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ABSTRACT

This paper gives the results of a controlled experiment on word association. The purpose was to establish norms of commonality of primary descriptive adjective responses to common nouns. The stimuli consisted of 203 common nouns selected from 10 everyday topics of conversation, approximately 20 from each topic. There were 350 subjects, 50% male, 50% female, selected from various regions in the United States and stratified into three age groups: 15-22, 51-65, and 66 and older. The norms of commonality were established by counting every identical repetition of noun-adjective pairs. Two tables give: (1) the index of common nouns used as stimuli in the experiment; and (2) the norms of descriptive adjective responses to common nouns, including the number of repetitions for each adjective. The identical response pairs with the largest numbers, such as 170 for winter--cold and 107 for circle--round, are considered of significant interest. (TL)

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NORMS OF DESCRIPTIVE ADJECTIVE RESPONSES TO COMMON NOUNS

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NORMS OF DESCRIPTIVE ADJECTIVE RESPONSES TO COMMON NOUNS

Introduction

The purpose of this controlled, or restricted, word association experiment was to establish norms of commonality of primary descriptive adjective responses to 203 common nouns grouped within ten everyday topics of conversation. The common nouns were selected by choosing the usual topics of conversation with approximately twenty common nouns for each topic.

Although few "syntagmatic responses," or descriptive adjective responses to common nouns, are given on a free word association test (Deese, 1965, 106), a controlled, or restricted, word association test can be given. In a controlled word association test, each subject's response is "chosen from a specified semantic or conceptual category" (Cramer, 1968, 24).

To establish these norms subjects were selected by stratified age groups. Probably "regional or geographic differences within the United States may not be large" for word association tests (Entwisle, 1966, 58); yet, for the present study, the subjects were selected in groups from each region of the United States. Only the first letter of each stimulus noun was capitalized, because all capital letters lead to more proper names as responses (Cramer, 1968). Verbal instructions were given to 20% of the subjects and written instructions were sent to the other 80% of the subjects to negate any differences in method of instruction, which can influence results (Cramer, 1968). Since females tend to give more common responses on

free association tests (Palermo and Jenkins, 1965b), 50% of the subjects are females and the other 50% of the subjects are males in the present study.

Subjects

Three hundred and fifty subjects in two northern Midwestern, two Western, one Eastern, and three Southern states volunteered. The states were Minnesota, Iowa, Colorado, California, Texas, Oklahoma, Florida, and Pennsylvania. Approximately half of the subjects were males, and the other half were females. Subjects were selected equally in each of the following age groups: fifteen through twenty-two years, fifty-one through sixty-five years, and sixty-six years and older. Approximately two-thirds of the subjects had attended college and the other one-third had attended high school. Most college majors and occupations and professions were sampled. All subjects were normally functioning members of society in the United States.

Stimuli

The stimuli for the pilot study of 100 subjects were a written list of 20 common nouns. The norms of commonality were established by counting every identical repetition of the noun-adjective pairs. This revealed at least 29% of the 100 pairs. For example, out of 100 subject's responses for student, the responses included 30 for young, 23 for busy, and 8 for intelligent, or a total of 61%. Next, the first time a response was counted, it was considered an original response and only a repetition thereafter. This led to at least 25% repetitions for each pair. An illustration is student, with repetitions of 29 for young, 22 for busy, and 7 for intelligent.

The stimuli for the next 100 subjects were a written list of 200 common nouns, based on 10 common topics of conversation. The

stimuli were divided into groups of twenty words for ten general areas of life, but the words Russian and Chinese were included as both a group of people and as a language subject. Establishment of the norms of commonality of the responses led to the fact that 132 of the nouns from the present author's two original word association tests met the established criteria of yielding 29% identical responses and 25% repetitions.

The 132 common nouns which met the criteria were the written stimuli for the next 125 subjects. Finally, the four written stimuli, fall, winter, spring, and summer, were sent to an additional 25 subjects in the three Southern states to add balance to the commonality norms.

Stimulus Materials

The only stimulus materials were the letter of introduction and explanation, the test of stimuli words, each subject's own pencil or pen, and for the second 100 subjects each subject's own clock or watch.

Procedure

Eighty per cent of the subjects received the written letter of instructions and the list of written stimuli. The other 20% of the subjects were read the written letter of instructions and were given the list of written stimuli. Only the first letter of each stimulus word was capitalized. (See Table 1.)

The letter of instructions for the second 100 subjects follows.

Since I am writing my Honors Thesis in Psychology at the University of Minnesota, I would appreciate having you use a clock with a second hand and time to the next full second the length of time that it takes you to write a descriptive adjective, such as blue, big, nice, etc., after each noun or listed word.

Thank you for your cooperation.

5.
The letter of instructions for the other 250 subjects follows.

Since I am writing my Honors Thesis in Psychology at the University of Minnesota, I would appreciate having you write your first descriptive adjective response, such as blue, big, nice, etc., after each noun or listed word.

Thank you for your cooperation.

The 80% of the subjects who received their stimuli by mail, sent them back to the experimenter. The other 20% turned them into the experimenter when the subject had completed writing his responses.

The return rate of subject's tests for the pilot study was 100%. The author originally gave or sent one test to each of 110 subjects for the second group of 100 returned tests; thus, 100 returned the test promptly, nine were never returned, and one was returned much later. Of 200 tests sent out, the third group of 125 tests were collected. The return rate for the four balancing word tests was 100%. Since the norms were established by stratified age groups and sections of the country of returned controlled word association tests, the author feels that the return rate is irrelevant to the results.

Results

The norms of commonality of primary adjective responses to common nouns are presented in Table 2. (See Table 2.) Although the cut off criteria provided the basis of the study, the larger number of identical response pairs, such as 170 for winter--cold and 107 for circle--round are of most interest to the author.

The listing for 100 subjects of Chinese and Russian included in each a group of people and a language for study resulted in two different sets of pairs of identical responses. When the listing of Christians for 92 subjects was included under groups of people and under happy occasions, the responses were usually duplicates.

Although the reaction times of each of the second 100 subjects to each stimulus noun were collected and analyzed, these data seem irrelevant to the establishment of norms of commonality.

