METHODS & DESIGNS

Meaning dominance norms for 120 homographs

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Over the past two decades, homographs have been used in psychological experiments aimed at testing a variety of theoretical issues concerning memory and language. Often, such research requires prior knowledge of the dominance relations among various meanings of the homographs. Previously available homograph meaning norms are limited because they are now more than 10 years old, and they have typically reported only the two most dominant meanings even though many homographs have three or more common meanings. This paper presents normative data on 120 homographs from a relatively large, heterogeneous sample of subjects ($N = 100$). Meaning dominance was assessed by having subjects write the first definition that came to mind for each homograph. Definition responses were grouped by similarity, and the resulting meaning categories were verified against dictionary meaning classifications. The number of distinct meanings varied from two to six for the homographs investigated, and frequency of response is reported for all definition categories.

Homographs have been used over the past several decades for a variety of purposes in psychological research. Probably their widest use has occurred in the testing of theories of lexical representation and access (see, e.g., Bentin, Bargai, & Katz, 1984; Gerard & Scarborough, 1989; Laudanna, Badecker, & Caramazza, 1989) and the study of context effects on meaning activation during reading and listening (see, e.g., Carpenter & Daneman, 1981; Kinoshita, 1985; Kintsch & Mross, 1985; Neill, Hilliard, & Cooper, 1988; Simpson, 1981; Simpson & Burgess, 1985; Van Petten & Kutas, 1987). Other uses for homographs have included the study of personality and thought disorders (see, e.g., Mathews, Richards, & Eysenck, 1989; Silverstein & Chaifetz, 1984), the neuropsychology of semantic processing (see, e.g., Deloche & Seron, 1981; Deloche, Seron, Scius, & Sequi, 1987; Pierce, 1984; Walker & Ceci, 1985), and both implicit and explicit memory processes (see, e.g., McElroy, 1987; Masson & Freedman, 1990; Micco & Masson, 1991; Roediger & Payne, 1983; Slamecka & Barlow, 1979; Underwood & Humphreys, 1979).

When homographs are used in research, it is almost always helpful and sometimes necessary to know the dominant and nondominant meanings of the words. Norms for meaning dominance of homographs have been pub-

lished previously, but they are limited for current use in several ways. First, many studies have typically reported only two meanings of homographs even though many homographs have between three and five distinct meanings (see, e.g., Geis & Winograd, 1974; Gorfein, Viviani, & Leddo, 1982). For some purposes, the dominance order of the less dominant meanings is crucial. Second, the previous normative studies are now more than 10 years old, which could be problematic if the dominance relationships for certain homographs change over time.

In most previous assessments of the dominance of homographs' meanings, subjects have been provided with homographs and have been asked to make open-ended definition responses. This procedure, along with free-association techniques, prevents any biasing of the subjects that might be caused by presenting them with alternative meanings from which to choose. However, with such free-response data it is not trivial to establish the number of distinct and valid meanings to be used in evaluating meaning dominance. In previous normative studies of homographs, different methods have been used to accomplish this. For example, Cramer (1970) categorized subjects' responses according to meaning categories that were established prior to the experiment. In contrast, others have employed various means of forming meaning categories by clustering subjects' responses. Warren, Bresnick, and Green (1977) determined meaning categories simply by clustering subjects' definitions on the basis of similarity. Two other studies allowed the consensus of a number of raters to determine meaning categories, judg-

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ing meanings according to the "semantic sense" they were believed to represent (Geis & Winograd, 1974; Gorfein et al., 1982). Nelson, McEvoy, Walling, and Wheeler (1980) also used the consensus of raters, but their categories were constrained to follow dictionary meanings defined by word origin.

After reviewing these different approaches, we decided to use a twofold method for creating homograph meaning categories. First, we clustered subjects' definitions into categories that were based on our own judgments of similarity, and then we verified these categories against the dictionary's treatment of the words' meanings, altering our meaning categories when necessary (i.e., collapsing or expanding the number of categories).

METHOD

Materials

A number of the words used for these norms came from previously published homograph studies (e.g., Nelson et al., 1980). The remainder were added because they were judged to have more than one meaning in current English usage.

Of our 120 homographs, 14 overlapped with the 50 used in Geis and Winograd's (1974) study; 23 overlapped with the 107 in Gorfein et al. (1982); 29 overlapped with the 120 in Wollen, Cox, Coahran, Shea, and Kirby (1980); and 95 overlapped with the 320 in Nelson et al. (1980).

Subjects

The subjects were 100 Air Force recruits in their 11th day of basic training at Lackland A.F.B., ranging in age from 17 to 27 years old. These recruits came from various regions of the country, and they tended to fall around the 60th percentile in national norms in general aptitude test scores. Twelve females and 88 males participated.

Procedure

The 120 homographs were placed in two forms (A and B) that differed only in the ordering of the words. Fifty subjects were tested with Set A, and 50 subjects were tested with Set B.

The words were presented to each subject in a five-page booklet. The front page of the booklet contained instructions. The subjects could read along as the instructions were read aloud by a test administrator. They were told to read each familiar English word and write a short definition in the space provided. The object was to write the definition in as few words as possible, and to write the first meaning that came to mind. Five examples were presented, demonstrating that words may have several meanings. The subjects were reminded to only write the first meaning that came to mind, even if they thought of a "better meaning" later. They were also told not to skip any of the words. When the subjects understood the task, they were allowed to begin and spend as much time as necessary. No one required more than 45 min to complete the task.

Response Categorization

Illegible responses, blank responses, and responses that reflected misinterpretation of the stimulus (e.g., a subject wrote *to polish* in response to the stimulus word *bluff*) were placed in an unclassified category. The remaining responses were classified in two stages. The first stage involved simply grouping similar definitions together. As a first step in this stage, definitions that contained exact or nearly exact wording were grouped together. Next, responses similar, but not identical, to the definitions in those groupings were added (i.e., synonyms, examples, or things associated with the definitions). For instance, some responses to the stimulus word *ground* included *soil*,

earth, *grass*, and *floor*. These definitions were grouped together because they represent synonyms for, or things associated with *the ground*. Definitions were also grouped on the basis of their reference to the same object or an action of that object. For example, *a bullet from a gun* and *being struck by a bullet* as definitions of the stimulus word *shot* were grouped together.

In some cases, we were unable to determine which meaning a subject intended. For example, 1 subject responded with *point* to the stimulus word *plot*. We had no way of determining whether the subject meant the plot to a story or plotting points on a graph. Such responses were placed in the unclassified category.

In the second stage of classifying definitions, we relied on *Webster's Ninth New Collegiate Dictionary* (1983) to determine which of the initial categories should be clustered together and which should remain separate. Of the 120 stimuli, 116 were listed in the dictionary as homographs designated by two or more separate entries. However, given dictionary conventions, we could not treat all separate entries as distinct meanings. This and other dictionaries make the distinction between related and unrelated homographs. When the two entries are derived from the same root but differ in part of speech, they are considered related homographs. For example, there are three numbered entries for the word *arm*. The second and third entries are related homographs: ²*arm* is a verb meaning *to furnish or equip with weapons*, and ³*arm* is a noun meaning *a means (as a weapon) of offense or defense; esp: FIREARM*. For our purposes, such related homographs were combined in one meaning category. In contrast, separate entries representing two distinct words that have the same spelling are considered unrelated homographs. For example, the first entry of *arm* is a noun meaning *a human upper limb*. Unrelated homographs such as this example remained as separate meaning categories in our method.

