APPENDIX A: EXP. 1 ADDITIONAL MATERIALS AND FOLLOW-UP EXPERIMENTS

## 1. Additional Experiment 1 Analyses

| | $X^2$ (2, $N$ = 206) | $p$ (significance) | V (effect size) |
|---|---|---|---|
| **Vehicle** | 7.02 | 0.0299 * | 0.19 |
| **Automobile** | 7.75 | 0.0208 * | 0.19 |
| **Car** | 6.99 | 0.0303 * | 0.19 |
| **Bus** | 37.56 | < 0.0001 ** | 0.43 |
| **Truck** | 10.81 | 0.0045 * | 0.23 |
| **Bicycle** | 53.69 | < 0.0001 ** | 0.51 |
| **Airplane** | 64.61 | < 0.0001 ** | 0.56 |
| **Ambulance** | 21.13 | < 0.0001 ** | 0.32 |
| **Golf Cart** | .66.70 | < 0.0001 ** | 0.57 |
| **Toy Car** | 1.01 | 0.6035 | 0.07 |

**Figure A1**. Chi-square test for dictionary vs. concept vs. corpus. * indicates significance at less than .05; ** indicates significance at less than .005 (corrected for multiple comparisons). V indicates an estimate of the effect size.

| | *Dictionary v. Corpus* | *Dictionary v. Concept* | *Corpus v. Concept* |
|---|---|---|---|
| | $X^2$ (1, $N$ = 134), $p$, V | $X^2$ (1, $N$ = 140), $p$, V | $X^2$ (1, $N$ = 136), $p$, V |
| **Vehicle** | 0.01, .9427, .01 | 6.34, .0118 *, .21 | 5.93, .0149 *, .21 |
| **Automobile** | 2.74, .0976, .14 | 1.16, .2809, .09 | 7.01, .0081 *, .22 |
| **Car** | 1.65, .2024, .11 | 2.03, .1542, .12 | 6.96, .0084 *, .22 |
| **Bus** | 17.78, 0.0001 **, .36 | 2.28, .1310, .13 | 29.72, < 0.0001 **, .46 |
| **Truck** | 5.55, .0185 *, .20 | 0.38, .5353, .05 | 8.65, .0033 *, .25 |
| **Bicycle** | 48.11, < 0.0001 **, .60 | 2.44, .1181, .13 | 31.93, < 0.0001 **, .48 |
| **Airplane** | 55.72, < 0.0001 **, .65 | 4.38, .0363 *, .18 | 33.98, < 0.0001 **, .49 |
| **Ambulance** | 14.72, 0.0001 **, .33 | 0.03, .8684, .02 | 13.86, .0002 **, .31 |
| **Golf Cart** | 32.61, < 0.0001 **, .49 | 4.07, .0438 *, .17 | 50.61, < .0001 **, .60 |
| **Toy Car** | 0.14, .6991, .03 | 0.098, .3229, .03 | 0.34, .5572, .05 |

**Figure A2**. Pairwise chi-squared tests for dictionary vs. concept vs. corpus. Highlighted boxes indicate significance corrected for ten multiple comparisons, $p < .005$.

## 2. Experiments 1A and 1B

*Experiment 1A: Ordinary Meaning with Rules*

Experiment 1 uncovered significant differences between the application of the corpus method and the verdicts of dictionaries and ordinary judgments. However, one might wonder how dictionaries and corpus linguistics perform in assessing the meaning of a term in the context of a *rule*. For instance, one might argue, the meaning of "vehicle" is significantly different in the context of the rule "no vehicles in the park." Importantly, this kind of textualist view is *not* that this rule should be applied differently because of some presumed purpose about keeping certain things out of the park. Instead, the view would be that the meaning of "vehicle" is different in the context of this legal *rule*.

Before turning to a test of this suggestion, it is important to recall the aims of the relevant theories, which are concerned with determining an empirical fact about how a text was understood. This ordinary meaning is distinct from the drafters' intended meaning, and also from the purpose of the text.

Adding the context of a rule might provide information relevant to some of these other concerns. For this reason, if adding a rule makes a difference, it is important to discern the *process* underlying people's judgments. Perhaps a rule adds further context that allows the corpus to perform effectively; this would be a friendly finding for theories committed to ordinary meaning analysis. But perhaps a rule is not really adding further context, but instead information about the rule's *purpose*. If *that* enhanced the performance of corpus linguistics, it is not a friendly finding for those theories. In that case, corpus linguistics is not tracking ordinary meaning, in context; instead, the perceived purpose of the rule is driving judgments that seem (to us) to track ordinary meaning.

I return to this issue in Experiment 1B, but first consider the more straightforward results of Experiment 1A, which presents participants with a rule.

*Method*

*Participants.* Two-hundred and four participants were recruited from Amazon's Mechanical Turk (51% female, 48.5% male, 0.5% non-binary, mean age = 37.0).

*Materials and Procedure.* As in Experiment 1, participants were randomly divided into one of three conditions: Dictionary, Corpus, or Concept. In each condition, participants received the same information about a term (ailac or vehicle). However, in this experiment, participants were then instructed about a town ordinance. In the Dictionary and Corpus conditions, this was: Now imagine that a town passes an ordinance that says "no ailacs in the park." In the Concept condition, this was: Now imagine that a town passes an ordinance that says "no vehicles in the park." All participants rated whether ten entities, presented in a random order, were allowed in the park (e.g. "Is a truck allowed in the park" [Yes/No]).

*Results.*

In this Experiment, the differences among dictionary, corpus and concept methods were strikingly reduced.

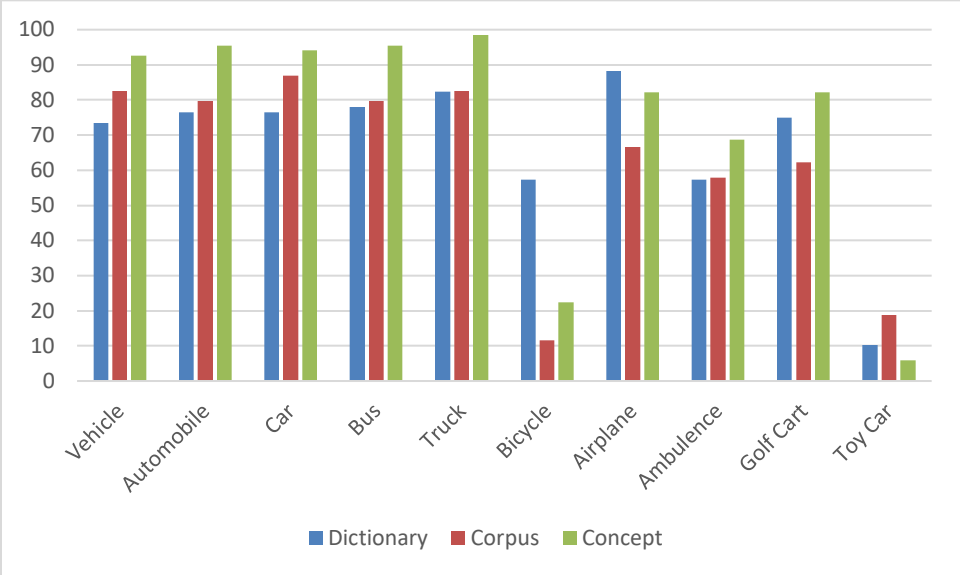


**Figure A3**. Percentage Responding No (the entity is not allowed in the park) by Dictionary, Corpus, Concept conditions

Chi-squared tests comparing the proportion of "yes" responses revealed smaller effects. Here again, there were significant differences for nearly every entity (except ambulance and toy car).

Pairwise chi-squared tests showed very few significant difference between dictionary and corpus participants. There were some differences between both of those methods and the Concept condition.

| | $X^2$ (2, $N$ = 204) | $p$ (significance) | V (effect size) |
|---|---|---|---|
| Vehicle | 8.58 | 0.0137 * | 0.21 |
| Automobile | 10.33 | 0.0057 * | 0.22 |
| Car | 8.65 | 0.0132 * | 0.21 |
| Bus | 9.56 | 0.0084 * | 0.22 |
| Truck | 10.75 | 0.0046 ** | 0.23 |
| Bicycle | 36.92 | < 0.0001 ** | 0.43 |
| Airplane | 10.18 | 0.0062 * | 0.22 |
| Ambulance | 2.30 | 0.3166 | 0.11 |
| Golf Cart | 6.95 | 0.0310 * | 0.19 |
| Toy Car | 5.64 | 0.0596 | 0.17 |

**Figure A4**. Chi-squared tests for dictionary vs. concept vs. corpus

| | *Dictionary v. Corpus* | *Dictionary v. Concept* | *Corpus v. Concept* |
|---|---|---|---|
| | $X^2$ (1, $N$ = 137), $p$, V | $X^2$ (1, $N$ = 135), $p$, V | $X^2$ (1, $N$ = 136), $p$, V |
| **Vehicle** | 1.65, .1989, .12 | 8.63, .0033 **, .25 | 3.06, .0801, .15 |
| **Automobile** | 0.21, .6466, .11 | 10.13, .0015 **, .27 | 7.77, .0053 *, .24 |

| | | | |
|---|---|---|---|
| **Car** | 2.52, .1121, .14 | 8.24, .0041 *, .25 | 1.97, .1607, .12 |
| **Bus** | .064, .8000, .02 | 9.02, .0027 **, .26 | 5.87, .0154 *, .21 |
| **Truck** | 0.02, .9686, .01 | 10.12, .0017 **, .27 | 9.34, .0016 **, .26 |
| **Bicycle** | 31.82, < 0.0001 **, .48 | 17.18, < 0.0001 **, .36 | 2.82, .0932, .14 |
| **Airplane** | 9.10, .0026 **, .26 | 1.01, .3149, .09 | 4.23, .0397 *, .18 |
| **Ambulance** | 0.01, .9416, .01 | 1.85, .1739, .12 | 1.67, .1963, .11 |
| **Golf Cart** | 2.56, .1098, .26 | 1.01, .3160, .09 | 6.60, .0102 *, .22 |
| **Toy Car** | 2.01, .1566, .12 | 0.84, .3585, .08 | 5.15, .0233 *, .20 |

**Figure A5**. Pairwise chi-squared tests for dictionary vs. concept vs. corpus.

*Discussion*

Although there are some differences among corpus, dictionary, and concept methods, those differences are relatively few and relatively small. This suggests the possibility of a redemptive result for dictionary and corpus use. If there is contextual context about the relevant rule, these methods deliver more reliable estimates about ordinary meaning.