Norms still need to be established for children under the age of 15 years. It would have been better to have used lower identical response pair and repetition scores for the cut off point for giving the common nouns as stimuli to the last 125 subjects. Several of the common nouns were close to the cut off point and every group of 100 subjects does not respond with the same number of identical response pairs and repetitions.

The index for the order of the 203 common nouns is in Table 1. (See Table 1.)

Norms of commonality of primary descriptive adjective responses to common nouns with each noun's tabulated numbers of identical responses are in Table 2. (See Table 2.)

Table 1

Index of Common Nouns

Mother	Government	Psychology
Father	Church	Art
Sister	City	Music
Brother	Town	Education
Cousin	County	Philosophy
Aunt	Country	History
Uncle	Village	Engineering
Grandmother	Township	Theatre
Grandfather	Borough	Biology
Self	Hospital	Forestry
Teacher	Office	German
Student	Class	Law
Minister	Representative	Square
Doctor	Senator	Circle
Dentist	President	Triangle
Librarian	Judge	Winter
Employer	Jury	Spring
Employee	Mathematics	Summer
Supervisor	Physics	Fall
Child	Chemistry	Mountains
School	English	Valley
College	Spanish	Plains
University	French	Desert

Arctic	Train	Blouse
Europe	Jet	Sweater
Africa	Airplane	Slacks
Asia	Desk	Suit
Americas	Stool	Coat
Tundra	Shelves	Hat
Rain	Vegetables	Gloves
Sun	Meat	Shirt
Snow	Milk	Belt
Sleet	Fruit	Socks
Antarctica	Cereal	Shoes
Australia	Juice	Boots
Sand	Tomato	Umbrella
Rock	Ham	Mittens
Table	Cheese	Hose
Chair	Bread	Slip
Piano	Orange	Scarf
Organ	Cake	Jacket
Bed	Pie	Bank
Couch	Apple	Purse
Stove	Lettuce	Loan
Refrigerator	Steak	Payment
House	Egg	Check
Car	Tuna	Cash
Truck	Butter	Dollars
Bicycle	Coffee	Cents
Tricycle	Dress	Savings
Bus	Skirt	Insurance

Will
 Donation
 Gift
 Gold
 Economy
 Trade
 Employment
 Compensation
 Welfare
 Finances
 Whites
 Blacks
 Negroes
 Chicanos
 Minority
 Citizens
 Foreigners
 Visitors
 Russian
 Chinese
 Americans
 Christians
 Jews
 Hindus
 Moslems
 Indians
 Mexicans
 Agnostics

Catholics
 Atheists
 Birth
 Death
 Birthday
 Christmas
 Easter
 Passover
 Holiday
 Conversion
 Baptism
 Marriage
 Divorce
 Location
 Relocation
 Anniversary
 Wedding
 Festival
 Feast
 Reunion
 Thanksgiving

Table 2

Norms of Descriptive Adjective Responses to Common Nouns

Mother (n=325)

(Father)

kind	47	good	39
loving	44	kind	10
warm	23	stern	9
good	13	big	8
beautiful	6	dependable	6
young	5	proud	4
understanding	5	gentle	4
sweet	4	nice	4
patient	3	strict	3
lovable	2	authoritative	3
tender	2	old	3
my	2	helpful	2
fat	2	respectful	2
protective	2	wonderful	2
gentle	2	warm	2
nice	2	dominant	2
weak	2	logical	2

Sister (n=325)

Father (n=325)

strong	41	older	41
--------	----	-------	----

(Sister)

little	32
younger	22
cute	20
loving	16
pretty	8
friendly	6
sweet	5
young	4
small	4
nice	4
beautiful	3
kind	3
happy	3
intelligent	2
sassy	2
blond	2
helpful	2
good	2
her	2
fussy	2
energetic	2
favorite	2
understanding	2
loved	2
Brother (n=325)	
big	47

(Brother)

older	29
younger	16
little	9
handsome	6
friendly	5
good	4
fun	3
helpful	3
nice	2
generous	2
reliable	2
young	2
elder	2
messed up	2
my	2
funny	2
smart	2
understanding	2
Cousin (n=225)	
first	23
distant	21
friendly	9
kissing	7
retard	3
tall	3
good	3

(Cousin)

small	2
snobbish	2
girl	2
weird	2
country	2
close	2
older	2
mean	2

Grandmother (n=100)

loving	13
cold	3
pretty	2
gentle	2
small	2
old	2
sweet	2

Aunt (n=100)

older	5
great	4
pleasant	2
sweet	2
loving	2

Grandfather (n=100)

loving	8
patient	5
blind	3
dead	3
proud	2
honest	2
friendly	2
sturdy	2

Uncle (n=100)

favorite	5
rich	4
slim	3
jolly	3
great	2
big	2
balding	2

Self (n=100)

hopeful	7
egotistical	4
selfish	3
lonely	2
good	2

Teacher (n=325)

older	22
intelligent	21
demanding	14
knowledgeable	12
stern	8
smart	7
good	7
strict	6
learned	5
kind	4
dedicated	3
excellent	3
capable	3
helpful	3
boring	3
respectful	2
interesting	2
emotional	2
considerate	2
aged	2
supervising	2
talking	2
concerned	2
eager	2
dull	2
hard	2

(Teacher)

old	2
authoritarian	2
authoritative	2

Student (n=325)

young	39
busy	30
studious	16
smart	16
intelligent	12
good	12
working	5
lazy	4
tired	3
poor	3
patient	2
single	2
interested	2
hard working	2
curious	2
bright	2
industrious	2

Minister (n=100)

foreign	6
visiting	4

(Minister)

(Doctor)

understanding 4

Doctor (n=225)

efficient 24

medical 15

good 10

family 8

old 7

busy 6

capable 5

helpful 4

quack 4

kind 4

friendly 3

patient 3

nice 3

white 3

competent 3

expensive 2

brilliant 2

surgical 2

educated 2

reliable 2

special 2

experienced 2

professional 2

our 2

careful 2

knowledgeable 2

concerned 2

Dentist (n=100)

painful 6

painless 6

carefree 4

talkative 4

Librarian (n=100)

strict 10

quiet 6

aged 4

efficient 3

silent 2

Employer (n=100)

stern 7

strict 3

fair 2

reliable 2

Employee (n=100)

reliable 4



(Employee)