We also found it necessary, albeit difficult, to make judgments about the relatedness of different senses of stimulus words listed in the dictionary (several senses are often listed under each entry). It became evident that some senses are highly related in meaning, whereas others are relatively unrelated. For our purposes, we chose to combine related senses into one general category, with the criterion that these related senses had to refer to the same concept. As an example, our first meaning category for the stimulus word *strike* was *to hit something*. We considered Sense 2 (*to aim and usu. deliver a blow or thrust*) and Sense 3 (*to come into contact forcefully*) of the first entry to be related, and subjects' responses corresponding to these meanings were placed into this singular category. Our third meaning category for the stimulus word *strike* was *a worker's protest*. This meaning was also found under the first entry as Sense 15 (*to stop work in order to force an employer to comply with demands*), and it is considered in the dictionary to have a sense related to our first category (i.e., *to hit something*). However, for our purposes, these seemingly different concepts were treated as unrelated meanings and remained separate categories.

In verifying our categorization of definitions against the dictionary, we also found that some of our groupings reflected subsenses, rather than unrelated senses or homographs. Instead of forming separate categories when this occurred, we designated the grouping found to be a subsense as a subcategory of the meaning category corresponding to the sense. For example, with the stimulus word *cast*, one sense of the word pertained to something's being formed in a mold. One of the subsenses to this meaning referred to plaster of paris. Thus, all responses corresponding to this subsense were formed into a subcategory under the more general meaning category of *something being formed in a mold*.

Subcategories were formed under any of three conditions. One condition, already mentioned, was the case in which one of our groupings corresponded to a subsense of another grouping's meaning. Another condition was formed from groupings that were related in general and specific terms. For example, the stimulus word *deck* has a subcategory to its first definition. The general category is *a structural platform*, and the subcategory is the more specific

definition of *the platform of a ship*. The final condition for such subcategories was formed when we believed there could be disagreement in our choice to combine objects with actions performed by or with that object. We anticipate that there might be differences in opinion as to whether an object as well as the action of that object have the same general meaning or have two distinct meanings. This is why we formed subcategories—so that in the event of disagreement, readers will easily be able to recompute the percentages. One example is the stimulus word *fan*. The main category is *a blowing device*, with the subcategory being *the action to direct a current of air upon*. In some such instances, it was difficult to determine whether a subject's response was referring to a noun or to a verb. In these instances, the questionable response was included in the main category.

Two other infrequent problems occurred. First, a few subjects occasionally wrote more than one definition as a response. For example, 1 subject responded, *a young child or goat*, to the stimulus word *kid*. In these situations, we classified the definition according to the first meaning given. Second, according to the dictionary used, some of our groupings were not listed as meanings of a word. One example was the word *litter*. A number of subjects defined the word as *cat box litter*, yet this meaning was not listed in the dictionary. This meaning was not found in other sources either (Morris, 1970; Rodale, 1978). Since we chose to verify the categories according to the dictionary, these unlisted (yet possibly valid) definitions were placed in the unclassified category.

RESULTS AND DISCUSSION

The data were initially analyzed separately for the subsamples responding to Forms A and B. The order of dominance for the first two meanings differed between the two subsamples in only 17 of the 120 homographs. Of these, 13 from one set showed the top two dominant meanings in reverse order, and 4 from one set had one of the subordinate meanings for the second dominant meaning. The correlation computed over the 120 homographs between the percent of individuals in each subsample indicating the dominant meaning was $r = .78$. These analyses suggested that word order on the response forms had minimal effects on the meaning dominance data, so all subsequent analyses were done on the total sample.

The Appendix lists each stimulus word along with our definition categories. The wording of most of the definitions was derived from the most prevalent subject response for each category. When no common definition wording was found within a category, we used a simplified version of the dictionary definition. The proportion of subjects giving a response in each category is listed in parentheses before each category name. For the dominant meanings, 95% confidence intervals for these proportions are also provided, to help the reader more accurately interpret the presence of a dominant meaning.

When subcategories of the predominant definitions are given, the number of subjects giving a response corresponding specifically to the main category wording can be obtained by subtracting the subcategory total from the main category total. Consider the stimulus word *cast* as an example—the third category is *something formed in a mold*. Twenty-six subjects gave responses that fell into this category, with 19 of the 26 falling into the subcategory pertaining to plaster of paris. Thus, the responses of only

7 subjects corresponded to the wording of the main category definition.

Examples of definitions are also provided in the right-hand column of the Appendix to show the exact wording of representative subject definitions. In our “unclassified” categories, we report all responses given by subjects. If more than one person gave the same unclassified response, the number of subjects who gave that particular response is listed in parentheses.

After tabulating all responses, 53 of the 120 stimulus words were found to have just two distinct meanings. Forty-five of the words had three meaning categories, and 22 had more than three meaning categories. This last group consisted mostly of words with four meanings (one word had five meanings, and two words had six). It should be noted that the stimulus word *tip* had no singular dominant meaning (i.e., the top two meanings resulted in the same number of responses).

After careful review of our categories and subcategories, we concluded that the majority of our 120 stimulus words represent unrelated homographs that are suitable for use in psychological experiments in which distinct meanings of known dominance are required. However, a few of the words were problematic. Words that may be of questionable utility are *fat* and *just*. To distinguish among the meanings of these words, as well as subjects' intentions, was too difficult a task. In the case of *fat*, our second meaning (*animal tissue; lard*) could actually be considered a subsense of our first meaning (*overweight*). Even though we listed two separate meanings for *fat*, it should be noted that interpretation of the dictionary listings could make the second meaning a subsense of the first. The problem associated with the word *just* was the difficulty we had in categorizing the responses. A number of the responses were too ambiguous to place into one of the three meanings (see the Appendix). For this reason, a larger percentage of the responses to this word will be found in the unclassified category.

To compare our results with previous studies, we performed two descriptive analyses. First, for each previous study that had an overlap with our stimulus set, we tabulated the number of homographs that had the same *order* of dominance as that indicated in our data (counting only the first two meanings). Second, we computed Pearson product-moment correlations between the percent of subjects indicating our dominant meaning and the percent of subjects in other studies indicating the same meaning (N for each correlation was the number of overlapping homographs in the two studies being compared). The results of these two methods of comparison are shown in Table 1.

As can be seen in Table 1, our meaning dominance results were in general agreement with the findings from previous studies. However, both indicators (number of dominance matches and correlation between percentages for dominant meanings) suggested that some differences existed. Most notably, there were some large discrepancies between our data and those of Wollen et al. (1980). The zero correlation ($r = .01$) largely reflected the fact that 5 of the 29 overlapping words had highly discrepant

Table 1
Comparison of Current Findings With Other Meaning
Dominance Norms

Homograph Norms	Overlapping Words	Matched Dominance	r
Geis & Winograd (1974)	14	12	.82
Gorfein et al. (1982)	23	19	.50
Nelson et al. (1980)	95	71	.54
Wollen et al. (1980)	29	19	.01

Note—The last column of this table lists correlations (r) between the current norms and the other norms with respect to the proportion of subjects responding with the dominant meaning (N always equals the number of overlapping words).

values in the two studies. The remaining 24 words were more positively associated. The discrepancies seen in this and the other studies could be due to changes in word usage over time (all previous norms are more than 10 years old), population differences (especially regional and educational differences), and, of course, sampling error.