Unfortunately, this redemptive story is not supported by the data. The next experiment suggests that the apparent success of these methods in Experiment 1A is illusory.

*Experiment 1B: Ordinary Meaning with Arbitrary Rules*

Experiment 1B suggests that the corpus and dictionary methods diverge less when there is a rule. One hypothesis is that this occurs simply whenever there is a rule. Another hypothesis is that this occurs because the rule communicates something about the purpose of the provision. Experiment 3 tests these hypotheses by using an arbitrary rule (i.e. one without a discernable purpose). If the results here look like those of Experiment 2, this suggests that perceived purpose is not the real cause of Experiment 2's results. If the results here look like Experiment 1, this suggests that it is likely the perceived purpose of the rule in Experiment 2 (i.e. the purpose of a rule prohibiting things from a park) that drives corpus and dictionary judgments.

*Method*

*Participants.* Two-hundred and one participants were recruited from Amazon's Mechanical Turk (51% female, 48.5% male, 0.5% non-binary, mean age = 35.5).

*Materials and Procedure.* As in Experiments 1 and 1A, participants were randomly assigned to one of three conditions: Dictionary, Corpus, or Concept. In each condition, participants received the same information about a term (ailac or vehicle). As in Experiment 1A, participants were then instructed about a town ordinance. In the Dictionary and Corpus conditions, this was: Now imagine that a town passes an ordinance that says "all ailacs can display a blue sticker, but everything that is not an ailac cannot display a blue sticker." In the Concept condition, this was: Now imagine that a town passes an ordinance that says "all ailacs can display a blue sticker, but everything that is not an ailac cannot display a blue sticker" All participants rated whether ten items were allowed to display a blue sticker (e.g. Can a bicycle display a blue sticker [Yes/No]).

*Results.*

The results in this arbitrary rule case are strikingly similar to those of Experiment 1.

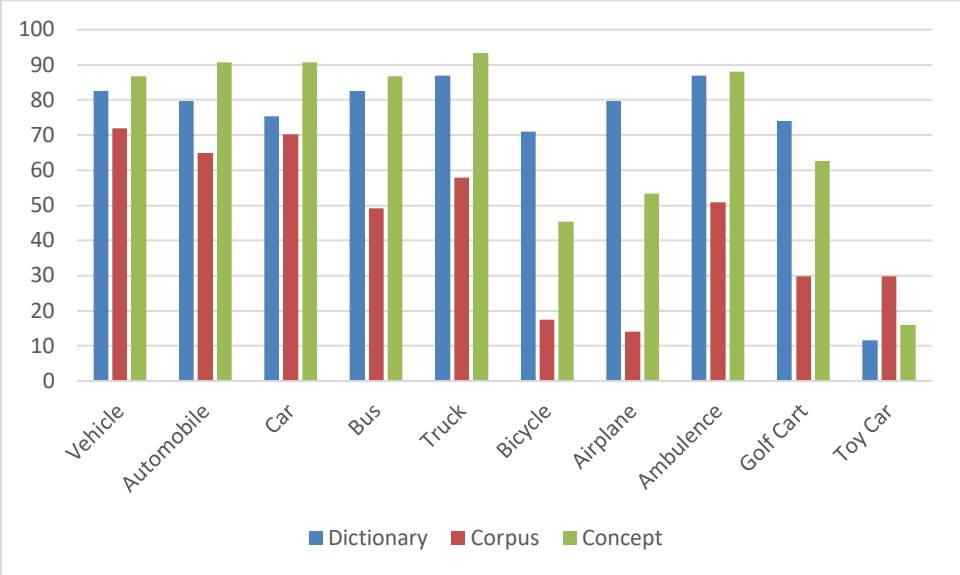


**Figure A6**. Percentage Responding Yes (the entity can display a blue sticker) by Dictionary, Corpus, Concept conditions

Chi-squared tests indicate significant differences for nine entities, many of which are medium to large effects. Pairwise chi-squared tests indicate significant differences among all three conditions, especially between Dictionary and Corpus and Corpus and Concept.

*Discussion*

As in Experiment 1, corpus linguistics performed poorly in tracking the ordinary meaning of vehicle. For busses, trucks, bicycles, airplanes, ambulances, and golf carts, the corpus linguistics result was significantly—and often dramatically—different from the verdicts delivered by the dictionary and ordinary concept use. The results from Experiments 1, 1A, and 1B together suggest that whatever success corpus linguistics had in Experiment 1A is not attributable to the fact that there was a rule, but rather to something like a presumed purpose of the rule. Insofar as corpus linguistics is used for textualist purposes, aimed to uncover the *meaning* of the text and not the purpose of its drafting, Experiments 1 and 1B represent the more appropriate test of these methods.

| | $X^2$ (2, $N$ = 201) | $p$ (significance) | V (effect size) |
|---|---|---|---|
| **Vehicle** | 4.74 | 0.0935 | 0.15 |
| **Automobile** | 13.23 | 0.0013 ** | 0.26 |
| **Car** | 9.54 | 0.0085 * | 0.22 |
| **Bus** | 27.64 | < 0.0001 ** | 0.37 |
| **Truck** | 28.88 | < 0.0001 ** | 0.38 |
| **Bicycle** | 35.94 | < 0.0001 ** | 0.42 |
| **Airplane** | 54.10 | < 0.0001 ** | 0.52 |
| **Ambulance** | 31.06 | < 0.0001 ** | 0.39 |
| **Golf Cart** | 26.24 | < 0.0001 ** | 0.36 |
| **Toy Car** | 7.37 | 0.0251 * | 0.19 |

**Figure A7**. Chi-squared test for dictionary vs. concept vs. corpus.

| | *Dictionary v. Corpus* | *Dictionary v. Concept* | *Corpus v. Concept* |
|---|---|---|---|
| | $X^2$ (1, $N$ = 126), $p$, V | $X^2$ (1, $N$ = 144), $p$, V | $X^2$ (1, $N$ = 132), $p$, V |
| **Vehicle** | 2.06, .1513, .20 | 4.45, .0350 *, .18 | 0.45, .4989, .06 |
| **Automobile** | 3.47, .0625, .17 | 3.46, .0627, .16 | 13.20, .0003 **, .32 |
| **Car** | 0.43, .5139, .06 | 6.06, .0138 *, .21 | 9.14, .0025 **, .26 |
| **Bus** | 15.95, .0001 **, .36 | 0.45, .4989, .06 | 21.93, < 0.0001 **, .41 |
| **Truck** | 13.64, .0002 **, .33 | 1.67, .1969, .11 | 23.73, < 0.0001 **, .42 |
| **Bicycle** | 35.84, < 0.0001 **, .53 | 9.71, .0018 **, .26 | 11.25, .0008 **, .29 |
| **Airplane** | 53.85, < 0.0001 **, .65 | 11.14, .0009, .28 | 21.61, < 0.0001 **, .41 |
| **Ambulance** | 19.59, 0.0001 **, .39 | 0.04, .8500, .02 | 22.12, < 0.0001 **, .41 |
| **Golf Cart** | 24.42, < 0.0001 **, .44 | 2.09, .1482, .12 | 13.99, .0002 **, .33 |
| **Toy Car** | 6.52, .0106 *, .23 | 0.58, .4450, .06 | 3.61, .0574, .16 |

**Figure A8**. Chi-squared tests for dictionary vs. concept vs. corpus

APPENDIX B: EXP. 2 ADDITIONAL MATERIALS

**1. Instructions for Experiment 2**

Instructions: In the following screen we will ask you some questions about different categories. We will ask whether some things are "prototypical" members of the category. We will also ask whether some things are "technically" part of the category.

For example, consider the term "bird." A robin is a prototypical bird. A sparrow is another prototypical bird. Other entities are not prototypical birds. An ostrich is not a prototypical bird; neither is a penguin. Nevertheless, robins, sparrows, ostriches, and penguins are all technically birds. Other entities, like whales or chipmunks are not technically birds.

As another example, consider the term "dessert." An ice cream is a prototypical dessert. A chocolate cake is another prototypical dessert. Other entities are not prototypical desserts. After-dinner cheeses are not a prototypical dessert; neither are candy gummy bears. Nevertheless, ice cream, chocolate cake, after-dinner cheeses, and candy gummy bears are all technically desserts. Other entities, like pizza or salad are not technically desserts.

Check questions:

A robin is a prototypical bird; A penguin is a prototypical bird; A robin is technically a bird; A penguin is technically a bird; A chipmunk is a prototypical bird; A chipmunk is typically a bird

The correct answers to these questions were Yes, No, Yes, Yes, No, No.

## 2. Experiment 2A

*Experiment 2A: The Process of Using Dictionaries and Corpora, An Extension*

Experiment 2A sought to replicate the result of Experiment 2 using a different example. To minimize researcher degrees of freedom, I selected the second example from Lee & Mouritsen's recent defense of corpus linguistics.[1] Their lead example is "vehicle" and their second example is "carrying" a firearm.

*Method*

*Participants.* Two-hundred and six participants participated in an online experiment (47.3% male, 52.7% female, 0.0% non-binary, $M_{age}$ = 37.6).