(Child)

neat
good
young
sullen
ambitious

3
2
2
2
2

first
naive
loving
noisy
trusting
cute
dependent

2
2
2
2
2
2
2

Supervisor (n=100)

understanding
bully
old
efficient

3
2
2
2

School (n=100)

brick
new
noisy
old

4
4
2
2

Child (n=225)

small
little
beautiful
sweet
young
innocent
lovable
happy
blond
smiling
crying
playful
inquiring

30
12
9
7
7
6
3
3
2
2
2
2
2

College (n=100)

small
defunct
large
accredited

13
7
2
2

University

corrupt
bureaucratic
democratic
free

5
4
4
4

(University)

(Church)

good 3

Government (n=100)

concerned 2

hypocritical 2

corrupt 5

bureaucratic 4

democratic 4

free 4

good 3

City (n=100)

large 13

dirty 6

hot 2

expanding 2

neat 2

beautiful 2

Church (n=225)

Town (n=225)

beautiful 25

protestant 17

quiet 8

Catholic 6

stone 5

spiritual 4

big 3

large 3

holy 3

dull 3

active 2

good 2

brick 2

irresponsible 2

Gothic 2

friendly 2

small 86

friendly 21

busy 5

peaceful 3

old 3

cool 2

clean 2

quiet 2

little 2

sleepy 2

our 2

down 2

home 2



County (n=100)

large 9
 smaller 3
 rich 2
 poor 2

(Borough)

small 3
 noisy 2
 busy 2
 dark 2

Country (n=100)

free 8
 green 5
 beautiful 5
 great 4

Hospital (n=100)

clean 7
 sanitary 7
 efficient 4
 large 3
 quiet 2

Village (n=100)

small 12
 quaint 5
 pretty 4
 tiny 4
 quiet 2

Office (n=100)

busy 5
 empty 4
 large 2
 inner 2

Township (n=100)

small 6
 square 5
 adjoining 2

Class (n=100)

graduating 10
 large 5
 obnoxious 2

Borough (n=100)

winding 3

Representative (n=100)

new 4
 young 4



(Representative)

(Jury)

thoughtless
talkative

2
2

fair
dumb

4
3

Senator (n=100)

Mathematics (n=225)

young
old
incumbent
smiling

5
4
3
2

higher
easy
difficult
hard

29
27
21
15

President (n=100)

corrupt
wise
responsible
popular
confident
responding

5
4
3
3
3
2

boring
new
complicated
numerical
fun
hateful
applied
dull

7
4
4
3
3
2
2
2

Judge (n=100)

fair
wise
honorable
critical

9
6
3
2

algebraic
logical
complex
mechanical

2
2
2
2

Physics (n=225)

Jury (n=100)

hung

14

simple
hard
puzzling

14
12
11

(Physics)

difficult	9
useful	7
nuclear	7
scientific	4
dull	2
measured	2
theoretical	2
confusing	2
harder	2
molecular	2
quantum	2
geo	2
dry	2
bad	2
atomic	2
interesting	2
complex	2
terrible	2
boring	2

Chemistry (n=100)

smelling	9
bubbling	5
interesting	4
difficult	4
simple	2

English (n=225)

perfect	18
fluent	16
broken	14
good	14
interesting	8
difficult	4
native	4
hard	3
soft	3
spoken	3
friendly	3
exciting	2
poor	2
fun	2
arrogant	2
modern	2
fascinating	2
stuffy	2
tricky	2

Spanish (n=225)

speaking	18
easy	14
musical	10
romantic	10

(Spanish)

poor	8
hard	5
good	5
fluent	4
difficult	4
dark	4
daring	3
melodic	3
artistic	2
interesting	2
challenging	2
flowing	2
nice	2
melodious	2
romance	2
classical	2

French (n=225)

romantic	12
easy	11
flowery	8
poor	6
beautiful	6
interesting	5
quaint	5

(French)

musical	5
nasal	5
precise	4
hard	4
difficult	3
old	2
Parisian	2
pleasant	2
gay	2
fluent	2
articulate	2
Canadian	2
fluid	2
Psychology (n=225)	
human	18
child	17
interesting	15
abnormal	8
understanding	7
difficult	6
applied	5
unpopular	4
easy	3
behavioral	3

(Psychology)

(Art)

useful 3
 Freudian 3
 scientific 2
 personal 2
 poor 2
 overemphasized 2
 general 2
 mental 2
 fascinating 2
 difficult 2
 pseudo 2
 silly 2
 existential 2
 social 2
 theoretical 2

Art (n=325)

creative 31
 expressive 25
 beautiful 24
 pop 21
 modern 13
 interesting 10
 colorful 9
 color 4
 Grecian 3

fine 3
 pleasant 3
 pretty 3
 displayed 2
 stimulating 2
 Medieval 2

Music (n=325)

soothing 22
 classical 22
 enjoyable 20
 quiet 19
 beautiful 14
 loud 13
 soft 13
 melodious 7
 sweet 6
 refreshing 5
 rock 4
 modern 3
 good 3
 restful 3
 impressionist 2
 symphonic 2
 pleaseful 2
 jazz 2

(Music)

harmonious

2

folk

2

(Education)

great

2

formal

2

Education (n=225)

higher

14

special

12

continuing

11

necessary

10

secondary

5

good

5

dull

4

completing

4

helpful

4

useful

3

laborious

3

primary

3

elementary

3

simple

2

essential

2

practical

2

learning

2

interesting

2

inadequate

2

liberal

2

boring

2

hard

2

Philosophy (n=225)

personal

13

living

9

my

8

interesting

8

Greek

7

ancient

7

boring

5

practical

5

life's

4

great

4

simple

4

deep

4

logical

3

Platonic

3

old

2

senseless

2

human

2

moral

2

sound

2

Aristotlean

2

necessary

2

Cartesian

2

(Philosophy)

profound 2
 stimulating 2
 basic 2
 thinking 2
 irrelevant 2
 dull 2

History (n=225)

old 31
 ancient 28
 interesting 10
 recording 8
 past 7
 fascinating 6
 living 5
 changing 5
 English 5
 boring 4
 dull 3
 American 3
 timeless 2
 vital 2
 Medieval 2
 informative 2
 fun 2