Unlike previous normative studies, our study's sample had the advantage of representing a range of geographic regions in the U.S. However, we were concerned that our subjects, in their 11th day of basic military training, might have provided responses to some homographs that were influenced by the military context of the research. For example, the stimulus words *arms*, *order*, *uniform*, *range*, and *company* all have one meaning that has direct relevance to the military. When examining our data for these homographs and comparing them with data from other studies, however, we found little evidence of the expected bias in meaning dominance.

The dominant meaning from our sample for *arm* referred to "appendages," which was consistent with two previous studies (Gorfein et al., 1982; Nelson et al., 1980). In the case of the stimulus word *order*, the military meaning was dominant in our sample, but it was also dominant in a sample of university students (Nelson et al., 1980). With the stimulus word *uniform*, the meaning relevant to the military was also dominant with our sample. However, because no other study included this word in their homograph norms, we had no way to know whether this outcome lacked generality across different subject populations. Finally, one might expect responses to the stimulus words *range* and *company* to have been biased by the military context of the study. However, subject definitions consistent with the military context (*a place to practice shooting* and *a body of soldiers*) were relatively infrequent (14% and 2%, respectively). Thus, we concluded that our results were minimally affected by the military context of the study.

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APPENDIX

Frequency Data for Reported Definitions of the 120 Homographs

ARMS

- (.58 ± .10) limbs of the body.....*appendages, extremities, legs, limb*
- (.37) weapons.....*guns, rifles*
- (.01) to bear arms.....*to bear*
- (.05) unclassified.....*blank, illegible, work, order, part of glass that kept them up*

BAND

- (.78 ± .08) come together for a purpose.....*group of people formed together for a purpose*
- (.70) group of people; esp musicians.....*instruments, music, singing group, symphony, orchestra*
- (.19) thin strip to hold objects together, or for decoration.....*holding device, worn on arm, rubber band, stick together, ring, bond, connected strip, string*
- (.03) unclassified.....*to prevent, stop, Jamie Handson*

BAR

- (.63 ± .09) counter serving food/drinks.....*serves alcohol, beer, saloon, tavern, night club, place to get a drink, place for enjoyment*
- (.30) long straight object used as fastener, support or barrier.....*rod, metal pole, post, pipe, iron bar*
- (.02) solid rectangular block.....*soap*
- (.03) to block.....*prevent entry*
- (.02) body of lawyers.....*lawyers*
- (.01) measure of music.....*measure of music*
- (.04) unclassified.....*blank, stain, line, a blank space*

BEAM

- (.63 ± .09) ray or stream of light.....*headlight, laser, ray of sun, concentrated light*
- (.06) to emit or radiate light.....*shine*
- (.32) piece of metal/wood used for support or balance.....*girder, metal bar, long wood, steel, ceiling support, holds up building, a balance beam*
- (.02) smile expansively.....*big smile*
- (.03) unclassified.....*illegible, blank (2)*

BEAT

- (.64 ± .09) to strike or hit repeatedly.....*hit, pound, pummel, abuse, fight, punch, slap, hurt*
- (.06) to whip (up) eggs.....*to whip*
- (.19) a regular, rhythmical unit of time.....*time, snap, time in music, of a song, music, heart*
- (.14) to defeat or subdue.....*to win, be ahead of, come in first*
- (.02) tired.....*tired*
- (.01) unclassified.....*illegible*

BELT

- (.79 ± .08) a strap of material.....*strap, rope, band of material, string*

APPENDIX (Continued)

(.72) flexible material worn around waist to support clothing, tools, or as decoration	<i>waist support, buckle, holds pants up, garter, suspenders</i>
(.14) to hit	<i>punch, hit hard, get hit</i>
(.07) unclassified	<i>illegible, blank (4), drive, cut</i>
BILL	
(.64 ± .09) itemized statement of fees/charges	<i>debt, check, expense, credit, pay statement, money owed, to be collected</i>
(.14) paper money	<i>money, a dollar, a US dollar</i>
(.10) the beak of a bird	<i>nose of bird, mouth of bird</i>
(.05) proposed legislation	<i>law, act of Congress</i>
(.05) visor of a cap	<i>front of cap, end of cap</i>
(.02) unclassified	<i>blank, someone's name</i>
BLOCK	
(.44 ± .10) to obstruct	<i>barricade, barrier, to stop something, keep from advancing, head off, football, interfere</i>
(.37) a solid material with flat sides	<i>cube, square, cement, cinder block, used to build houses, baby toy, piece of wood</i>
(.14) city square	<i>neighborhood, portion of a city, piece of land, street, corner</i>
(.05) unclassified	<i>illegible, blank, rock, island, hide</i>
BLUFF	
(.82 ± .08) to mislead or deceive	<i>fib, lie, fake out, not for real, to fool, pull a stunt, kid around</i>
(.13) a cliff	<i>edge of land, cliff, hill top, mountainous region</i>
(.05) unclassified	<i>illegible, to get away from, to polish, clean, shine</i>
BOX	
(.85 ± .07) four-sided container	<i>holds things, square, container, cardboard, small case, block, cat box, shoe box, carton</i>
(.01) to enclose (as if in a box)	<i>close in on</i>
(.12) to fight	<i>fight, hit, form of self defense, nail (slang)</i>
(.03) unclassified	<i>radio (3)</i>
BREAK	
(.64 ± .09) to reduce to pieces; destroy	<i>tear in two, to snap or crack, ruin something, in pieces, shatter, split, crack, fracture</i>
(.27) to interrupt	<i>get a rest, to pause, relief, time to relax, not working, time out, stop, discontinue</i>
(.04) move away from	<i>separate, disconnect</i>
(.05) unclassified	<i>never, cry, right, pedal in car, dance</i>
BRIGHT	
(.73 ± .09) radiating or reflecting light	<i>glowing, intensity, shining, sunny, not dark, brilliant, luminous, glare, headlight, hard to look at, blinding</i>
(.18) intelligent	<i>smart, sharp, a smart student, happy</i>
(.07) high saturation (of color)	<i>brilliant colors, colorful, yellow, neon, very loud, fluorescent</i>
(.01) promising	<i>future</i>
(.01) unclassified	<i>up toned</i>
CASE	
(.75 ± .08) object used to hold items	<i>box, container, luggage, compartment, briefcase, shelf, cover for an object</i>

APPENDIX (Continued)