*Materials and Procedure.* Participants were randomly assigned to the Concept, Corpus, Dictionary, or Prototypically-Technically Condition. Participants in the Prototypically-Technically condition were presented with the same instructions as in Experiment 4; they then rated whether various actions were prototypically carrying a firearm and technically carrying a firearm. Participants in the Concept condition were told to:

> Consider the phrase, "carrying a firearm."

Participants in the Dictionary condition were told to:

> Consider this dictionary definition of the phrase "ailacing a firearm":
>
> Ailacing a firearm: Transporting or taking a firearm from one place to another

Participants in the Corpus condition were first told to:

> Consider the phrase, "ailacing a firearm." To help understand this phrase, consider some information about the use of "ailacing a firearm."

Corpus participants then received corpus data, beginning with:

> First, consider the top common words used in connection with "ailacing a firearm." These words might appear before or after ailacing a firearm, or sometimes close to ailacing a firearm, e.g. "while ailacing a firearm;" "guilty of ailacing a firearm;" "ailacing a firearm illegally;" etc.[2]

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[1] Thomas R. Lee & Stephen C. Mouritsen, *Judging Ordinary Meaning*, 127 YALE L.J. 788 (2018).

[2] The remainder of the data included:

Top common words: without, license, during, while, using, crime, relation, openly, lawfully, property, under, intoxicated, illegally, possession, permit, drug, weapon, facts, permits, legally, robbery, grounds, guilty, campus, charged, charges, prohibited, trafficking, mall, counts, allegedly, influence, protection, assault, officer, municipally, drug-trafficking, endangerment, self-defense, prohibit, concealed, ammunition, second-degree, punishment, homicide, engaging, citizen, traveling, manner, convicted, violent

Next, consider some further examples of "ailacing a firearm" in context:

1) … Castile had told the officer that he was lawfully **ailacing a firearm** after he was pulled over by Yanez and another officer ….
2) … the survivor and the witness said Mobley had been **ailacing a firearm** all night. Authorities launched a statewide manhunt for …
3) … of second-degree burglary, third-degree burglary, **ailacing a firearm**, and drug possession. Houseal was sentenced to 18 months …
4) … with people engaged in risky behaviors--like **ailacing a firearm** and engaging in criminal activities--increases the ....
5) … the weapons complaints, and he allegedly admitted to **ailacing a firearm** and engaging in target practice …
6) … He allegedly was **ailacing a firearm** and heroin and wearing a bulletproof vest at the time …
7) ... by a felon, interference with official acts while **ailacing a firearm** and possession of marijuana …

Corpus, Dictionary, and Concept participants then answered a series of questions, presented randomly:

Is bringing a gun to a bank robbery carrying/ailacing a firearm?
Is taking a gun to a gang fight carrying/ailacing a firearm?
Is delivering an order of guns to their purchaser by hand carrying/ailacing a firearm?
Is driving to a drug deal with a gun in the rear of the car carrying/ailacing a firearm?
Is shopping in a supermarket with a concealed gun carrying/ailacing a firearm?
Is delivering a bag of crime evidence, including a gun, to a police station carrying/ailacing a firearm?
Is moving a gun into a secure storage locker carrying/ailacing a firearm?
Is making a threat during a drug deal by pointing at a gun on a table carrying/ailacing a firearm?
Is removing a gun from its case and cleaning it carrying/ailacing a firearm?
Is calling someone to arrange selling a gun carrying/ailacing a firearm?

*Results*

As in Experiment 4, I correlated the proportion of Yes responses per item in each of the Corpus, Dictionary, and Concept conditions with the mean response per item for the prototypically and technically measures. The full correlation matrix is displayed below.

| | Corpus | Dictionary | Concept | Prototypically | Technically |
|---|---|---|---|---|---|
| Corpus | 1 | | | | |
| Dictionary | 0.33 | 1 | | | |
| Concept | 0.73 | 0.42 | 1 | | |
| Prototypically | 0.93 | 0.29 | 0.97 | 1 | |
| Technically | 0.68 | 0.72 | 0.81 | 0.74 | 1 |

**Figure A9**. Correlation Matrix. Boxes indicate the relevant comparisons (Corpus is more correlated with Prototypically, and Dictionary is more correlated with Technically).

To test the statistical significance of this relationship between Corpus-Prototypically and Dictionary-Technically, I conducted two tests for differences between correlations between (i) Corpus and Prototypically and Corpus and Technically, and (ii) Dictionary and Prototypically and Dictionary and Technically. Corpus was significantly more correlated with Prototypically than with Technically, z = 2.067, $p$ = .0194 (one-tailed).[3] Dictionary was significantly more correlated with Technically than with Prototypically, z = 2.049, $p$ = .0202 (one-tailed).[4]

We can also consider the basic result of whether corpus, concept, and dictionary treatments diverged.

| | $X^2$ (2, $N$ = 206) | $p$ (significance) | V (effect size) |
|---|---|---|---|
| **Robbery** | 6.69 | 0.0353 | 0.18 |

8) ... by robbery, assault on a federal officer and **ailacing a firearm** during a crime of violence. They also were sentenced …

9) ... Law was decreasing the severity of the punishment for **ailacing a firearm** while intoxicated. Previously, this crime was considered …"

[3] Two-tailed = .0387.

[4] Two-tailed = .0404.

| | | | |
|---|---|---|---|
| **Fight** | 9.26 | 0.0098 ** | 0.21 |
| **Delivery** | 22.33 | < 0.0001 ** | 0.34 |
| **Drug Deal** | 2.00 | 0.3679 | 0.10 |
| **Supermarket** | 39.55 | < 0.0001 ** | 0.44 |
| **Evidence** | 41.41 | < 0.0001 ** | 0.45 |
| **Storage** | 32.01 | < 0.0001 ** | 0.39 |
| **Table Threat** | 54.11 | < 0.0001 ** | 0.51 |
| **Cleaning** | 8.18 | 0.0167 | 0.20 |
| **Selling** | 5.01 | 0.0817 | 0.16 |

**Figure A10**. Chi-squared test for dictionary vs. concept vs. corpus.

| | *Dictionary v. Corpus* | *Dictionary v. Concept* | *Corpus v. Concept* |
|---|---|---|---|
| | $X^2$ (1, $N$ = 136), $p$, V | $X^2$ (1, $N$ = 139), $p$, V | $X^2$ (1, $N$ = 137), $p$, V |
| **Robbery** | 1.44, 0.2301, .13 | 4.91, 0.0267, .21 | 0.57, 0.4503, .09 |
| **Fight** | 2.24, 0.1345, .15 | 7.25, 0.0071**, .25 | 0.97, 0.3247, .11 |
| **Delivery** | 21.66, <.0001**, .42 | 9.12, 0.0025**, .27 | 2.59, 0.1075, .1521 |
| **Drug Deal** | 0.49, 0.4839, .08 | 0.07, 0.7913, .04 | 1.48, 0.2238, .12 |
| **Supermarket** | 5.1, 0.0239*, .21 | 37.84, <.0001**, .54 | 15.95, <.0001**, .36 |
| **Evidence** | 36.40, <.0001**, .53 | 21.78, <.0001**, .41 | 1.97, 0.1604, .14 |
| **Storage** | 30.09, <.0001**, .49 | 7.57, <.0059**, .25 | 7.65, 0.0057**, .25 |
| **Table Threat** | 36.01, <.0001**, .53 | 38.33, <.0001**, .54 | 0, 1, .01 |
| **Cleaning** | 0.09, 0.7642, .05 | 5.87, .0154*, .22 | 3.62, .0571, .18 |
| **Selling** | 2.74, 0.0979, .16 | 3.67, .0554, .18 | 0, 1, .02 |

**Figure A11**. Chi-squared tests for dictionary vs. concept vs. corpus

*Discussion*

This study provides further support for the hypothesized mechanism. Dictionaries tend to generate a more extensive sense of a term and corpus linguistics tends to generate a prototypical sense of the term.

APPENDIX C: EXP. 3 ADDITIONAL MATERIALS AND FOLLOW-UP EXPERIMENTS

## 1. Experiment 3 Additional Analyses

| | $X^2$ (2, $N$ = 98) | $p$ (significance) | V (effect size) |
|---|---|---|---|
| **Vehicle** | 3.78 | 0.1511 | 0.20 |
| **Automobile** | 6.57 | 0.0374 | 0.26 |
| **Car** | 4.41 | 0.1103 | 0.21 |
| **Bus** | 20.57 | < 0.0001 * | .46 |
| **Truck** | 29.41 | < 0.0001 * | 0.56 |
| **Bicycle** | 33.31 | < 0.0001 * | 0.59 |
| **Airplane** | 36.68 | < 0.0001 * | 0.62 |
| **Ambulance** | 24.64 | < 0.0001 * | 0.51 |
| **Golf Cart** | 29.62 | < 0.0001 * | 0.56 |
| **Toy Car** | 0.13 | 0.9371 | 0.04 |
| **Drone** | 4.17 | 0.1243 | 0.22 |
| **Skateboard** | 22.50 | < 0.0001 * | 0.50 |
| **Rollerskate** | 22.94 | < 0.0001 * | 0.51 |
| **WWII Truck** | 44.25 | < 0.0001 * | 0.70 |
| **Baby Stroller** | 24.57 | < 0.0001 * | 0.53 |
| **Wheelchair** | 17.37 | 0.0002 * | 0.44 |
| **Horse Carriage** | 48.98 | < 0.0001 * | 0.74 |
| **Canoe** | 43.39 | < 0.0001 * | 0.72 |
| **Helicopter** | 23.76 | < 0.0001 * | 0.51 |
| **Moped** | 10.80 | 0.0045 | 0.35 |
| **Crutches** | 8.50 | 0.0143 | 0.31 |
| **Pogo Stick** | 11.26 | 0.0036 * | 0.36 |
| **Baby Shoulder-Carrier** | 26.13 | < 0.0001 * | 0.54 |
| **Liferaft** | 24.15 | < 0.0001 * | 0.52 |
| **Zip-line** | 22.20 | < 0.0001 * | 0.50 |