Engineering (n=225)

mechanical 30
 electrical 21
 civil 18
 chemical 10
 mathematical 8
 mining 6
 practical 6
 building 5
 structural 5
 dull 4
 boring 3
 constructive 3
 difficult 3
 technical 3
 exacting 2
 hard 2
 construction 2
 industrial 2
 drawing 2
 useful 2
 crowded 2
 contract 2
 space 2
 county 2
 essential 2



(Engineering)

aeronautical

2

dry

2

Theatre (n=225)

dramatic

18

living

15

progressive

9

entertaining

8

fun

8

beautiful

5

artful

5

uncouth

4

Guthrie

4

exciting

4

creative

3

enjoyable

3

good

3

movie

3

open

3

roudy

3

interesting

3

large

2

round

2

mysterious

2

avant gard

2

fantastic

2

(Theatre)

absurd

2

fascinating

2

Biology (n=100)

classifying

6

simple

6

interesting

5

difficult

5

living

4

Forestry (n=225)

green

25

preserving

12

beautifying

8

interesting

8

protective

6

woodsy

5

natural

5

seeding

4

important

3

conservative

3

practical

3

free

3

exciting

2

good

2

lonely

2

(Forestry)

Law (n=100)

peaceful	2
necessary	2
dull	2
German (n=225)	
gutteral	19
intelligent	9
harsh	8
stout	7
haughty	6
hard	6
easy	4
handsome	3
stubborn	3
rigid	3
industrious	3
rich	2
early	2
systematic	2
good	2
East	2
tough	2
West	2
excellent	2
difficult	2

strict	4
ridiculous	4
just	3
complete	3
painful	3
regulating	3
new	2
peaceful	2

Square (n=225)

perfect	40
geometric	15
flat	14
four	8
cubical	5
large	5
straight	5
rectangular	4
even	3
big	3
sharp	3
equal	3
red	3
hard	2



(Square)

equilateral

2

blue

2

round

2

(Triangle)

three-cornered

3

odd

2

big

2

Circle (n=225)

round

107

large

20

red

4

small

4

continuous

4

smooth

2

unending

2

whole

2

Winter (n=350)

cold

170

snowy

38

white

8

long

5

cool

3

wet

3

warm

3

rainy

3

foggy

2

clear

2

hard

2

icy

2

mild

2

bleak

2

howling

2

Minnesota

2

Triangle (n=225)

isosceles

25

equilateral

21

red

20

obtuse

9

three-sided

8

musical

7

pointed

6

right

4

love

3

geometrical

3

Spring (n=350)

green

36

rainy

34

(Spring)

pleasant	25
beautiful	24
fresh	10
wet	10
cool	7
lovely	4
foggy	3
windy	3
nice	3
stormy	2
hospitable	2
gentle	2
lazy	2
bursting	2
bright	2
lively	2
pleasant	2
cozy	2
happy	2
late	2
refreshing	2

Summer (n=350)

hot	94
warm	37

(Summer)

beautiful	21
lazy	16
humid	4
breezy	4
flowering	3
scorching	3
steamy	3
relaxing	3
fun	3
dry	2
bright	2
desolate	2
fragrant	2

Fall (n=350)

colorful	56
brown	38
crisp	21
cool	15
beautiful	14
calm	14
dry	11
rainy	9
warm	9
windy	9

(Fall)		(Valley)	
clear	4	low	16
foggy	3	hidden	9
pleasant	3	narrow	8
arid	2	winding	3
brisk	2	fertile	3
dying	2	hot	2

Mountains (n=325)

Plains (n=325)

high	55	flat	85
rocky	27	rolling	23
tall	22	sprawling	12
lofty	18	wider	12
snowy	15	broad	9
beautiful	14	great	9
steep	9	level	5
rugged	3	brown	5
burnt	2	open	4
barren	2	western	3
towering	2	vast	3
purple	2	high	2
breath taking	2	smooth	2
		unending	2
		golden	2
		grassy	2

Valley (n=325)

green	67
deep	43
peaceful	20



Desert (n=325)

hot	40
dry	38
arid	31
sandy	20
shifting	10
barren	6
windy	3
huge	2
large	2

Arctic (n=225)

cold	83
frigid	18
frozen	13
polar	9
icy	8
white	5
frozen	5
freezing	3

Europe (n=100)

old	11
beautiful	8
divided	4

Africa (n=225)

hot	23
darkest	20
black	16
tropical	10
dark	7
wild	6
South	4
sandy	3
wealthy	3
huge	3
distant	2

Asia (n=100)

Oriental	8
mysterious	7
warring	3
vast	3

Americas

beautiful	7
friendly	5
picturesque	4
connecting	2
productive	2

Tundra (n=225)

(Sun)

frozen 29
 cold 25
 mossy 9
 desolate 8
 vast 8
 treeless 7
 windy 2
 barren 2
 dry 2
 flat 2

Rain (n=100)

wet 11
 falling 8
 dripping 6
 gentle 2

Sun (n=225)

hot 60
 bright 28
 warm 25
 red 8
 setting 5
 soft 5

blazing 4
 golden 2

Snow (n=225)

white 68
 cold 19
 drifting 8
 falling 7
 blowing 6
 melting 5
 sparkling 4
 wet 3
 pretty 2
 soft 2

Sleet (n=225)

cold 31
 icy 22
 hard 12
 wet 9
 sharp 8
 slippery 4
 miserable 4
 prickly 2

Antarctica (n=225)

cold	65
frozen	25
frigid	20
icy	12
distant	4
south	4
white	3
enormous	3
lonely	2
freezing	2

Australia (n=225)

afar	18
distant	7
far away	6
sandy	5
beautiful	5
empty	4
hilly	4
small	4
windy	4
green	4
far	4
big	4

(Australis)

large	4
southern	3
barren	2
interesting	2

Sand (n=225)

white	25
hot	26
smooth	17
fine	13
gritty	12
grainy	8
wet	7
soft	7
rough	6
warm	5
brown	5
scratchy	3
coarse	3
dry	3
golden	3
quick	2