(.08) grouping.....	<i>unit of something, 24, of soda, 24 bottles, bundle</i>
(.19) a suit or action in law.....	<i>trial in court, jury, law process, criminal's testimony, investigation</i>
(.03) examine carefully.....	<i>inspect, check out the area, look over</i>
(.03) unclassified.....	<i>illegible (2), brand name of a tractor</i>
CAST	
(.43 ± .10) to throw off or away.....	<i>throw out, throw out a (fishing) line, fishing rod, fishing maneuver, spread out, disown</i>
(.30) group of performing actors.....	<i>group of people, play performers characters in a play, drama</i>
(.26) something formed in a mold.....	<i>to form, hard, forge, concrete</i>
(.19) plaster of Paris.....	<i>broken leg, covers a broken bone, plaster, support for broken bone, brace</i>
(.01) unclassified.....	<i>a court hearing</i>
CHANGE	
(.66 ± .09) to make different in some way.....	<i>alter, switch, reverse, redo, fix, rearrange, correct, transform, personality change, choose something else,</i>
(.34) money in small denominations.....	<i>pocket money, coins, money, extra money, loose coins</i>
CHECK	
(.59 ± .10) paper having monetary value.....	<i>draft, payment, money, bill, money voucher, money order, bounce, promissory note, check book, symbol of cash</i>
(.35) to inspect; look over.....	<i>make sure of something, evaluate, look for mistakes, verify, to look at</i>
(.05) a mark.....	<i>a mark, slash mark, a mark if right</i>
(.01) a chess move.....	<i>chess move or call</i>
CLUB	
(.65 ± .09) a social organization.....	<i>organization, a group of people with a common interest, hobby, a membership, group</i>
(.26) social gathering place.....	<i>recreation hall, recreation center, YMCA, resort, gathering place, party place, bar, dancing, drink, nightclub</i>
(.33) big wooden stick.....	<i>large stick, weapon, stick used for striking, cudgel, golf</i>
(.03) to hit.....	<i>to hit</i>
(.02) unclassified.....	<i>blank, club sandwich</i>
COAST	
(.78 ± .08) land near a shore.....	<i>where land meets water, the beach along the ocean, east or west, shoreline, near border, water, edge of land</i>
(.15) to glide along effortlessly.....	<i>roll under own power, glide, to move slowly, go with no power, easy sailing, go at a steady pace</i>
(.07) unclassified.....	<i>blank (2), illegible, bribe, soap (2), a brand of soap</i>
COMPANY	
(.58 ± .10) a corporation.....	<i>firm or business, major business, manufacturer, a franchise, IBM, working place, industry, construction</i>
(.37) association with another/fellowship.....	<i>friends, group of people at a gathering, friends in your presence, someone to be with</i>

APPENDIX (Continued)

(.13) guests in your home	<i>visitors, guests, the people you have over</i>
(.02) body of soldiers	<i>military unit for Army</i>
(.03) unclassified	<i>blank, illegible, suit</i>
CROSS	
(.37 ± .09) religious symbol	<i>Christ, crucifix, God, Church, gravestone, what Jesus died on, worn by religious persons</i>
(.31) to go from one side to the other	<i>walk to other side of the street, traverse, get over something, step in front of</i>
(.13) intersecting lines	<i>a mark, perpendicular to, two lines that intersect, diagonal, intercept</i>
(.06) bad temper; grumpy	<i>mean, to be mad, angry</i>
(.13) unclassified	<i>blank (4), overlap, here, combine, to overcome, go the opposite way of something, contradict, go in for of, meet, right away from you</i>
DECK	
(.65 ± .09) platform serving as structural element and forming the floors	<i>platform, floor, patio, wooden floor of porch, attachment to house, place to sit, sunning</i>
(.27) a platform for a ship	<i>ship floor, ship, boat, part of a ship, found on a boat, Navy carrier, surface of a boat</i>
(.13) a pack of cards	<i>cards, playing cards, 52 cards</i>
(.12) knock down, punch	<i>hit, to knock out, knock down</i>
(.10) unclassified	<i>blank, illegible, boring, car stereo, stack (2), girls, top, upper, the top</i>
DIGIT	
(.92 ± .05) a numeral	<i>a number, one number, decimal, .1, period, interval of numbers, numbers used for counting</i>
(.05) a finger or toe	<i>a finger, a finger or toe</i>
(.03) unclassified	<i>pair, big hole in space, something us to reduce far</i>
DRAW	
(.73 ± .09) to sketch	<i>create a picture, design, etch, animate, picture, art, paint, stickman, write and form shapes</i>
(.10) to choose	<i>to take, choose, receive, pick of luck, to pick</i>
(.06) to bring toward; pull out	<i>to come closer, pull in, pull on, to remove a gun from a holster</i>
(.04) an even match; to tie	<i>even match, stalemate</i>
(.07) unclassified	<i>blank, illegible (2), used to keep clothes straight, place to put clothes, this, glass of beer</i>
FAINT	
(.80 ± .08) to lose consciousness	<i>to pass out, fall down, weak, become unconscious, dizzy, black out, to collapse, light headed</i>
(.18) lacking distinctiveness	<i>hard to see, very little, light, dim, slight, not clear, barely visible, distant</i>
(.02) unclassified	<i>noise, lot</i>
FAIR	
(.48 ± .10) marked by impartiality or honesty	<i>to be even, equal, just, equal in judgement, without bias, to share, compromise, honest, right</i>

APPENDIX (Continued)

(.31) carnival/festival	<i>park, amusement, circus, community activity, a place of games and festivities, town, animals</i>
(.14) sufficient but not ample	<i>average, normal, to be adequate, alright, lower than good, not bad, feeling okay, good, okay</i>
(.05) not dark; blonde	<i>light complexion, light, white color, light hair</i>
(.02) unclassified	<i>a payment to get in, unhappy</i>
FAN	
(.79 ± .08) blowing device	<i>machine used to circulate air, device used to cool some people down, wind machine, electric, cool, automatic air, cool air</i>
(.13) to direct a current of air upon	<i>to blow air, to cool off, to blow, waving motion, create a breeze</i>
(.03) a propeller (slang)	<i>propeller</i>
(.19) a supporter	<i>admirer, cheerer, follower, ardent goer, football fanatic, friend without knowing</i>
(.02) unclassified	<i>swat, believer</i>
FAT	
(.93 ± .05) overweight	<i>obese, not skinny, extra weight, big, having excess mass, a large size, gordo, heavy, too wide</i>
(.07) animal tissue; lard	<i>mushy substance, lard, on meat, energy source, cellulite, saved energy, stored protein</i>
FIGURE	
(.57 ± .10) shape of an object	<i>image, form of something, female body outline, geometric shape, dimensions, mannequin, form, girlfriend, 24-36-24</i>
(.21) calculate	<i>to comprehend or solve, decipher, think, try to understand, to work it out, process of thinking</i>
(.12) number	<i>a number</i>
(.10) unclassified	<i>blank (3), illegible, boring, perfection, formation, of speech (2), construct</i>
FINE	
(.43 ± .10) good quality or appearance	<i>alright, okay, good, exact, nice, great, perfect, doing well, nice looking, acceptable</i>
(.34) penalty	<i>a charge for something done, punishment of money, penalty, a tariff, fee of money, ticket, to pay for a violation</i>
(.19) small	<i>very thin, micro, very small and precise, small, minced</i>
(.08) smooth	<i>not rough, to smooth down, to polish</i>
(.04) unclassified	<i>precious, adicut, sharp (2)</i>
FIRE	
(.80 ± .08) flames	<i>inferno, smoke, a chemical reaction between heat and wood, heat, danger, blazes burning something</i>
(.13) dismiss from one's job	<i>lose your job, to get rid of, to relieve of duties, terminate</i>
(.07) to shoot	<i>to shoot something, shoot a gun</i>
FIRM	
(.84 ± .07) something strong/sturdy	<i>stiff, solid, hard, tough, tight, grip, not bending, not loose, not flabby, in good shape, not soft</i>
(.11) to stand fast	<i>unyielding, confident, strict, not easily swayed, standing strong</i>