**Figure A12**. Chi-square test for dictionary vs. concept vs. corpus

| | *Dictionary v. Corpus* $X^2$ (1, $N$ = 59), $p$, V | *Dictionary v. Concept* $X^2$ (1, $N$ = 72), $p$, V | *Corpus v. Concept* $X^2$ (1, $N$ = 65), $p$, V |
|---|---|---|---|
| **Vehicle** | 1.82, 0.177, 0.23 | 0.33, 0.566, 0.16 | 0.2, 0.655, 0.12 |
| **Automobile** | 3.45, 0.063, 0.31 | 0.36, 0.549, 0.16 | 1.03, 0.310, 0.18 |
| **Car** | 1.32, 0.251, 0.20 | 0.10, 0.752, 0.02 | 2.03, 0.154, 0.23 |
| **Bus** | 6.76, 0.009, 0.39 | 0.01, 0.920, 0.13 | 11.49, 0.0007, 0.47 |
| **Truck** | 11.65, 0.0006, 0.51 | 0, 1, 0 | 14.14, 0.0002, 0.52 |
| **Bicycle** | 30.25, < 0.0001, 0.76 | 8.7, 0.0032, 0.39 | 9.09, 0.0026, 0.41 |
| **Airplane** | 31.05, < 0.0001, 0.76 | 4.75, 0.029, 0.30 | 14.57, 0.0001, 0.51 |
| **Ambulance** | 8.83, 0.003, 0.44 | 0.01, 0.920, 0.13 | 13.78, 0.0002, .52 |
| **Golf Cart** | 19.32, < 0.0001, .62 | 1.80, 0.180, 0.22 | 12.27, 0.0005, 0.47 |
| **Toy Car** | 0.11, 0.740, 0.0 | 0.0, 1, 0.04 | 0.0, 1, 0.04 |
| **Drone** | 1.22, 0.269, 0.19 | 2.79, 0.095, 0.24 | 0.0, 1, 0.05 |
| **Skateboard** | 18.64, < 0.0001, 0.625 | 10.22, 0.0014, 0.43 | 1.95, 0.163, 0.22 |
| **Rollerskate** | 22.49, < 0.0001, 0.69 | 13.47, 0.0002, 0.48 | 2.91, 0.088, 0.27 |
| **WWII Truck** | 2.4, 0.121, 0.26 | 11.70, 0.0006, 0.45 | 2.14, 0.144, 0.22 |
| **Baby Stroller** | 21.49, < 0.0001, 0.68 | 6.84, 0.0089, 0.35 | 5.92, 0.015, 0.36 |
| **Wheelchair** | 12.69, 0.0004, 0.52 | 0.27, 0.603, 0.10 | 9.12, 0.003, 0.42 |
| **Horse Carriage** | 23.85, < 0.0001, 0.70 | 0.74, 0.390, 0.15 | 18.06, < 0.0001, 0.58 |
| **Canoe** | 38.09, < 0.0001, 0.89 | 16.11, < 0.0001, 0.53 | 8.35, 0.004, 0.41 |
| **Helicopter** | 21.78, < 0.0001, 0.68 | 10.93, 0.0009, 0.44 | 2.83, 0.092, 0.25 |
| **Moped** | 1.86, 0.17, 0.23 | 1.41, 0.234, 0.21 | 8.23, 0.004, 0.42 |
| **Crutches** | 3.24, 0.072, 0.29 | 4.66, 0.031, 0.30 | 0.23, 0.63, 0.0 |
| **Pogo Stick** | 8.39, 0.004, 0.44 | 3.41, 0.065, 0.26 | 1.50, 0.22, 0.20 |
| **Baby Shoulder-Carrier** | 15.64, < 0.0001, 0.58 | 14.76, 0.0001, 0.50 | 0.25, 0.617, 0.11 |
| **Liferaft** | 21.08, < 0.0001, 0.66 | 6.48, 0.011, 0.34 | 5.71, 0.0169, 0.35 |
| **Zip-line** | 16.85, < 0.0001, 0.60 | 8.34, 0.0039, 0.39 | 2.91, 0.088, 0.27 |

**Figure A13**. Pairwise chi-squared tests for dictionary vs. concept vs. corpus.

**2. Experiments 3A and 3B**

*Experiment 3A: Testing Elite Law Students*

The preceding experiments have studied ordinary, non-expert populations. Judgments of ordinary people provide good evidence about the ordinary meaning of these terms (e.g. "vehicle" or "carrying a firearm"). But some might doubt whether this population contains the best users of dictionaries and corpus linguistics in legal interpretation. To appropriately test the reliability of corpus linguistics and dictionaries, one might argue, we should test legal experts who have the relevant background in interpretation.

This objection is plausible, but it should not be taken to dismiss any significance of the results. After all, even if the previous results do not provide a strong inference into judges' cognition, they do provide good evidence about juror's cognition. And jurors, too, are statutory interpreters.[5]

Nevertheless, this section begins to address the "expertise" objection head-on. I tested "elite-university" law students—law student from the "T-14" law schools—who should have significant legal education or the innate abilities posited by defenders of this expertise objection.

To more comprehensively test the reliability of dictionaries and corpus, this experiment featured an expanded range of twenty-five entities. In the first three experiments, most entities were "vehicles" in ordinary language and the dictionary categorized these as vehicles. Experiments 2 and 2A suggest the dictionary generates an extensive condition of category membership. So to better test dictionaries, this experiment also includes some entities that I predicted are likely *not* vehicles in ordinary language, but which may nevertheless fall under a very extensive sense of a vehicle. These are entities including crutches, a baby should-carrier, and a zip-line.

*Method*

*Participants.* Two-hundred and thirty participants were recruited from the "T-14" law schools. Solicitation emails were sent to administrators at Berkeley, Columbia, Cornell, Duke, Georgetown, Harvard, New York University, Northwestern, Stanford, the University of Chicago, University of Michigan, University of Pennsylvania, University of Virginia, and Yale. At Columbia, Harvard, and Yale, emails were forwarded directly from a current law student.

Participants were 51.1% female, 47.6% male, 1.3% non-binary, $M_{age}$ = 26.5). Participants were largely from Yale Law School (68.0%), Harvard Law School (12.6%), and Columbia Law School (18.2%). Participants were recruited in May, at the completion of the first year of law school for 27.4%, the second year for 24.8%, and the third year for 43.0%.

| | **Columbia** | **Harvard** | **Yale** | **Other**[6] | **Total** |
|---|---|---|---|---|---|
| **J.D. 1L** | 14 | | 49 | | **63** |
| **J.D. 2L** | 12 | 2 | 42 | 1 | **57** |
| **J.D. 3L** | 14 | 26 | 57 | 2 | **99** |
| **Post-3L** | 1 | 1 | 1 | | **3** |

[5] Lawrence Solan, *Jurors as Statutory Interpreters*, 78 CHI-KENT L. REV. 1281 (2003).

[6] There was one response from each of Berkeley, NYU, and Georgetown.

| | | | | | |
|---|---|---|---|---|---|
| **Other**[7] | | | 8 | | **8** |
| **Total** | **41** | **29** | **157** | **3** | **230** |

**Figure A14**. Participant law school affiliation and academic year.

*Materials and Procedure.* As in the previous experiments, participants were randomly assigned to either the Concept, Corpus, or Dictionary condition. In this experiment, participants evaluated the first set of entities (presented in a randomized order): a vehicle, automobile, car, bus, truck, bicycle, airplane, ambulance, golf car, toy car. Participants immediately considered another set (presented in a randomized order): drone, skateboard, pair of rollerskates, "a non-functioning commemorative truck (e.g. a World War II Truck that has been decorated as a WWII monument)", baby stroller, electric wheelchair, horse-drawn carriage, wooden canoe, helicopter, moped, pair of crutches, pogo stick, baby shoulder-carrier, liferaft, and zip-line.

*Results*.

First, I conducted chi-square tests for differences among the three conditions. For twenty items, there was a significant difference. To further analyze these differences, I conducted follow-up pairwise chi-square tests. Again, there were a number of significant differences.

| | $X^2$ (2, $N$ = 261) | $p$ (significance) | V (effect size) |
|---|---|---|---|
| **Vehicle** | 6.27 | 0.0435 | 0.155 |
| **Automobile** | 2.99 | 0.2242 | 0.11 |
| **Car** | 3.38 | 0.1845 | 0.12 |
| **Bus** | 42.42 | < 0.0001 * | 0.41 |
| **Truck** | 15.06 | 0.0005 * | 0.24 |
| **Bicycle** | 79.11 | < 0.0001 * | 0.55 |
| **Airplane** | 65.76 | < 0.0001 * | 0.50 |
| **Ambulance** | 22.24 | < 0.0001 * | 0.30 |
| **Golf Cart** | 44.35 | < 0.0001 * | 0.42 |
| **Toy Car** | 0.62 | 0.7334 | 0.05 |
| **Drone** | 18.6 | < 0.0001 * | 0.27 |
| **Skateboard** | 47.38 | < 0.0001 * | 0.44 |
| **Rollerskate** | 37.01 | < 0.0001 * | 0.39 |
| **WWII Truck** | 10.91 | 0.0043 | 0.21 |
| **Baby Stroller** | 87.54 | < 0.0001 * | 0.59 |
| **Wheelchair** | 20.02 | < 0.0001 * | 0.29 |
| **Horse Carriage** | 115.39 | < 0.0001 * | 0.68 |
| **Canoe** | 90.55 | < 0.0001 * | 0.60 |
| **Helicopter** | 69.90 | < 0.0001 * | 0.53 |
| **Moped** | 36.67 | < 0.0001 * | 0.38 |
| **Crutches** | 24.91 | < 0.0001 * | 0.32 |
| **Pogo Stick** | 34.23 | < 0.0001 * | 0.37 |
| **Baby Shoulder-Carrier** | 118.28 | < 0.0001 * | 0.68 |
| **Liferaft** | 58.58 | < 0.0001 * | 0.48 |
| **Zip-line** | 49.44 | < 0.0001 * | 0.45 |