Rock (n=225)

hard	94
------	----



(Rock)

solid	24
smooth	18
pretty	6
flat	2
heavy	2
strong	2
rough	2

Table (n=100)

round	17
carved	5
flat	4
large	2

Chair (n=100)

comfortable	9
straight	6
soft	7
broken	2

Piano (n=100)

beautiful	7
polished	4
blond	2

Organ (n=100)

pipe	20
hand	4
electrical	2
antique	2

Bed (n=225)

soft	55
comfortable	33
warm	10
sleepy	9
comfort	3
water	3

Couch (n=225)

comfortable	28
soft	25
long	14
green	6
hard	5
relaxing	5
sagging	5
reclining	4
dirty	4
cozy	3

(Couch)

uncomfortable 2
 velvet 2
 inviting 2
 pretty 2
 sexy 2
 restful 2
 comfy 2

Stove (n=225)

hot 69
 cooking 11
 gas 10
 cold 7
 black 4
 dirty 4
 warm 2
 electric 2
 potbellied 2
 red 2
 white 2

Refrigerator (n=225)

cold 53
 white 18
 full 10
 large 8

(Refrigerator)

cooling 8
 electric 7
 new 5
 empty 5
 old 3
 modern 3
 frost free 2
 useable 2
 pink 2
 preserving 2
 noisy 2

House (n=100)

green 7
 old 6
 large 5
 white 5
 empty 5

Car (n=100)

new 10
 old 7
 small 7
 rusty 4

Truck (n=100)

C Bus (n=225)

large 13
 powerful 4
 dirty 4
 noisy 3

smelly 61
 dirty 47
 red 27
 crowded 10

Bicycle

speedy 12
 new 4
 touring 3
 red 2

yellow 9
 slow 8
 school 8
 large 7
 noisy 4
 old 4

Tricycle (n=225)

small 41
 red 28
 childish 13
 three-wheeled 6
 sturdy 5

city 4
 mini 3
 empty 3
 uncomfortable 3
 convenient 2
 useful 2

Train (n=225)

fun 5
 blue 4
 shiny 3
 easy 3
 little 3
 squeaking 2
 toy 2
 new 2

moving 31
 slow 29
 long 29
 fast 22
 noisy 12
 Amtrak 5
 choo-choo 5

(Train)

old 3
 electric 2
 whistling 2
 crowded 2
 obsolete 2
 diesel 2
 dirty 2

Airplane (n=100)

soaring 6
 big 6
 old 5
 wingless 4
 silver 2

Desk (n=100)

solid 12
 cluttered 5
 messy 4
 empty 4
 small 3

Jet (n=225)

fast 46
 swift 9
 silver 8
 streaking 7
 noisy 6
 jumbo 6
 roaring 5
 crashing 4
 high 3
 loud 3
 big 3
 black 2
 smooth 2
 roomy 2
 scary 2

Stool (n=100)

folding 8
 small 5
 tall 5
 round 3

Shelves (n=100)

high 4
 long 3
 full 3
 folding 3



(Shelves)

narrow	3
empty	3
dusty	2

Vegetables (n=225)

green	57
fresh	21
variety	10
leafy	9
crisp	7
raw	6
nourishing	6
tasty	6
good	6
healthy	5
growing	3
cooked	2
terrible	2
orange	2
mixed	2
crunchy	2

Meat (n=100)

red	34
raw	14
hot	13

(Meat)

delicious	12
juicy	11
fresh	10
lean	10
expensive	10
dried	7
tender	7
frozen	5
tasty	5
good	4
tough	3
rare	3
dead	2

Milk (n=225)

white	31
cold	28
whole	24
fresh	17
sour	17
skim	9
sweet	5
nutritious	5
chocolate	5
cool	4
healthful	4



(Milk)

raw	3
warm	3
wholesome	2
creamy	2
expensive	2

(Cereal)

cold	15
soggy	5
sticky	4
bland	4
good	3
cooked	3
crisp	3
wheat	2
whole grain	2
breakfast	2
morning	2
grainy	2

Fruit (n=225)

fresh	42
juicy	20
sweet	14
ripe	13
good	11
firm	6
citrus	5
acid	3
cold	3
yellow	2
crisp	2
delectable	2
canned	2

Juice (n=225)

tart	81
orange	44
sweet	28
cold	12
refreshing	12
sour	6
tangy	4
liquid	3
wet	3
tomato	2
good	2

Cereal (n=225)

dry	37
crunchy	35
hot	35

(Juice)

tasty 2
 morning 2
 fruit 2

Tomato (n=225)

red 59
 ripe 21
 juicy 16
 fresh 11
 green 8
 yellow 7
 rotten 3
 large 3
 thick 2
 cherry 2
 acid 2
 soup 2
 plump 2

Ham (n=100)

thick 6
 lean 5
 pink 3
 fat 2
 fresh 2

(Ham)

delicious 2

Cheese (n=225)

yellow 20

soft 9

tangy 7

sharp 7

good 6

moldy 6

Swiss 5

blue 5

mild 4

Colby 4

aged 3

cream 3

cottage 3

smooth 3

rancid 2

sliced 2

delicious 2

filling 2

dry 2

green 2

smelly 2

hard 2

Bread (n=225)

white	35
fresh	24
stale	18
soft	11
dry	9
moldy	9
crusty	8
brown	6
rye	6
good	5
dark	5
warm	5
whole wheat	4
wheat	3
baked	2
toasted	2
homemade	2

Orange (n=225)

juicy	40
round	19
sweet	11
large	7
orange	7
sour	6

(Orange)

ripe	6
rotten	5
juice	5
bright	4
delicious	4
navel	4
good	3
large	2
small	2
peeled	2
big	2
sweetest	2
cold	2
nutricious	2
tasty	2
fresh	2
yellow	2

Cake (n=225)

chocolate	39
sweet	27
fluffy	22
white	12
layer	11
coffee	6

(Cake)

delicious	6
crumbly	5
moist	5
pretty	5
fresh	4
soft	3
angel food	3
fattening	3
birthday	3
frosted	2
dry	2
carrot	2
rich	2
good	2

(Pie)

pumpkin	4
soft	4
sour	3
tasty	3
strawberry	2
fattening	2
good	2
pecan	2
pizza	2
favorite	2
filling	2
fruit	2
fruity	2