APPENDIX (Continued)

(.02) a company	<i>a company</i>
(.03) unclassified	<i>blank, illegible, to be build</i>
FIT	
(.65 ± .09) conform correctly to size and shape	<i>to adapt perfectly, snug, match, make so it stays, to place in correctly, right size, trying on clothes, to wear comfortably</i>
(.14) a tantrum	<i>temper tantrum, seizure, to throw a temper, very angry, moment of rage, conniption, behavior</i>
(.14) in good physical shape	<i>body in good shape, physically fit, able, strength and ability</i>
(.07) unclassified	<i>blank (2), illegible, acquired, stable, clean, Candy Lower</i>
FLEET	
(.88 ± .06) a large group of something operated under the same control	<i>a lot of, large group, many of the same thing, more than a few</i>
(.13) group of people	<i>group of military squad, army, air force, crew, flight</i>
(.56) group of ships	<i>bunch of ships, row of ships, boats, Navy, Spanish Armada</i>
(.07) to be fast; agile	<i>fast, quick, to be fast</i>
(.05) unclassified	<i>illegible, blank, unit of something, to go away, graceful</i>
GAG	
(.44 ± .10) choke	<i>to choke, throw up, to almost vomit, to choke on food, to puke</i>
(.28) a joke	<i>a trick, funny, a stunt, prank, laugh, trick someone for fun</i>
(.24) to stifle someone	<i>stifle, muffle, to tie up, shut someone up, cover, bound, cloth used to close mouth</i>
(.04) unclassified	<i>rape, dislike, a jock, tuck</i>
GRACE	
(.52 ± .10) a prayer before a meal	<i>a prayer, blessing of food, blessing, a few words of thanks</i>
(.19) ease of movement or bearing	<i>finesse, perfection, elegance, poise, fluid motion, style, with little effort</i>
(.14) a special privilege	<i>a gift from God, to be honored, God's patience with us, amazing, forgiveness, another chance</i>
(.03) a title	<i>nobility, show respect, courtesy</i>
(.12) unclassified	<i>blank (3), stamina, Jones, a girl's name (4), peace (2), allowance</i>
GRAVE	
(.77 ± .08) a burial site	<i>tomb, burial place, where a dead person lies, final resting place, 6 ft. hole, cemetery</i>
(.14) seriousness	<i>serious, danger, important, sad condition</i>
(.03) carving (in sculpture)	<i>to carve, scrape the surface</i>
(.06) unclassified	<i>blank (2), a lot, big, very bold, grandfather</i>
GROUND	
(.79 ± .08) solid surface of the earth	<i>dirt, earth, floor, hard, surface, substance you walk on</i>
(.13) electrical connection	<i>touching one thing to another, to set against, electricity</i>
(.01) small pieces	<i>small pieces of materials</i>

APPENDIX (Continued)

(.07) unclassified	plane, flush, to put flush to something, to firmly secure, even up, play, suspended
HARD	
(.71 ± .09) solid	stiff, sturdy, cannot bend, firm, not soft, rock, concrete, ungiving surface
(.26) difficult	difficult, something not easily done, tough
(.03) unclassified	blank (2), type of music
HIDE	
(.83 ± .07) conceal	not in sight, purposely become missing, to put away secretly, seek cover, evade, camouflage yourself, stow away
(.13) skin of an animal	skin, outer layer of a cow, piece of leather
(.04) unclassified	blank (3), rear end
HIGH	
(.85 ± .07) having large extension upward	far up, way up there, above, up in the air, not low, on top, roof, elevated, tall, hills, altitude, 40000 feet
(.05) showing excitement(as if on a drug)	in a good mood, stoned, a dizzy feeling
(.02) above normal standards	above that which is normal
(.08) unclassified	illegible (2), blank (4), high school, a greeting
JAM	
(.52 ± .10) preserves	jelly, a desert spread, sweets, a fruit jel
(.36) pressed into tight position; forced	cram together, stuck, stuff, to overcrowd, to block something
(.04) music session	music, concert
(.01) to play music	to play instruments
(.03) difficult situation	problem, hard place to get out of, mess
(.05) unclassified	injure, dunk, to incline, door, interfere
JAR	
(.84 ± .07) a glass container	big glass used for storage, can, holds things, cookie, mason
(.12) sudden or unexpected shake	jolt, shake, knock loose, to bump, move quickly
(.02) position of being ajar	opened, open a little
(.02) unclassified	head, to bottle up
JUST	
(.54 ± .10) reasonable	fair, lawful, even, right, the right amount, equal, legal
(.14) only; merely	only, that's all, simple, as is
(.09) exactly; precisely	like something, the way it should be, action for now, right then, barely, not quite
(.23) unclassified	blank (7), English word (2), to go along with, also, easy, nevermind, to mean otherwise, to do what is told, into the air, so, have, because, do it, maybe, wait (2)
KID	
(.64 ± .09) young child	small child, juvenile, son, young adult, teenager, under 18
(.22) baby goat	baby goat, young goat
(.07) joke around	to joke around, foolish, play, joke with
(.07) unclassified	blank (2), small, offspring, to very people, little, young
KIND	
(.75 ± .08) of sympathetic nature	being nice, gentle, pleasant, caring, willing to help, loving

APPENDIX (Continued)

(.20) a certain type	<i>something specific, a certain object, type, one of a group,</i>
(.05) unclassified	<i>blank, too, forgiving, easy, understand</i>
LAST	
(.81 ± .08) the end; remainder	<i>final, not first, toward end, rear, behind, only one left</i>
(.15) endure	<i>go a long time, linger, not wear out, savor, forever, continue</i>
(.04) unclassified	<i>blank, butler, to be the, before</i>
LEAN	
(.53 ± .10) little fat; slender	<i>thin, skinny, little fat, slim, small, type of meat, trim, in shape</i>
(.39) lay against	<i>rest against something, to put weight on, position forward</i>
(.08) unclassified	<i>blank(2), loan (2), foreclosure, bank, soft, narrow</i>
LETTERS	
(.60 ± .10) written correspondence	<i>messages, love notes, mail, mom, post cards, group of words sent somewhere, cards, writings</i>
(.39) the alphabet	<i>part of words, alphabet</i>
(.01) unclassified	<i>should stories</i>
LIE	
(.96 ± .04) untruth	<i>cheat, deceive, not tell the truth, false, not honest, fib</i>
(.04) laying down	<i>lay down, bed</i>
LIGHT	
(.64 ± .09) illumination	<i>result of sun, energy, able to see, opposite of dark, method of overcoming darkness, bulb, sun, bright, lamp</i>
(.26) not heavy	<i>not heavy, low in weight</i>
(.02) to ignite	<i>light cigarettes</i>
(.02) trivial	<i>not serious, trivial</i>
(.06) unclassified	<i>illegible (2), blank, on, answer, brigs</i>
LIKE	
(.52 ± .10) enjoy	<i>to get along with, not hate, lust, care for, to favor, agree with, to think highly of</i>
(.42) similar	<i>same as, go together, to be the same, similar</i>
(.06) unclassified	<i>blank(2), true, just as, that, perception</i>
LITTER	
(.79 ± .08) garbage	<i>trash, garbage, waste</i>
(.42) throw trash around	<i>drop garbage, waste spread around, to make a mess, to illegally dump trash</i>
(.09) newborn puppies/kittens	<i>newborn puppies, a bunch of kittens, baby kittens</i>
(.02) stretcher	<i>stretcher</i>
(.10) unclassified	<i>blank, illegible (2), figgy, cat's, what cats go to the bathroom in, cats go to the bathroom in this, cat (2), cat litter</i>
LOAF	
(.63 ± .09) shaped mass of food	<i>portion of bread, bread, shape of bread, meatloaf, not a slice</i>
(.34) lay around	<i>goof off, be lazy, to sit around, idle, to move slowly, do nothing</i>
(.03) unclassified	<i>part of, break, cruze</i>