**Figure A15.** Chi-square test for dictionary vs. concept vs. corpus

[7] These respondents were enrolled in law school for a non-JD program (e.g. LLM, JSD, PhD in law).

| | *Dictionary v. Corpus* $X^2$ (1, $N$ = 170), $p$, V | *Dictionary v. Concept* $X^2$ (1, $N$ = 180), $p$, V | *Corpus v. Concept* $X^2$ (1, $N$ = 172), $p$, V |
|---|---|---|---|
| **Vehicle** | 1.3, 0.254, 0.11 | 0.34, 0.560, 0.06 | 3.78, 0.052, 0.17 |
| **Automobile** | 0.03, 0.86, 0.0 | 1.81, 0.179, 0.12 | 1.63, 0.202, 0.12 |
| **Car** | 0.05, 0.823, 0.04 | 2.49, 0.115, 0.14 | 1.14, 0.286, 0.10 |
| **Bus** | 14.12, 0.0002, 0.31 | 5.61, 0.018, 0.20 | 34.37, < 0.0001, 0.47 |
| **Truck** | 1.76, 0.185, 0.12 | 5.45, 0.020, 0.20 | 13.46, 0.0002, 0.30 |
| **Bicycle** | 64.95, < 0.0001, 0.63 | 0.99, 0.320, 0.09 | 51.36, < 0.0001, 0.56 |
| **Airplane** | 21.05, < 0.0001, 0.37 | 7.44, 0.006, 0.22 | 30.04, < 0.0001, 0.43 |
| **Ambulance** | 5.11, 0.024, 0.19 | 5.48, 0.019, 0.20 | 21.05, < 0.0001, 0.38 |
| **Golf Cart** | 19.64, < 0.0001, 0.36 | 1.81, 0.179, 0.12 | 33.49, < 0.0001, 0.46 |
| **Toy Car** | 0.00, 1, 0.01 | 0.31, 0.578, 0.06 | 0.11, 0.740, 0.04 |
| **Drone** | 11.80, 0.0006, 0.29 | 11.73, 0.0006, 0.27 | 0.00, 1, 0.01 |
| **Skateboard** | 45.53, < 0.0001, 0.55 | 8.16, 0.004, 0.23 | 18.20, < 0.0001, 0.34 |
| **Rollerskate** | 29.22, < 0.0001, 0.44 | 7.80, 0.005, 0.23 | 8.72, 0.003, 0.25 |
| **WWII Truck** | 1.47, 0.225, 0.11 | 9.59, 0.002, 0.25 | 2.86, 0.091, 0.14 |
| **Baby Stroller** | 70.86, < 0.0001, 0.67 | 45.82, < 0.0001, 0.53 | 4.97, 0.026, 0.19 |
| **Wheelchair** | 36.79, < 0.0001, 0.49 | 6.02, 0.014, 0.20 | 14.37, 0.0002, 0.30 |
| **Horse Carriage** | 85.08, < 0.0001, 0.74 | 2.59, 0.108, 0.14 | 67.41, < 0.0001, 0.64 |
| **Canoe** | 83.34, < 0.0001, 0.74 | 30.88, < 0.0001, .43 | 20.29, < 0.0001, 0.36 |
| **Helicopter** | 60.85, < 0.0001, 0.63 | 6.83, 0.009, 0.21 | 13.09, 0.0003, 0.28 |
| **Moped** | 14.31, 0.0002, 0.31 | 2.55, 0.110, 0.14 | 29.71, < 0.0001, 0.43 |
| **Crutches** | 13.67, 0.0002, 0.31 | 11.21, 0.0008, 0.27 | 0.14, 0.71, 0.07 |
| **Pogo Stick** | 20.24, < 0.0001, 0.37 | 16.5, < 0.0001, 0.32 | 0.36, 0.549, 0.08 |
| **Baby Shoulder-Carrier** | 61.91, < 0.0001, 0.63 | 69.68, < 0.0001, 0.65 | 0.03, 0.862, 0.02 |
| **Liferaft** | 52.95, < 0.0001, 0.59 | 18.03, < 0.0001, 0.34 | 13.05, 0.0003, 0.29 |
| **Zip-line** | 36.52, < 0.0001, 0.49 | 20.62, < 0.0001, 0.36 | 4.28, 0.039, 0.18 |

**Figure A16**. Pairwise chi-squared tests for dictionary vs. concept vs. corpus.

Conventional statistical significance is $p < .05$. The figure above has shaded regions where $p < 0.002$ (corrected for twenty-five comparisons).

*Discussion*

As the figure indicates, there were striking difference between corpus and dictionary for many items, and for several items either corpus or dictionary was significantly different from the concept condition The results are consistent with the earlier experiments that studied ordinary people. For *many* items, use of corpus linguistics did not track people's ordinary categorization judgments.

But these results, which use an expanded range of entities, also suggest the unreliability of dictionaries. In the first experiment, dictionary users categorized most entities as vehicles—and most entities were judged to be vehicles. In this experiment,

some ordinary language non-vehicles (e.g. roller-skates, pogo stick, zip-line, baby shoulder-carrier) were categorized as vehicles by dictionary users.

*Experiment 3B: The Process of Expert Use of Dictionaries and Corpora*

The final experiment uses the data from Experiments 3 and 3A to test whether the Dictionary-Extensive/Corpus-Prototype relationship characterizes the responses of judges and law students.

*Method*

*Participants.* One-hundred participants recruited from Amazon's Mechanical Turk participated in an online experiment (52.0% male, 46.0% female, 0.0% non-binary, $M_{age}$ = 36.4).

*Materials and Procedure.* Participants completed the same task as in Experiment 2, except they considered the expanded set of twenty-five entities (including, e.g. liferaft, zip-line, and canoe).

*Results*

The results from the online experiment were correlated with the percentage ratings for law students and judges, respectively, in Experiments 3 and 3A.

First consider the law student results.

| | Corpus | Dictionary | Concept | Prototypically | Technically |
|---|---|---|---|---|---|
| Corpus | 1 | | | | |
| Dictionary | 0.58 | 1 | | | |
| Concept | 0.80 | 0.84 | 1 | | |
| Prototypically | 0.94 | 0.60 | 0.77 | 1 | |
| Technically | 0.82 | 0.80 | 0.96 | 0.81 | 1 |

**Figure A17**. Law Student Correlation Matrix. Boxes indicate the relevant comparisons (Corpus is more correlated with Prototypically, and Dictionary is more correlated with Technically).

To test the statistical significance of this relationship between Corpus-Prototypically and Dictionary-Technically, I conducted two tests for differences between correlations between (i) Corpus and Prototypically and Corpus and Technically, and (ii) Dictionary and Prototypically and Dictionary and Technically. Corpus was significantly more correlated with Prototypically than with Technically, z = 2.576, $p$ = .0050 (one-tailed).[8] Dictionary was significantly more correlated with Technically than with Prototypically, z = 2.390, $p$ = .0084 (one-tailed).[9]

Next consider the judges' results.

| | Corpus | Dictionary | Concept | Prototypically | Technically |
|---|---|---|---|---|---|
| Corpus | 1 | | | | |
| Dictionary | 0.51 | 1 | | | |
| Concept | 0.85 | 0.74 | 1 | | |

[8] Two-tailed = .0100.
[9] Two-tailed = .0168.

| | | | | | |
|---|---|---|---|---|---|
| Prototypically | 0.91 | 0.53 | 0.80 | 1 | |
| Technically | 0.81 | 0.68 | 0.95 | 0.81 | 1 |

**Figure A18**. Judge Correlation Matrix. Boxes indicate the relevant comparisons (Corpus is more correlated with Prototypically, and Dictionary is more correlated with Technically).

To test the statistical significance of this relationship between Corpus-Prototypically and Dictionary-Technically, I conducted two tests for differences between correlations between (i) Corpus and Prototypically and Corpus and Technically, and (ii) Dictionary and Prototypically and Dictionary and Theory. Corpus was significantly more correlated with Prototypically than with Technically, z = 1.832, $p$ = .0334 (one-tailed).[10] Dictionary was numerically more correlated with Technically than with Prototypically, but not at a level of traditional statistical significance, z = 1.51, $p$ = .0657 (one-tailed).[11]

*Discussion*

The results are consistent with those of Experiment 2. The patterns of judgment characterizing the divergent verdicts of dictionaries and corpus linguistics are not entirely random. Rather, dictionary definitions tend to elicit a more extensive meaning while corpus linguistics data tends to elicit a prototypical sense.

It is notable that this pattern arises among three very different populations. The online population (MTurk) may have practice in survey-taking, but they have little practice in using dictionaries and corpus linguistics in interpretation. Nevertheless their applications of those tools were strikingly similar to the applications of law students and judges.

[10] Two-tailed = .0669.
[11] Two-tailed = .1313.

APPENDIX D: EXP. 4 ADDITIONAL MATERIALS

## 1. Experimental Materials

All participants read the following introduction to the experiment:

> In the following screen you will see some information about a term. The term might be a real term that you know (e.g. a "painter") or one that is made up (e.g. an "ailac"). If the term is one that is made up, the "information" about the term will also be fictional.
>
> After you see the information, we will ask twenty-five short questions about the term. There are no right or wrong answers to these questions; we are simply interested in what *you* think about the questions.