Apple (n=225)

Pie (n=225)

apple	28	red	60
juicy	27	crisp	18
crusty	14	tart	17
large	12	wormy	14
fresh	11	juicy	13
delicious	7	green	7
blueberry	7	delicious	6
lemon	4	ripe	6
cherry	4	big	5
		crunchy	5

(Apple)

hard 4
 Harellson 3
 sour 2
 fresh 2
 baked 2

Lettuce (n=225)

green 53
 crisp 49
 leafy 27
 fresh 9
 crispy 5
 head 4
 crunchy 4
 salad 3
 leaf 3
 hick 2
 bitter 2
 boycotted 2

Steak (n=225)

rare 41
 tender 23
 juicy 22
 red 12

(Steak)

tough 11
 thick 9
 good 7
 medium 7
 well done 5
 beef 4
 expensive 4
 T-bone 3
 big 2
 tasty 2
 delicious 2
 warm 2

Egg (n=100)

fresh 12
 large 6
 rotten 3
 small 3

Tuna (n=225)

oily 17
 light 12
 chunky 12
 canned 10
 dark 9

(Tuna)

smelly	8
fresh	8
fishy	8
white	7
good	4
greasy	4
flakey	3
hot	2
chunk	2
Chicken of the Sea	2
Starkist	2
delicious	2
large	2
tasty	2

rich	3
melted	3
apple	2
melty	2
melting	2
salty	2
oily	2
smooth	2

Coffee (n=225)

black	46
hot	26
strong	20
bitter	11
rich	6
aromatic	5
stale	5
roasted	3
brown	3
good	2
fresh	2

Butter (n=225)

soft	30
yellow	28
fresh	14
creamy	14
sweet	9
rancid	4
saltless	3
cold	3
greasy	3

Dress (n=225)

pretty	27
short	19
long	15



(Dress)

(Skirt)

red 10
 blue 9
 new 8
 formal 5
 nice 5
 fashionable 3
 lovely 3
 cotton 3
 indecent 2
 colorful 2
 green 2

Blouse (n=225)

nice 2
 white 35
 sheer 11
 loose 11
 pretty 10
 floral 7
 soft 7
 sleeveless 6
 see through 6

Skirt (n=225)

clean 5
 flimsy 3
 green 3
 tight 3
 lacy 3
 frilly 3
 silk 2
 short 76
 pleated 15
 long 11
 mini 6
 blue 5
 wool 5
 dirty 4
 loose 4
 full 4
 tight 3
 plaid 3
 brown 2

Sweater (n=225)

warm 61
 tight 12
 blue 10
 pretty 8
 soft 7

(Sweater)

bulky	6
woolen	5
comfortable	3
knit	3
angora	3
hot	2
cardigan	2
nice	2
cashmere	2

Slacks (n=100)

blue	6
flaring	6
worn	5
black	5
long	3
baggy	3
pink	2
neat	2

Suit (n=100)

seasucker	4
black	2
brown	2
soft	2
dark	2

Coat (n=225)

warm	31
heavy	20
slicker	12
long	9
winter	6
short	4
fur	4
bulky	4
over	2
leather	2
woolen	2
brown	2

Hat (n=100)

floppy	6
large	5
high	5
white	3
torn	3
brimless	2
flashy	2

Gloves (n=225)

warm	32
leather	20



(Gloves)

white	14
heavy	8
kid	6
stretch	5
long	4
brown	3
suede	3
furry	2
soft	2
cold	2
covering	2

Shirt (n=100)

white	8
clean	4
blue	4
floral	3
plaid	2
stripped	2

Belt (n=100)

wide	9
black	8
long	4
snug	3

(Belt)

worn	2
braided	2

Socks (n=225)

white	17
stretch	15
warm	12
wool	12
black	10
holey	8
clean	6
argyle	5
knee	4
sweat	4
smelly	3
covering	3
dirty	3
nylon	3
long	2
fuzzy	2
bright	2

Shoes (n=225)

comfortable	18
brown	17

(Shoes)

new	13
black	12
leather	9
old	7
worn	6
tight	5
protective	5
walking	4
white	4
sturdy	4
polished	4
high	4
tennis	3
shiny	2
earth	2
suede	2
patent	2

(Boots)

leather	4
heavy	3
waterproof	3
practical	3
shiny	2
protective	2
brown	2

Umbrella (n=100)

clear	11
black	4
huge	4
ribbed	4
wet	3
pretty	2

Mittens (n=225)

warm	51
red	17
woolen	12
knitted	10
fluffy	5
wooly	4
yellow	4
ski	3

Boots (n=225)

high	40
black	14
warm	12
rubber	10
red	4
leaky	4

(Mittens)

fuzzy	3
pretty	2
wet	2
cold	2

Hose (n=225)

sheer	21
nylon	14
panty	13
long	11
garden	10
snagged	9
water	8
rubber	7
clear	6
wet	5
silk	5
short	3
fire	3
support	2
non-run	2

Slip (n=225)

white	31
pink	14

(Slip)

half	12
lacy	9
short	8
nylon	6
silk	5
silky	4
sexy	3
soft	3
cotton	3
slippery	3
clinging	2
slinky	2

Scarf (n=225)

pretty	24
long	17
warm	16
red	9
silk	8
lengthy	7
sheer	6
square	5
pink	5
bright	5
woolen	5



(Scarf)

green	3
wide	2
plaid	2
blue	2

(Bank)

river	2
convenient	2
gray	2

Purse (n=225)

Jacket (n=100)

short	10
warm	8
washable	4
red	3
green	2

large	9
empty	9
messy	8
black	8
bulky	8
small	7
leather	7

Bank (n=225)

savings	30
large	13
money	10
secure	8
big	6
piggy	6
safe	5
rich	5
soft	3
security	3
solid	2

coin	6
heavy	4
full	3
red	2
white	2
shoulder	2
cluttered	2
stolen	2
clutch	2

Loan (n=225)

small	27
large	13

(Loan)		(Payment)	
bank	7	regular	3
poor	5	last	3
term	5	loan	3
financial	5	overdue	3
helpful	5	prompt	2
easy	4	late	2
installment	3		
ample	2	Check (n=100)	
unwise	2	bouncing	5
joint	2	bad	5
student	2	personal	3
necessary	2	lost	3
big	2		
		Cash (n=225)	