APPENDIX (Continued)

LOG

- (.83 ± .07) piece of wood..... *lumber, wood, tree, cut up trees,
hunk of wood, forest, part of tree*
- (.16) a record; journal..... *book, diary, pilot's log*
- (.05) to enter in a log..... *write down events, to sign in, keep track of*
- (.01) unclassified..... *to remember*

MEAN

- (.80 ± .08) stingy quality..... *bad, not nice, vicious and cruel,
tough guy, angry, ugly, nasty*
- (.15) state; intend..... *not always what you say, imply,
understand, to state something*
- (.03) average..... *average, average out of a group*
- (.02) unclassified..... *blank, to be made*

MIND

- (.80 ± .08) brain..... *a terrible thing to waste, mental mass,
innerself, to think with second brain,
what we use to think*
- (.12) to obey..... *behave, obey, to tend to something,
look after*
- (.05) to care..... *do care, care*
- (.03) unclassified..... *blank, changes, to own*

MISS

- (.49 ± .10) make a mistake..... *let go by, didn't see, error, not hit,
overlooked, to skip over, to be late*
- (.26) long for..... *yearn, emotion, to think about, home,
lonely, want to see*
- (.18) a girl..... *unmarried young lady, ma'am,
young woman*
- (.07) unclassified..... *blank (2) to forgive, Sandy, don't
remember, wrong way, Candy Lower*

MUG

- (.75 ± .08) a cup..... *used to drink coffee, glass, beer
container, ceramic cup*
- (.21) rob..... *attack, to steal from, hit, to take
money by force, to harm*
- (.04) face..... *face*

NOVEL

- (.92 ± .05) a book..... *story, fiction, long narrative book,
boring book, suspense*
- (.05) new; unique..... *something new, good idea, brilliant idea*
- (.03) unclassified..... *great, movie, car*

NUT

- (.47 ± .10) a hard-shelled seed..... *shelled fruit, seed from a tree,
acorn, shell, peanut, walnut*
- (.31) a strange person..... *crazy, a goofy person, kooky person*
- (.19) metal bolt..... *holds a screw, tightens a bolt, fastener*
- (.03) unclassified..... *blank (2), fruitcake*

ORDER

- (.87 ± .07) to demand..... *to instruct, command, military
command, to tell someone what to do*
- (.16) request (as a meal)..... *ask for, restaurant, purchase, tell
someone what you want*
- (.07) arrangement..... *to organize, put in place, list,
all in file*
- (.06) unclassified..... *illegible, duty, mayhem, arms, peace
and quiet, law and order*

PEN

- (.93 ± .05) writing utensil..... *writing instrument, ink, pencil, write*
- (.05) cage..... *where animals are kept, place for pigs*
- (.01) to enclose in a cage..... *lock up*
- (.02) unclassified..... *pin, boring*

APPENDIX (Continued)

PITCHER

- (.54 ± .10) a glass container.....*holds drinks, container for liquid, water, a container you use to pour a drink, pottery*
- (.43) one who throws.....*baseball, throw, person who throws the ball, Mets, baseball player*
- (.03) unclassified.....*blank, photo, something but that girls*

PLAIN

- (.83 ± .07) ordinary.....*not fancy, simple, bland, nothing on it, no outstanding features*
- (.07) flat land.....*flat grassy area, desert, lands*
- (.01) to be obvious.....*obvious*
- (.09) unclassified.....*blank (3), same, a machine that flies, ride, fits in, air craft, a flying machine*

PLANT

- (.84 ± .07) vegetation.....*living green thing, fern, gives oxygen, not an animal, flower*
- (.34) to place.....*put in place, put down firmly, dig and grow something, to sow, stay, to put in, to start roots*
- (.09) a factory.....*large manufacturing building, place of work, nuclear*
- (.07) unclassified.....*blank (4), illegible, start, fall*

PLAY

- (.79 ± .08) amusement.....*fun activities, horse around, recreation, fun time, to have fun, to start a game, frolic*
- (.16) a stage production.....*theatrical presentation, drama, musicals, actors acting, screenplay*
- (.02) use a musical instrument.....*fiddle, make a musical instrument perform*
- (.03) unclassified.....*blank, dance, to turn on*

PLOT

- (.41 ± .10) to scheme.....*make plans, to deceive a plan, think out, to go against, conspiracy*
- (.31) storyline.....*the meaning of a story, theme, main idea, direction of a story*
- (.19) area of land.....*piece of land, measurement of land, grave*
- (.06) chart.....*pick points, to draw, to mark on a map*
- (.03) unclassified.....*the driver of a plane, point, officer*

POOL

- (.75 ± .08) body of water.....*swimming, area of liquid, water, small lake, something to swim in*
- (.17) billiards.....*game played with sticks and balls, 8-ball*
- (.06) gather together.....*group of people, all together, driving arrangement*
- (.01) gambling game.....*gambling*
- (.01) unclassified.....*blank*

POP

- (.62 ± .10) soft drink.....*carbonated beverage, Coke, soda, type of cola, drink*
- (.23) to explode.....*burst, noise, bang, to break apart, rupture*
- (.05) type of music.....*up beat music, music*
- (.05) to hit.....*hit*
- (.03) father.....*my dad, father*
- (.01) appear suddenly.....*to spring up*
- (.01) unclassified.....*corn*

APPENDIX (Continued)

PRESENT

- (.41 ± .10) a gift.....*a gift, treat, Christmas present*
 (.37) current time.....*now, occurring now, right now, here
and now, at this time*
 (.15) accounted for.....*here, here now, at this place,
being there*
 (.15) introduce.....*show, to bring forth, announce
something, to display, to demonstrate*
 (.07) to give.....*to give to, give of*

PRESS

- (.77 ± .08) apply pressure.....*to push on, squeeze, make flat,
to iron, to push together*
 (.20) the media.....*people who make newspapers,
reporters, journalists*
 (.03) unclassified.....*blank (2), to make someone do
something*

PUNCH

- (.84 ± .07) to hit.....*to hit with the fist, deck, a solid
right, jab, Tyson*
 (.14) a drink.....*liquid refreshment, juice, liquid made from
fruit*
 (.02) unclassified.....*group, ending line*

RACE

- (.72 ± .09) a competition.....*event, marathon, contest, game, speed,
derby, stock cars*
 (.21) to compete.....*to move, to run against someone*
 (.27) ethnic group.....*color of skin, origin, kind of people,
heritage*
 (.01) unclassified.....*blank*

RAM

- (.51 ± .10) run into.....*to shove, hit while running, smash, hard
impact, to butt, bash*
 (.43) male sheep.....*animal, type of sheep, animal with
curved horns, mountain goat*
 (.06) unclassified.....*blank (2), illegible, truck (2),
to protrude*