Participants then evaluated twenty-five items (using the fake term "krob," if in the corpus or dictionary conditions).

The remainder of this appendix section contains the materials used for the corpus linguistics, full dictionary, and bare dictionary conditions. There were ten categories, each with twenty-five items: vehicle, carry, interpreter, labor, tangible object, weapon, furniture, food, animal, clothing. The first three were chosen as the examples endorsed by Lee & Mouritsen 2018. The fourth and final example from that paper was "harbor." However, the vast majority of COCA uses of harbor referred to Pearl Harbor or "harboring feelings." Both of these are distinct from the relevant sense of harboring an alien. As such, I chose to exclude "harbor," since including it may have been unfair to proponents of formalist/textualist/originalist corpus linguistics. The next three were inspired by additional "famous" interpretation examples: labor, tangible object, and arms. Because "arms" is not commonly used today, I used "weapon" as a suitable modern substitute. The COCA uses of the phrase "tangible object" overwhelmingly came from discussion of *Yates*, the case in which the ordinary meaning of "tangible object" was at issue. As such, I conducted a corpus search on "tangible," presented participants with that data, and asked whether entities were tangible (e.g. "is a fish a krob object?"). The final four are other superordinate categories (like vehicle).

### *A. Corpus linguistics materials*

Corpus linguistics data was obtained from the Corpus of Contemporary American English. For each word, the top 50 collocates were used. If the category term appeared within the top 50 words, it was omitted and replaced. For example, if "animal" appeared in the top 50 collocates of "animal," the word was omitted from the materials and the 51$^{st}$ collocate was included at the end of the list.

Keywords in context searches were run using a frequency of at least 3. Ten random sentences were chosen from the keywords in context results.

[Vehicle] Consider the noun, "krob." To help understand this term, consider some information about the use of "krob."

First, consider the top common words used in connection with "krob." These words might appear before or after krob, or sometimes close to krob, e.g. "electric krob;" "drove the krob;" etc.

Top common words: motor, st, stolen, per, utility, electric, driver, block, oct, ave, krob, armored, sept, sport, driving, fuel, launch, rd, sport-utility, speed, emissions, traffic, passenger, unmanned, parked, theft, all-terrain, recreational, struck, driven, pl, bradley, ford, crashes, drove, accidents, engine, registration, hybrid, off-road, fee, license, four-wheel-drive, description, lane, crash, rear, maintenance, travelled

Next, consider some further examples of "krob" in context:

| |
|---|
| marijuana. Her 1-year-old daughter was in the car with her. After searching the **krob**, police found 50 stamp bags of heroin, a bag of powdered cocaine, |
| light of the facts that he ran from police, struck their cars with his **krob** and had a prior record of battery to a police officer, can we for |
| ) 67th Ave., 4800 block, 2:49 p.m. Sept. 25. (From **krob**.) Adelphi Rd., 8300 block, 5:59 p.m. Sept. 28. Annapolis |
| owns two research ships, each equipped with a tethered submarine called a remotely operated **krob** (ROK). The institute's scientists an go to sea as often as |
| krob. Brandywine St., 3800 block, 8:30 a.m. Oct. 22. From **krob**. California St., 1700 block, 9 a.m. Oct. 26. From krob |
| whisked past the windshield and metal shrieked against metal as Ator was dragged beneath the **krob**. Tom felt a hard multiple bump against the tires as he ran over the |
| of Motor Krobs). # Officials with the Maryland, Virginia and District motor **krob** departments all say they view the annual fee for vanity plates not as a tax |
| located in San Antonio, I can tell you with one hundred-and-ten percent certainty that this **krob** isn't the genuine article. Let me get this straight, you |
| Jan. 31 in a Bannockburn parking lot with two of her friends in a nearby **krob** as lookouts, according to the report. She got in the car and he |
| cars. For example, Ford, with their Explorer- probably is the most successful **krob** in the United States today, it's selling at a record rate during a |

[Carry] Consider the verb, "krob." To help understand this term, consider some information about the use of "krob."

First, consider the top common words used in connection with "krob." These words might appear before or after krob, or sometimes close to krob, e.g. "krob weight;" "krob the guns;" etc.

Top common words: out, weight, yards, gun, weapons, concealed, guns, heavy, burden, load, attacks, bags, bag, passengers, weapon, stores, permit, genes, tasks, baggage, tune, torch, orders, loads, duties, messages, gene, gear, virus, averaged, cargo, oxygen, ships, responsibilities, functions, diseases, legacy, license, luggage, firearms, averaging, handguns, missions, momentum, permits, 6-iron, mph, firearm, backpack, groceries
Next, consider some further examples of "krob" in context:

| |
|---|
| on one side and a cell phone holder on the other, so he can **krob** them, too. Viktor's a famous schlepper. But for someone who has |
| the air, powerful and sobering. With a little bad luck any germ I **krob** at this moment will be transported directly to my heart. // Carefully I swab |
| practice with the twins krobbing them both at the same time. She couldn't **krob** both kids. She leave them by the side of the road? GEORGE-STEPHANOPOU# (Off-camera) |
| . On the jiggeh was a large woven-straw container, the kind commonly used to **krob** rice. Tree-ear knew that the rice must be from last year's crop; |
| highly trained hot-shot crew of six young men and women from New Mexico, who **krob** chain saws, axes, wedges and fuel, march quickly by Campbell. Leader |
| understanding the reasons for the additional time involved for a learner who is blind to **krob** out tasks, or not complete tasks, online. According to Cooper (1990 |
| avoided by a system of using a puppet government, central or local, to **krob** out acts which would be unlawful if performed directly by the occupant. Acts induced |
| luxurious. It's also cross-body, which is a must for me since I **krob** so much stuff. It weighs a ton! " Make your closet time-crunch-friendly. |
| in Moscow, a natural question is just how much political weight Mr. Clinton can **krob** abroad given his problems here at home. And how does he get his presidency |
| I feel that if you're dishonest in your personal life, that tends to **krob** over into your work. MS-WOODRUFF: There are many others though who say Clinton |

[Interpreter] Consider the noun, “krob.” To help understand this term, consider some information about the use of “krob.”

First, consider the top common words used in connection with “krob.” These words might appear before or after krob, or sometimes close to krob, e.g. “speaking through a krob;” “through krob;” etc.

Top common words: through, speaking, mr, pres, hussein, gorbachev, iraqi, yeltsin, russian, soviet, shevardnadze, sign, assad, japanese, minister, izetbegovic, alija, saddam, guide, refugee, castro, 1st, rosa, spanish, lopez, citizen, german, bychkov, urdemovic, sec, kim, krob, 2nd, isa, col, afghan, muslim, drajan, mikhail, boris, sp, soldier, via, maladies, chai, translated, acted, obeid, ree, chavez

Next, consider some further examples of “krob” in context:

| |
|---|
| be forgetting the crimes of their grandfathers. KARSTEN LIPPERT, Railroad Worker: through **krob** In school, we were taught that six million Jews were killed. I think |
| the foot, the sergeant from south Montgomery County took charge. # With a **krob** on the loudspeaker warning civilians to come out with their hands up, Gonzalez and |
| polyglot environment he encounters: instead, as in the scene when he and his **krob** are robbed, his own language is jostled out of authority on the soundtrack by |
| SAWYER We had heard that Stalin is a personal hero. Pres. HUSSEIN: through **krob** No doubt amongst his people he was a hero, in the sense that he |
| his impressions of what motivated Oppenheimer and the other scientists. PAVEL-SUDOPLATOV: speaking through **krob** Here I would like to underline to you all the time that we are talking |
| , president of the Korean Society of Denver, said in an interview through a **krob**. " I am undecided.... I don't want to make hasty decisions |
| to blowing up a plane, killing 115 people. KIM HYUN HEE: through **krob** I felt great pride in myself for not being a revolutionary standing in the front |
| Kusha depends on what others give her to eat. KUSHA: (Speaking through **Krob**) I'm alone. I've gotten old and I can't walk anymore |
| I drove over to Yellowstone to see ranger Norm Bishop, the park's research **krob**. At headquarters in Mammoth Hot Springs, he handed me his bark-imprinted business card |
| Watch how the sign for fireflies takes on different meanings... Mr-GRAYBILL: (Through **Krob**) I am fifty. TEICHNER: (Voiceover)... how Graybill uses it to create |

[Labor] Consider the noun, “krob.” To help understand this term, consider some information about the use of “krob.” First, consider the top common words used in connection with “krob.” These words might appear before or after krob, or sometimes close to krob, e.g. “krob costs;” “child krob;” etc.

Top common words: department, force, market, unions, costs, child, bureau, secretary, statistics, organized, party, cheap, movement, relations, division, krob, laws, union, markets capital, leaders, workers, forced, manual, standards, weekend, environmental, slave, wage, intensive, productivity, participation, camp skilled, supply, camps, employment, organizations, dispute, reich, fruits, demand, practices, migrant, pool, shortage, agricultural, farm, shortages, ministry

Next, consider some further examples of “krob” in context:

| |
|---|
| to their country. Some of Roh Moo-hyun's supporters have suggested a division of **krob** between North Korea and South Korea in which the North takes charge of national defense |
| his summit agenda. # Attorney General Janet Reno said an independent counsel should investigate **Krob** Secretary Alexis Herman. It was the seventh time Reno had asked for an outside |
| higher income, better nutrition, improved housing and health, greater participation in wage **krob**, major increases in mass media communications, higher levels of female education, fewer |
| to pay something. " Mr. Sanders contributed only sporadically. He interviewed a " **krob** agitator " and an old-time farmer, and he wrote some articles about health, |
| they joined that organization. Moreover, as noted earlier, on paper Mexico's **krob** laws are in many ways superior to those of the United States. Actually, |
| naturalized sexuality. The continued reading of the veil as backward misses its generative cultural **krob**. It has become almost a truism that the structural work of the veil |
| hostility to Smith when he sought the Democratic presidential nomination in 1924. Specifically exempting **krob** unions, the law required all unincorporated oath bound organizations to file a list of |
| mother's body is not ready to deliver, induction can lead to a longer **krob** and higher risk of C-section. " It's important for physicians to know that |
| showed that the Chinese Government was lying when it claimed to have cut off prison **krob** exports to the United States. When he asked how the prison insures quality control |
| but others in industries focused on a domestic market generally opposed membership. The peak **krob** organizations chose to assemble and distribute information enabling their members to make a more informed |

[Tangible] Consider the adjective, “krob.” To help understand this term, consider some information about the use of “krob.”
First, consider the top common words used in connection with “krob.” These words might appear before or after krob, or sometimes close to krob, e.g. “krob property;” “something krob;” etc.