Payment (n=225)			
large	93	green	22
down	31	petty	21
hard	25	ready	17
monthly	14	cold	15
time	13	lost	10
final	9	hard	9
small	8	little	7
cash	7	jingly	4
installment	6	loose	4
big	5	quick	3
first	4	small	3



(Cash)

(Cents)

necessary
handy
good
rich
immediate

2
2
2
2
2

ten
lost
fifty
common
jingling
five

5
3
3
3
3
3

Dollars (n=225)

green
silver
many
round
few
ten
valuable
crisp
disappearing
American
unit
hundred

35
31
17
16
8
3
2
2
2
2
2
2

no
little
pennies
worthless

3
2
2
2

Savings (n=100)

small
large
dual
helpful

18
5
2
2

Insurance (n=100)

free
expensive
faulty
insufficient

3
3
3
3

Cents (n=225)

few
copper
many
loose
small

37
21
7
5
5

Will (n=225)

final
last

34
27



(Will)		(Donation)	
strong	13	money	2
legal	7	thoughtful	2
determined	5	cheap	2
good	4	liberal	2
probate	4		
long	3	Gift (n=225)	
free	3	loving	24
important	2	birthday	14
benevolent	2	thoughtful	10
		small	10
Donation (n=225)		generous	9
small	23	beautiful	8
generous	20	expensive	7
large	12	pretty	6
charitable	11	Christmas	5
free	9	surprise	3
charity	7	free	3
big	6	special	3
gift	5	heartfelt	2
one	5	parting	2
helpful	4	wedding	2
deductible	3	love	2
willing	2	nice	2
kind	2	happy	2
poor	2		



Gold (n=225)

yellow	21
pure	17
shining	14
shiny	12
old	9
valuable	7
expensive	7
solid	5
beautiful	5
hard	3
glittering	3
pretty	3
rich	3
fool's	3
bright	3
sparkling	2
metallic	2
silver	2
heavy	2

Economy (n=225)

false	16
poor	14
fluctuating	11

(Economy)

sound	10
rising	10
bad	7
unstable	5
inflationary	5
thrifty	4
tight	4
stable	3
American	3
balanced	2
national	2
political	2
faltering	2
lousy	2
declining	2

Trade (n=100)

free	11
equal	5
unwise	3
common	2

Employment (n=100)

scarce	7
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(Employment)

full	7
equal	5
sound	4
useful	3

Welfare (n=100)

growing	8
public	8
popular	2
free	2

Compensation (n=225)

minimal	22
workman's	16
small	14
fair	7
money	5
adequate	5
monetary	4
regular	4
unemployment	3
good	3
old	3
sufficient	3
ample	3
just	3
necessary	2
low	2
big	2

Finances (n=225)

high	16
poor	12
unstable	9
substantial	8
low	5
lost	5
balancing	5
good	4
necessary	3
bad	3
stable	3
monetary	3
household	3
big	2
increasing	2
short	2
dwindling	2

(Finances)

rich 2
 needed 2
 troubled 2

Whites (n=225)

ambitious 15
 good 8
 many 7
 egg 5
 majority 5
 rich 4
 dress 4
 prejudicial 4
 respectful 4
 tall 4
 beautiful 3
 proud 3
 pale 3
 light 2
 intelligent 2
 predominant 2
 middle class 2
 nice 2

Blacks (n=225)

massive 17
 athletic 11
 advancing 7
 racist 6
 bad 6
 dark 5
 minority 4
 jet 4
 militant 3
 oppressed 3
 poor 3
 beautiful 2
 dull 2
 southern 2
 northern 2
 protesting 2
 many 2
 African 2
 singing 2

Negroes (n=225)

black 26
 old 15

(Negroes)

singing	9
southern	8
lazy	6
African	6
many	3
poor	3
race	3
stacky	2
proud	2
friendly	2
American	2
deprived	2
good	2
rich	2
discriminated	2

Chicanos (n=225)

striking	12
Mexican	11
dirty	10
brown	10
few	5
laboring	5
squatty	5
poor	5

(Chicanos)

good	4
young	3
advancing	3
Spanish	2
minority	2
angry	2
deprived	2
swarthy	2
cheerful	2
emotional	2
exploited	2
Minority (n=225)	
small	50
clamoring	17
growing	10
silent	7
few	5
underprivileged	5
unreasonable	4
vocal	4
oppressed	4
radical	3
poor	2
black	2

Citizens (n=225)

American	15
natural	12
worthy	10
good	8
working	8
concerned	7
free	7
aging	6
loyal	6
many	5
thoughtful	5
United States	5
senior	4
responsible	3
solid	3
sceptical	2
active	2
unaware	2
poor	2
interested	2
informed	2
young	2

Foreigners (n=100)

visiting	10
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(Foreigners)

disrespectful	2
calm	2
wealthy	2
inquisitive	2

Visitors (n=225)

friendly	21
welcome	18
foreign	16
curious	11
pleasant	10
happy	9
polite	4
few	3
hospital	3
many	3
noisy	2
unexpected	2
interesting	2
lonely	2

Russian (n=225)¹

strong	14
difficult	13
cruel	11

(Russian)

Chinese (n=225)¹

hard	10	yellow	17
cold	8	crafty	11
militant	6	red	9
unknown	6	cruel	5
black	4	Oriental	4
friendly	3	industrious	4
red	3	heavy	3
Communistic	2	quiet	3
stubborn	2	huge	3
loud	2	beautiful	3
cunning	2	good	3
haughty	2	hard working	3
easy	2	slant eyed	3
singing	2	smart	3
puzzling	2	intelligent	2
emotional	2	yellow skinned	2
unhappy	2	Mandarin	2
enigmatic	2	Eastern	2
perplexing	2	visiting	2
complex	2	small	2
white	2	few	2
gutteral	2	Americans (n=225)	
tzarist	2	happy	13
interesting	2		