RANGE

- (.67 ± .09) the extent of something.....*area that can be accomplished, area of
ability, range of sight, distance between
two things, an interval*
 (.14) place to practice shooting.....*place guns are shot, shooting, rifle
range, gun, target range*
 (.17) stove top.....*stove, oven top, an appliance*
 (.11) open region of land.....*large field, flat plains, ranch,
open prairie*
 (.05) unclassified.....*blank (2), illegible, anger, a place*

RARE

- (.90 ± .06) uncommon.....*unusual, not normal, unique, hardly
seen, scarce, few, hard to find*
 (.10) raw meat.....*not well cooked, pink steak, bloody,
uncooked*

RATE

- (.62 ± .10) frequency.....*pace, measurement of speed, expense,
time of something, per minute, amount
of, heart rate*
 (.31) judge.....*score, place on a scale, an evaluation,
to put in order, grade, a certain
standard*
 (.07) unclassified.....*blank (2), illegible, progress, rhyme,
beat, current status*

APPENDIX (Continued)

REST

- (.97 ± .03) take a break *relax, rest, sleep, taking it easy, sit down, to get peace and quiet*
 (.01) the remainder *what's left*
 (.02) unclassified *blank (2)*

RING

- (.78 ± .08) a circle *dirt around the tub, a circle made of some material*
 (.63) jewelry *gold band, promise ring, band worn around finger, marriage ornament*
 (.20) a noise *loud noise, telephone sound, bell, chime*
 (.02) unclassified *illegible, twist forcefully*

ROLL

- (.54 ± .10) a forward motion *tumble, over and over, to move in circles, move without lifting, turning over, move ball*
 (.41) bread *food, type of bread, donut, bun, pastry*
 (.05) unclassified *blank, illegible, go down, falling on ground, open ground*

ROW

- (.66 ± .09) line of objects *line, one single column, aisle, straight line, a file of items*
 (.32) to paddle *stroke, boat, to oar a boat, boat momentum*
 (.02) unclassified *bunch, idle*

RULER

- (.65 ± .09) measuring device *used for measuring, 12-inch stick, judge of distance*
 (.30) leader *king, president, one who leads a group, boss, person in charge*
 (.05) unclassified *blank (3), tape, kind*

SAFE

- (.69 ± .09) free from danger *no danger, protected, secure, alright, cautious, okay, refuge, no worries*
 (.26) security box *a locking container, metal box, to hide money in, place to secure belongings, store money*
 (.05) unclassified *blank (2), illegible, parents, succur*

SECOND

- (.60 ± .10) following first *not first, next after the first, two, second place, try again, second string*
 (.36) measure of time *period of time, unit of time, 1/60th of a minute*
 (.02) second base *middle of baseball field*
 (.02) unclassified *blank, feel bad*

SHARP

- (.67 ± .09) pointed edge *not dull, razor, contains a jagged edge, cutting point, pierce, able to cut easily, finely honed*
 (.21) smart *very intelligent, quick, smart person, outstanding*
 (.03) to look good *snappy appearance, eye catching*
 (.09) unclassified *blank (3), no duel, line, hammerhead, precise, on the ball, intact*

SHED

- (.57 ± .10) to fall off *lose hair, to come off and fall, to peel away, molt, to eliminate fur*
 (.39) a storage building *shack, a small hut, to store tools, covering, place for storage, shelter, garage*
 (.04) unclassified *blank, do, rip up, keep away from*

APPENDIX (Continued)

SHIP

- (.80 ± .08) a boat vessel, ocean going vessel, large boat, liner, ahoy, sink
 (.20) to send to move from a place, go away, to move out, to leave, get sent out

SHOT

- (.50 ± .10) hit by a bullet gun fired, gun shot, hit by a bullet, wounded
 (.15) pellets bullets, shot gun shell, comes from a gun
 (.38) injection a needle put in the arm, insert medication, needle, vaccine
 (.01) measure of alcohol one drink
 (.01) state of uselessness beat up; old
 (.10) unclassified blank (4), speedid, took off quickly, hurt, pain (2), painful

SIGN

- (.55 ± .10) board bulletin board, signal, something to inform or guide, notice, billboard
 (.33) endorse write your name, to place your signature, autograph, initial
 (.07) communicate visible action, to relay sign language, gesture
 (.01) astrological sign astrological
 (.04) unclassified blank, miracle, script, classification

SINK

- (.53 ± .10) go beneath the surface to go under, drowned, not float, what you do in quicksand, to fall
 (.41) wash basin kitchen object, basin, place to wash hands, dishes, water utensil
 (.01) a hole hole
 (.05) unclassified blank, illegible, top, to smell, smells

SKIP

- (.50 ± .10) to pass over to go over, miss an item, omit, every other, bypass
 (.47) to jump bounce over, jump a step, hop, hop step, movement done by feet
 (.03) unclassified a boat, to overtake, void

SLIP

- (.65 ± .09) lose balance and fall to fall, no footing, slide, trip, to miss a step
 (.21) undergarment woman's undergarment, part of dress, article of clothing
 (.04) piece of something thin piece of paper
 (.03) make an error mess up, made a mistake
 (.01) boat ramp boat dock
 (.01) sneak away run away unnoticeably
 (.05) unclassified blank, to suddenly, glide, slip, over

SPRING

- (.41 ± .10) season time of year, one of the four seasons, fresh air, before summer, a time for rebirth
 (.28) to jump or leap bounce, jump up, leap
 (.21) metal coil corkscrew-shaped rod, steel coil, mattress
 (.08) water source where water comes from the earth, gushes water, underground water source
 (.02) unclassified compreser, life

STABLE

- (.54 ± .10) animal shelter where a horse sleeps, a place for animals, stall, barn

APPENDIX (Continued)

(.36) sturdy	<i>firm, durable, unmoving, solid, balanced, steady, level, even, controlled</i>
(.04) noncritical	<i>to be okay, feeling good, in between</i>
(.06) unclassified	<i>together, stagnant, to be able, concoctrate, not awkward, stable</i>
STAFF	
(.68 ± .09) personnel	<i>group of workers, the leaders, employees, a group working together</i>
(.28) a pole	<i>stick, cane, rod, cudgel, early medieval weapon</i>
(.01) horizontal lines for music	<i>a music note</i>
(.03) unclassified	<i>jump, scout camp, knife</i>
STALK	
(.77 ± .08) hunt down	<i>prey upon, to quietly pursue, sneak upon something, to hunt, to follow, chase, prowl</i>
(.18) stem	<i>what corn grows on, the shaft of a corn flower, corn, Jack and Bean</i>
(.05) unclassified	<i>bunch, bird, pore, wait, knife</i>
STALL	
(.47 ± .10) cubicle	<i>a place for a toilet, horse stall, a closed partition, pen for livestock, stable</i>
(.27) to delay	<i>make a person wait, to take time, hold up, hesitate, waste time</i>
(.26) temporarily stop working	<i>not to start, to break down, quit running, stop in mid air, not moving</i>
STAR	
(.75 ± .08) celestial object	<i>gaseous nova, nebula, sun, light speck, bright light in the sky, sun of another galaxy</i>
(.19) celebrity	<i>famous, movie, to be popular, to appear</i>
(.04) 5-pointed figure	<i>brigadier general, a five point object</i>
(.02) unclassified	<i>boring, hit</i>
STATE	
(.73 ± .09) division of land	<i>place on map, city, place in a country, Georgia, territory, province, land borders</i>
(.16) say something	<i>express your opinion, tell your view, speak, recite, make known</i>
(.10) condition	<i>mental position you are in, how you're doing, being</i>
(.01) unclassified	<i>blank</i>
STEER	
(.64 ± .09) a bull	<i>cattle, male cow, a male bull with horns, fixed bull, animal, beef, Texas Longhorn</i>
(.35) to direct	<i>guide, drive, control, to turn, use direction</i>
(.01) unclassified	<i>eyes in one place</i>
STICK	
(.70 ± .09) piece of wood	<i>twig, part of a tree, club, pole, straight object, limb, branch</i>
(.15) adhere to	<i>paste, stay close to, won't come apart, hold, be attached</i>
(.13) to poke	<i>jab, poke</i>
(.02) unclassified	<i>ball, unhealthy</i>
STOOP	
(.86 ± .07) squat down	<i>kneel, bend over, bend down, duck, to push your body down</i>
(.12) lower oneself	<i>low, to go low</i>