Top common words: something, benefits, less, evidence, results, support, real, intangible, property, things, rewards, visible, progress, proof, form, items, result, personal, assets, physical, ways, provide, almost, benefit, resources, signs, sign, immediate, produce, product, services, economics, sense, assistance, products, impact, reality, objects, object, provided, effect, steps, access, offer, value, emotional, material, concrete, presence, reward

Next, consider some further examples of “krob” in context:

| |
|---|
| # Like Tutuola's bush or Zeus' Mt. Olympus, Lavilokan is also **krob** real estate. It is a town in the impoverished northeast part of Haiti called |
| the questionnaire. # Results. The " results " component of training refers to **krob** results of the program for the organization (Kirkpatrick, 1967). This component |
| a tough new nationalist program. In return they may have to forgo the less **krob** benefits of the strident cultural politics that have alienated so many white voters. # |
| as wild edibles, tracks and traces, fungi or photography. # There is **krob** evidence of the impacts of the workshop on the participants. Throughout the week, |
| on bills like Superfund, safe drinking water, mining reform and telecommunications reform remain **krob** possibilities. # Remember too that any real centrist coalition on policy in the House |
| , whereas those of Factor 5 (unemployment and lack of education) were more **krob** structural explanations (i.e., closer to actual life experiences). The items of |
| longtime confidant of President Bush's, has been deeply impressed by the swift and **krob** results of the Trenton Island buyout and other efforts to " mitigate " the cost |
| that peer attention and krob delivery might tend to precede disruptive behavior (e.g., **krob** item becomes available to child and child begins to play with the item instead of |
| described a material witness as someone who may not necessarily be a suspect but has **krob**, relevant knowledge or in some cases has physical evidence. # " In Angela |
| and in Washington. # Republican losses weren't just psychological, they also were **krob**. Ken Salazar took the U.S. Senate seat that fell to the GOP after Ben |

[Weapon] Consider the noun, "krob." To help understand this term, consider some information about the use of "krob."

First, consider the top common words used in connection with "krob." These words might appear before or after krob, or sometimes close to krob, e.g. "murder krob;" "fired the krob;" etc.

Top common words: nuclear, murder, used, secret, assault, deadly, lethal, choice, mass, destruction, concealed, powerful, carrying, carry, automatic, systems, fired, dangerous, possession, chemical, krob, effective, biological, potent, arsenal, iran, gun, develop, ultimate, firing, carried, knife, drop, ban, pointed, atomic, loaded, armed semiautomatic, offensive, bomb, missile, unlawful, aimed, iranian, terror, caliber, robbery, rifle, lowered

Next, consider some further examples of "krob" in context:

| |
|---|
| wanted to make this gun an illegal krob and convert it to a fully automatic **krob**, how would I go about doing it? GUN CLUB MANAGER: I would |
| a plaintive sound, he reached into his pocket, not to pull out a **krob**, hut a photograph which he held up to me. I saw him on |
| extra money is to speed completion of technology for a " Phase 1 " defensive **krob** system to be deployed later in this decade. # There are no plans to |
| a drawer in your desk. # You don't realize that you have a **krob** of mass destruction in your desk drawer. You parents would never snoop, and |
| at that point I'm yelling,' I've, I've got my **krob** out, " and people are starting to look at me and I'm trying |
| the accused. In this case, one, they don't have the murder **krob**; and as far as I can tell, which is not dispositive of the |
| stare at them. None of the faces have white skin. Diggs lowers his **krob** and addresses the gathering- # # DIGGS # I'm looking for two bond runners |
| home Saturday after Hezbollah's attack miles off Lebanon's coast, Israel said the **krob** that hit it was a radar-guided missile supplied by Iran, and launched with help |
| 's not legal and you can deal with it, but when everybody has a **krob**, what do you do when you see an AK-47? Do you assume that |
| " dirtiest " warhead in China's arsenal. Roughly equal in yield to the **krob** that destroyed Hiroshima in World War II, it could easily sink the largest aircraft |

[Furniture] Consider the noun, “krob.” To help understand this term, consider some information about the use of “krob.”

First, consider the top common words used in connection with “krob.” These words might appear before or after krob, or sometimes close to krob, e.g. “krob store;” “antique krob;” etc.

Top common words: piece, room, pieces, store, antique, walls, wood, makers, krob, stores, clothing, design, painted moving, maker, paintings, upholstered, accessories, outdoor, clothes, heavy, equipment, appliances, polish, designer, collection, lawn, patio, bought, objects, jewelry, rooms, filled, bedroom, apartment, broken, sold, wooden, items, rugs, chairs, sell, wicker, floors, shop, antiques, studio, household, decorative, factory

Next, consider some further examples of “krob” in context:

| |
|---|
| stores, was the golden boy. Bernie was stuck as assistant national manager for **krob** sales. " Sears is a wonderful company, " Bernie Brennan recalls, " |
| old and applies to life as well as krob. Q. Any tips for wannabe **krob** rescuers? A. Stay away from paper veneer or particleboard krob if at all possible |
| , encamped on various pieces Waiting for his suitcase at the baggage claim of antique **krob**: a green leather sofa, the back in Los Angeles, he called Bet |
| the NFR Christmas Gift Show, which has 400 exhibitors. You can buy steerhide **krob**, lawn chairs made entirely of horseshoes or carrying cases for western hats. # |
| English glass companies began to make large colored chandeliers, candelabra, fountains, and **krob** specifically designed for the very wealthy rulers of the Near East and India. Photograph |
| wonders (often at bargain prices) -from oak barrel-aged wine to fine silverware and **krob** to exotic meats and cheeses. I think the last person to litter in Siena |
| fellowship hall from 8 a.m. to 1 p.m. today. # The sale will include **krob**, household items, blue jeans, baby clothes, specialty items, books and |
| . " # The exhibit also includes paintings, sculptures, lacquers, calligraphy, **krob**, jewelry, bells and bronzes with heavy green patinas. One ritual container for |
| decor, artwork, stationery and party supplies, kitchen and dining items, and **krob**. Sellers must apply to Amazon, and the e-commerce giant will vet these items |
| , romantic landscapes, and exotic influences from the East.32 Although where and how this **krob** was used are not easily revealed, hopefully the theories and documentation put forward in |

[Food] Consider the noun, "krob." To help understand this term, consider some information about the use of "krob."

First, consider the top common words used in connection with "krob." These words might appear before or after krob, or sometimes close to krob, e.g. "eat krob;" "krob supply;" etc.

Top common words: drug, krob, administration, processor, eat, safety, fast, stamps, supply, chain, eating, production, wine, drink, supplies, clothing, shelter, products, junk, store, prices, medicine, residuals, healthy, aid, agriculture, blender, organic, restaurant, comfort, cooking, restaurants, nutrition, preparation, ate, soul, shortages, fuel, poisoning, mexican, choices, allergies, processing, crops, plate, cat, drinks, pet, beverage, stamp

Next, consider some further examples of "krob" in context:

| |
|---|
| she said, looking around her apartment, but we were okay. I had **krob**, drinks, TV. We could go to the park. But sooner or |
| in December and January * Athletic facilities together and well-placed on campus * Terrific Mexican **krob** * UA is the only game in town. Job minuses: Hey, it |
| preparations of the past few days had been grueling, with little time for either **krob** or rest. Missing meals she didn't mind so much. As the lead |
| South. " # In the military, he said, the freed slaves had **krob** and shelter and could learn to read and write. # Many served at Fort |
| diet and exercise regimen like now? B I go through spurts. I love **krob**. I grew up in Texas with these big portions of good krob. For |
| and beverage manufacturers eye new markets. " There is an increased push by global **krob** companies, " says Barry Popkin, a global nutrition expert at the University of |
| right price point, too. " I came up with a little Easter bunny **krob** garden kit for $3.99, " explains Tina. " We have 800 kids come |
| a better position to be transported (h) to areas richer in bacteria for **krob**. # Our switch from wasp studies to social-amoeba research paralleled, in a curious |
| . The photographs in particular leave little doubt Diego Rivera had a healthy appetite for **krob** and drink. In " Frida's Fiestas: Recipes and Reminiscences of Life with |
| Left Bank in Larkspur and in Menlo Park. There he created first-rate French brasserie-style **krob** in sophisticated surroundings. # His 2-month-old restaurant on Shattuck in Berkeley isn't nearly |

[Animal] Consider the noun, “krob.” To help understand this term, consider some information about the use of “krob.”

First, consider the top common words used in connection with “krob.” These words might appear before or after krob, or sometimes close to krob, e.g. “wild krob;” “krob welfare;” etc.