(Americans)

young	9
loyal	7
good	5
intelligent	5
beautiful	5
proud	5
ugly	5
patriotic	5
busy	4
rich	4
many	3
quiet	3
native	3
grumpy	2
friendly	2
materialistic	2
white	2
fat	2
industrious	2
confused	2
nolsy	2
middle class	2
conglomerate	2
North	2
informed	2

Christians (n=225)²

loving	88
good	24
faithful	21
religious	20
happy	13
naive	11
protestant	6
devout	5
hypocritical	5
kind	4
many	3
crusading	3
persecuted	3
proselytising	3
early	3
truthful	3
singing	3
forgiving	3
concerned	2
irrational	2

Jews (n=225)

concerned	13
wealthy	12

(Jews)

(Hindus)

greedy	11
religious	9
persecuted	8
deceitful	5
good	4
evil	4
orthodox	4
squabbling	4
boastful	4
thrifty	4
suppressed	3
trying	2
stingy	2
devoted	2
honest	2
clanish	2
European	2

mysterious	3
mystic	3
poor	3
dark	3
deceitful	3
passive	3
good	3
Asian	2
peaceful	2
humanly	2
brown	2
ancient	2

Moslems (n=225)

black	11
wealthy	8
kneeling	7
warring	7
Eastern	5
religious	5
unknown	3
ritualistic	3
Arabic	3
interesting	3
secular	2

Hindus (n=225)

destructive	16
praying	16
Indian	9
Eastern	7
muderous	6
many	3



(Moslems)

veiling	2
handsome	2
faithful	2
praying	2
Arab	2
foreign	2

Indians (n=225)

American	36
red	26
vanishing	9
red skinned	6
tribal	6
angry	5
artistic	3
wild	3
brave	3
poor	3
peaceful	2
stealthy	2
mistreated	2
sad	2
good	2
struggling	2

Mexicans (n=225)

laboring	23
colorful	13
poor	8
friendly	6
Spanish	6
brown	6
migrant	5
dark	5
singing	5
dancing	4
dirty	3
musical	2
struggling	2

Agnostics (n=100)

rioting	11
cold	8
hating	6
crazy	2
dense	2

Catholics (n=225)

devout	34
hypocritical	14

(Catholics)

religious	11
kneeling	6
Roman	6
Irish	5
praying	5
few	4
friendly	4
wealthy	3
good	3
traditional	3
conservative	3
strict	2
bigot	2
loyal	2
many	2
powerful	2

Atheists (n=225)

screaming	12
destructive	6
ungodly	5
unbelieving	5
few	4
radical	3
stupid	3

(Atheists)

selfish	3
sad	3
smart	3
religious	2
bewildered	2
many	2
Birth (n=225)	
premature	59
normal	17
easy	14
joyous	12
happy	9
new	8
beginning	7
painful	6
natural	5
live	4
exciting	4
sad	3
traumatic	2
wonderful	2
Death (n=225)	
sad	30

(Death)

lingering	13
peaceful	10
painful	8
sudden	8
final	6
ending	6
premature	4
tragic	3
continuing	3
quiet	3
timely	3
inevitable	3
slow	3

Birthday (n=225)

happy	103
celebrating	7
old	6
frequent	2
first	2

Christmas (n=161)

merry	60
joyful	16
white	13

(Christmas)

holy	5
snowy	2

Easter (n=225)

happy	60
joyful	32
quiet	5
beautiful	4
bright	4
sunny	4
beginning	3
Christian	3
solemn	2
religious	2
holy	2
green	2
yellow	2

Passover (n=100)

religious	17
good	4
sorrowful	2
beautiful	2

Holiday (n=225)

happy	28
gay	14
free	11
fun	11
restful	9
joyous	6
quiet	5
relaxing	5
welcome	5
good	4
tragic	4
summer	2
religious	2
long,	2
family	2

(Baptism)

beautiful	3
flowery	2

Marriage (n=225)

happy	27
loving	10
good	8
lasting	8
binding	7
beautiful	6
combining	3
quiet	3
unhappy	2
together	2
union	2
shotgun	2

Conversion (n=100)

total	13
quick	4
graceful	2

Divorce (n=225)

sad	27
unfortunate	8
bitter	7
quick	7
separating	6
harsh	5
unhappy	5

Baptism (n=100)

watery	11
emerging	4

(Divorce)

selfish	3
bad	3
necessary	3
difficult	3
painful	3
sudden	3
heartbreaking	2
never	2
tragic	2
messy	2

Location (n=100)

good	9
pretty	5
expensive	5
dirty	2
poor	2

Relocation (n=225)

ideal	12
convenient	8
new	8
beautiful	7
upsetting	5
difficult	5

(Relocation)

larger	4
exciting	4
necessary	4
urban	3
unhappy	3
forced	3
vast	3

Anniversary (n=225)

happy	62
observing	12
golden	11
wedding	10
celebrating	9
memorable	7
silver	6
first	5
fun	3
yearly	2
beautiful	2

Wedding (n=225)

beautiful	28
happy	21
white	8

(Wedding)

(Feast)

shotgun 5
 gay 4
 small 4
 large 4
 pretty 4
 sad 3
 joyful 3
 big 3
 church 2
 quiet 2
 joyous 2
 lovely 2
 traditional 2
 golden 2
 uniting 2

Festival (n=100)

gay 12
 colorful 6
 joyful 5
 noisy 4

Feast (n=100)

happy 8
 joyful 4

Reunion (n=225)

pleasant 2
 friendly 2
 tearful 2
 happy 30
 thankful 19
 family 13
 bountiful 9
 grateful 7
 class 3
 joyful 3
 fun 3
 many 2
 blessed 2
 gay 2
 school 2
 loving 2
 twenty-fifth 2

Thanksgiving (n=225)

happy 20
 free 17
 thankful 17
 bountiful 6

(Thanksgiving)

complete	5
stuffing	4
full	3
plentiful	3
prayerful	3
family	3
grateful	2
good	2
joyful	2
our	2

Independence (n=225)

fourth	41
free	25
American	10
joyous	10

(Independence)

personal	9
quiet	5
earned	5
important	4
complete	4
freedom	4
necessary	3
glorious	3
noisy	3
new	2
good	2
revolutionary	2
precious	2

¹100 Ss responded to this word twice

²92 Ss responded to this word twice

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