APPENDIX (Continued)

(.09) porch area.....	<i>porch, step, overhang</i>
(.05) unclassified.....	<i>make smaller, decline, post, to be noise, tree stump</i>
STRAIN	
(.83 ± .07) stress.....	<i>stress, emotional distress, worry, discomfort</i>
(.65) to over-exert.....	<i>work to the fullest extent, to put pressure on, to struggle</i>
(.11) filter.....	<i>sift, drain out, process of sorting, get rid of impurities</i>
(.06) unclassified.....	<i>blank(2), illegible(2), easy, fine</i>
STRIKE	
(.77 ± .08) to hit something.....	<i>hit, punch, slug</i>
(.15) missing a baseball.....	<i>to miss, miss, in baseball, strike 3</i>
(.06) workers' protest.....	<i>to rally against, workers refusing to work</i>
(.02) unclassified.....	<i>stop, to hike</i>
STRIP	
(.86) to take off.....	<i>remove clothes, take everything off, to remove paint, get rid of</i>
(.08) narrow piece of something.....	<i>thin long object, line, piece of land</i>
(.02) boulevard.....	<i>place to cruise</i>
(.04) unclassified.....	<i>blank(2), illegible, section</i>
SWAMP	
(.86 ± .07) marsh land.....	<i>bog, marsh, bayou, mud, soggy land, mushy area, dirty pond</i>
(.10) to be overcome.....	<i>overload, overcrowded, too much to handle, a big mess</i>
(.04) unclassified.....	<i>exchange, trade (2), area in MASH</i>
TABLET	
(.56 ± .10) booklet of paper.....	<i>notebook, used for writing, a writing pad, paper bound together</i>
(.38) medication.....	<i>pill, aspirin, medicine</i>
(.01) solid piece of material.....	<i>piece of sidewalk</i>
(.05) unclassified.....	<i>blank, illegible, what you eat on, sleepy, a flat surface with support at bottom</i>
TAP	
(.69 ± .09) hit lightly.....	<i>touch softly, barely touch, thump, nudge, to poke something, press down with an object</i>
(.15) a faucet.....	<i>water fountain, beer, something a liquid comes out of, water spigot</i>
(.09) type of dance.....	<i>hit the toe of your foot on the ground, dance, metal part on a shoe</i>
(.01) a tool for forming screw threads.....	<i>tool</i>
(.06) unclassified.....	<i>blank, illegible, bounce, to lightly, to capture, break into</i>
TIP	
(.28 ± .09) the end of something.....	<i>point, the top, end of a stick, edge, very top of, crest</i>
(.27) gratuity.....	<i>money left for services, 15%</i>
(.07) to leave money.....	<i>leave money, give waitress extra money</i>
(.23) advice.....	<i>hint, suggestion, a piece of advice, clue, inside info</i>
(.20) cause to fall over.....	<i>slightly unlevel, offset, leaning, fall over, to raise a hat</i>
(.02) unclassified.....	<i>to touch, don't have a hold of</i>
TIRE	
(.77 ± .08) wheel.....	<i>black rubber wheel, car, rubber, spare</i>
(.18) exhausted.....	<i>wearing out, weary, weak, sleepy, run down</i>
(.05) unclassified.....	<i>blank (3), object, to make less of</i>

APPENDIX (Continued)

TRAIN

- (.70 ± .09) long line..... *group moving together, persons, following in an orderly fashion*
 (.66) locomotive..... *box cars, on a track, passenger vehicle, transportation, Amtrak*
 (.27) to teach..... *show how to do something, to get in shape, practice*
 (.01) trailing part of a dress..... *wedding garment*
 (.02) unclassified..... *blank, to make organized*

TREAT

- (.84 ± .07) reward..... *gift for a good deed, pay for, candy, gift, something special*
 (.09) to care for; fix..... *to make better, help, heal, to season*
 (.03) behavior toward someone..... *act, how you are to something*
 (.04) unclassified..... *smell string, to scare, scare, worn*

TRIM

- (.69 ± .09) cut off the excess..... *clip, cut just a little, groom*
 (.16) lean..... *slender, fit, shape, thin, slim*
 (.07) border..... *liner, part around the edge, house*
 (.08) unclassified..... *blank (3), adjust, mend, to alter, to paint, concise*

TRIP

- (.55 ± .10) vacation..... *travel, away, journey, go to another place*
 (.42) stumble..... *to fall, catch your foot on something, knock down*
 (.03) unclassified..... *blank (3)*

UNIFORM

- (.64 ± .09) clothing..... *certain type of dress, dress code, outfit, suit, military dress*
 (.35) all the same..... *in order, conformity, one form, even and neat*
 (.01) unclassified..... *set of class*

VOLUME

- (.45 ± .10) amount of liquid..... *measurement, how much something will hold, capacity*
 (.41) loudness..... *range of noise, noise, sound control, turn up a radio, high or low*
 (.12) book..... *encyclopedias, a number of books*
 (.02) unclassified..... *bolk, 1-?*

WAKE

- (.60 ± .10) arise from sleep..... *to get up, open eyes, bright eyes, to bring from sleep, not sleep*
 (.25) wave..... *wave a boat makes, waves in the water*
 (.09) funeral..... *a deceased person's gathering, part of a funeral*
 (.01) aftermath..... *aftermass*
 (.05) unclassified..... *blank, surprise, filling sorry, the brim of something, sudden movement*

WATCH

- (.53 ± .10) timepiece..... *clock, used for time, object that keeps time*
 (.46) observe..... *to look at, look for, see, monitor*
 (.01) unclassified..... *both hands*

WILL

- (.52 ± .10) last testament..... *a legal document, something written for inheritance, last wishes*
 (.36) determination..... *the mind power to do something, intend to do, want, drive, strength*
 (.12) unclassified..... *blank (3), illegible, yes (2), not, obey, to obey, won't, easy going, present tense form of be*

APPENDIX (Continued)

YARN

(.81 ± .08) thread	<i>string, twine, thick thread, used for knitting, sewing</i>
(.09) a tale.....	<i>to tell a story, wild tale, talk</i>
(.10) unclassified.....	<i>blank(2), illegible, sleepy, sleepiness or tired, to be tired, ring, to stretch, stretch, role of think</i>

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