35	young	1038	7.00 (2.48)	5.54 (2.63)	5.04 (2.65)	385
virtue	479	6.27 (2.34)	4.00 (2.58)	6.35 (1.85)	30	youth	1039	6.68 (2.73)	5.81 (2.70)	4.56 (2.75)	82
vision	480	6.50 (1.95)	4.75 (2.50)	6.03 (2.18)	56	zest	1040	7.00 (2.43)	5.52 (2.96)	5.88 (2.33)	5
volcano	619	4.58 (2.04)	6.23 (2.07)	3.12 (1.80)	2						
vomit	481	1.96 (1.46)	5.62 (2.89)	3.42 (2.40)	3						
voyage	1028	6.15 (2.13)	5.42 (2.12)	4.69 (1.78)	17						
wagon	1029	5.41 (1.05)	3.91 (1.77)	4.91 (0.43)	55						
war	482	1.46 (0.81)	7.28 (2.44)	3.48 (2.82)	464						
warmth	483	7.65 (1.96)	3.38 (2.28)	5.81 (1.92)	28						
wasp	484	3.35 (1.64)	5.57 (2.23)	3.70 (1.64)	2						
waste	485	2.58 (1.36)	3.76 (1.85)	4.46 (1.82)	35						
watch	580	5.54 (1.50)	4.12 (1.68)	5.35 (2.10)	81						
water	486	6.39 (1.80)	4.87 (2.36)	5.13 (1.89)	442						
waterfall	487	8.12 (0.91)	4.54 (2.93)	5.31 (2.02)	2						
wealthy	488	7.75 (1.34)	6.03 (2.62)	6.68 (2.65)	12						
weapon	489	3.40 (1.90)	6.05 (2.14)	4.60 (2.85)	42						
weary	490	3.54 (2.08)	3.80 (2.42)	3.88 (2.09)	17						
wedding	491	8.30 (0.97)	5.91 (3.06)	6.91 (2.09)	32						
whistle	1030	5.86 (1.25)	4.90 (2.17)	5.38 (1.94)	4						
white	542	6.54 (1.70)	4.77 (2.27)	5.96 (1.93)	365						
whore	492	1.61 (1.37)	5.54 (3.01)	4.10 (2.81)	2						
wicked	493	2.97 (2.58)	6.37 (2.43)	4.53 (2.92)	9						
wife	1031	6.59 (1.89)	4.27 (2.31)	5.50 (1.63)	228						
win	494	8.40 (0.99)	7.20 (2.71)	7.60 (2.14)	55						
windmill	1032	6.10 (1.21)	3.45 (1.85)	5.25 (0.72)	1						
window	495	5.87 (1.29)	3.87 (2.03)	4.96 (1.72)	119						
wine	496	6.25 (2.42)	4.72 (2.48)	5.56 (2.38)	72						
wink	1033	7.12 (2.07)	5.92 (2.78)	5.56 (2.02)	7						
wise	497	7.77 (1.15)	3.77 (2.88)	7.23 (2.35)	36						
wish	1034	7.32 (2.25)	5.32 (2.73)	5.12 (2.24)	110						
wit	1035	7.32 (2.29)	5.24 (2.49)	6.65 (2.06)	20						
woman	498	6.42 (1.90)	4.52 (2.55)	6.50 (1.66)	224						
wonder	499	6.22 (1.62)	4.87 (2.36)	5.09 (2.23)	67						



\_\_\_\_\_  
Name (Please Print)

\_\_\_\_\_  
Home Phone

\_\_\_\_\_  
Work Phone



1 brutal	2 vehicle	3 girl	4 ambition
5 sweetheart	6 paradise	7 killer	8 inspire
9 vandal	10 kindness	11 scurvy	12 beauty
13 cheer	14 useful	15 dagger	16 anguished
17 slave	18 hostage	19 glamour	20 home
21 devil	22 flabby	23 feeble	24 scornful
25 ridicule	26 alert	27 cyclone	28 accident
29 powerful	30 hammer	31 inspired	32 relaxed
33 decompose	34 mighty	35 anger	36 god
37 headache	38 disappoint	39 scum	40 startled
41 disaster	42 priest	43 candy	44 meek
45 stink	46 wasp	47 rescue	48 guilty
49 theory	50 vampire	51 city	52 pie
53 foul	54 frustrated	55 music	56 jealousy



## Affective Norms for English Words (ANEW)

Bradley & Lang, 1999