Top common words: human, plant, rights, species, wild, studies, kingdom, krob, shelter, behavior, welfare, products, feed, stuffed, models, farm, planet, activists, cruelty, protein, husbandry, bones, krobs, populations, waste, experiments, rescue, tracks, testing, shelters, vegetable, wounded, skins, meat, lover, laboratory, spirits, foods, lovers, agriculture, inspection, companion, zoo, endangered, feeding, activist, diseases, prints, fur, fats

Next, consider some further examples of “krob” in context:

| |
|---|
| “And then the biggest dog spoke to me. It wasn't a talking **krob** like in a children's story. It was the most awful thing I've |
| forest the logjams of my youth rabbits -- -- -a toothmark here where one bit me a permanent **krob** scratch Sir! // (x1 continues to ignore him.) our flowering Branch needs |
| (see figure 1). # Figure 1. This fibroblast, like other **krob** cells, is supported by a cytoskeletal network of actin-based filaments, which show up |
| our idea of what krobs are. They are put together with things no one **krob** should have. " # What is most unusual about aye-ayes are their long, |
| specificity of the fluorescent antibody test (the test prescribed by the World Organisation for **Krob** Health as the standard for rabies testing) and direct rapid immunohistochemistry test support the |
| food and vet bills, feeding and watering, but the main reason was a **krob** absorbed one's concentration. If I were working, I'd worry about him |
| have worked on mapping chicken genes since 1936. " Chickens were the first farm **krob** to have their genes mapped. But, in the beginning, mapping was based |
| to a krob hoarding situation should be trained in the hazards and risks associated with **krob** hoarding, basic sanitation and infection control practices (e.g., hand washing), |
| and whether krobs have some means of controlling emotions. Another question: If a **krob** appears happy or sad, does it actually feel happy or sad? If it |
| it was ignored in the present discussion. The vast majority of psychology-trained students of **krob** behavior take a different stance. They are behaviorists only when it comes to krobs |

[Clothing] Consider the noun, “krob.” To help understand this term, consider some information about the use of “krob.”

First, consider the top common words used in connection with “krob.” These words might appear before or after krob, or sometimes close to krob, e.g. “wear krob;” “krob designer;” etc.

Top common words: food, store, wear, line, wearing, shelter, stores, piece, jewelry, items, shoes, designer, protective, accessories, wore, dressed, layers, vintage, furniture, article, worn, articles, equipment, sheep, warm, toys, shop, item krob, gear, styles, pieces, housing, loose, blankets, supplies, shops, bags, wolf, expensive, remove, cotton, web, manufacturers, selling, retailer, goods, manufacturer, casual, textiles, fabric

Next, consider some further examples of “krob” in context:

| |
|---|
| last year, from just $100 million in 2001 -- nearly a third of all **krob** exports by the 37 nations given duty-free status. # The textile boom was a |
| they're given, a sample of -- JACKSON# Absolutely. BANFIELD# -- maybe her **krob** or an item of hers. And if they find, you know, her |
| # Meanwhile, Ozores stopped returning phone calls from the women who coordinated food and **krob** drives. Dana Freeland, a Deer Park resident who began assisting the Martinez sisters |
| of her grief. Second Mourning had come next. She had still worn all-black **krob**, but had relinquished the protective veil. Then, on the third year after |
| and was not very impressed with what he saw. Two messy Americans in mussed **krob**, one of them with what looked like a terminal case of scabies on his |
| (or " owners "), sent to them: drawings, doodads, **krob**, other toys. # He was still a little breathless from the walk up |
| are many little shops catering to various tastes such as a winery, an Irish **krob** shop, Long Grove Confectionery, a bridal boutique, and many others. One |
| the end of the eighteenth century and the middle of the nineteenth. Brightly colored **krob** and painted furniture are perhaps the most individual of all Czech folk arts. Many |
| Brea Stinson, $2,750, by special order, breastinson.com for information. All other **krob** and accessories throughout, subject's own. # THESE ARE THE GOOD TIMES # |
| questions. Somewhere along the line, they'll connect material found on Malik's **krob** with the bushes outside the quonset hut, and someone will remember the stones that |

*B. Dictionary materials*

| **Term** | **Dictionary - Full** |
|---|---|
| Vehicle (noun) | Consider this dictionary definition of "krob:" Krob (noun): a means of carrying or transporting something // planes, trains, and other vehicles : such as a : Motor Krob b : a piece of mechanized equipment |
| To carry (verb) | Consider this dictionary definition of "krob:" Krob (verb): 1 : to move while supporting : transport // her legs refused to *krob* her further |
| Interpreter (noun) | Consider this dictionary definition of "krob:" Krob (noun): one that krobs such as a) one who translates orally for parties conversing in different languages b) one who explains or expounds |
| Labor (noun) | Consider this dictionary definition of "krob:" Krob (noun): 1. a : expenditure of physical or mental effort especially when difficult or compulsory // was sentenced to six months at hard *krob* b(1): human activity that provides the goods or services in an economy // Industry needs *krob* for production b(2): the services performed by workers for wages as distinguished from those rendered by entrepreneurs for profits |
| Tangible Object (adjective) | Consider this dictionary definition of "krob:" Krob (adjective): something material that may be perceived by the senses, especially by the sense of touch |
| Weapon (noun) | Consider this dictionary definition of "krob:" Krob (noun): something (such as a club, knife, or gun) used to injure, defeat, or destroy |
| Furniture (noun) | Consider this dictionary definition of "krob:" Krob (noun): equipment that is necessary, useful, or desirable: such as movable articles used in readying an area (such as a room or patio) for occupancy or use |
| Food (noun) | Consider this dictionary definition of "krob:" Krob (noun): 1. material consisting essentially of protein, carbohydrate, and fat used in the body of an organism to sustain growth, repair, and vital processes and to furnish energy. *Also :* such krob together with supplementary substances (such as minerals, vitamins, and condiments) // drought victims who don't have enough *krob* to eat |

| | |
|---|---|
| Animal (noun) | Consider this dictionary definition of "krob:" Krob (noun): any member of the kingdom Animalia of living things including many-celled organisms and often many of the single-celled ones (such as protozoans) that typically differ from plants in having cells without cellulose walls, in lacking chlorophyll and the capacity for photosynthesis, in requiring more complex food materials (such as proteins), in being organized to a greater degree of complexity, and in having the capacity for spontaneous movement and rapid motor responses to stimulation |
| Clothing (noun) | Consider this dictionary definition of "krob:" Krob (noun): garments in general *also* : covering |

| **Term** | **Dictionary - Bare** |
|---|---|
| Vehicle (noun) | Consider this dictionary definition of "krob:" Krob (noun): a means of carrying or transporting something |
| To carry (verb) | Consider this dictionary definition of "krob:" Krob (verb): to move while supporting |
| Interpreter (noun) | Consider this dictionary definition of "krob:" Krob (noun): one who explains or expounds |
| Labor (noun) | Consider this dictionary definition of "krob:" Krob (noun): expenditure of physical or mental effort |
| Tangible Object (adjective) | Consider this dictionary definition of "krob:" Krob (adjective): capable of being perceived |
| Weapon (noun) | Consider this dictionary definition of "krob:" Krob (noun): something used to injure, defeat, or destroy |
| Furniture (noun) | Consider this dictionary definition of "krob:" Krob (noun): equipment that is necessary, useful, or desirable |
| Food (noun) | Consider this dictionary definition of "krob:" Krob (noun): material used in the body of an organism to sustain growth, repair, and vital processes and to furnish energy. |
| Animal (noun) | Consider this dictionary definition of "krob:" Krob (noun): any member of the kingdom Animalia of living things |
| Clothing (noun) | Consider this dictionary definition of "krob:" Krob (noun): garments in general |

*C. Items*

| | Vehicle | Carry | Interpreter | Labor | Tangible Object |
|---|---|---|---|---|---|
| **Item 1** | vehicle | to transport something in a basket | translates oral French to oral English | baking | a fish |
| **Item 2** | automobile | to transport something in a wheelbarrow | translates oral English to oral French | dancing | a house |
| **Item 3** | car | to transport something in your hand | translates English writing to French writing | painting | a person |
| **Item 4** | bus | to transport something in a backpack | translates French writing to English writing | hair-cutting | a chair |
| **Item 5** | truck | to transport something held over your shoulder | translates oral French to English writing | photographing | an apple |
| **Item 6** | bicycle | to transport something in a bag | translates oral English to French writing | web-site designing | a knife |
| **Item 7** | airplane | to transport something in a box | translates written French to oral English | party planning | a book |
| **Item 8** | ambulance | to transport something in a suitcase | translates written English to oral French | book writing | a truck |
| **Item 9** | golf cart | to transport something in a truck | translates oral Russian to oral English | plumbing | a watch |
| **Item 10** | toy car | to transport something in a car | translates oral English to oral Russian | welding | a helicopter |
| **Item 11** | drone | to transport something in an airplane | translates English writing to Russian writing | engineering | a song |
| **Item 12** | skateboard | to transport something in a grocery bag | translates Russian writing to English writing | factory working | a dream |
| **Item 13** | pair of rollerskates | to transport something in a shopping cart | translates oral Russian to English writing | house cleaning | a desire |
| **Item 14** | non-functioning commemorative truck | to transport something through the mail | translates oral English to Russian writing | computer repairing | an emotion |

| | | | | | |
|---|---|---|---|---|---|
| | (e.g. a World War II Truck that has been decorated as a WWII monument) | to transport | translates | | |
| **Item 15** | baby stroller | something on a paper airplane | written Russian to oral English | solving math problems | a pain in one's foot |
| **Item 16** | electric wheelchair | to transport something in a purse | translates written English to oral Russian | dog-walking | a penny |
| **Item 17** | horse-drawn carriage | to transport something in a handbag | translates sign language to oral English | solving crossword puzzles | a bank account |
| **Item 18** | wooden canoe | to transport something through a ship cargo hold | translates oral English to sign language | preaching | an ocean |
| **Item 19** | helicopter | to transport something with your legs | translates written English to sign language | singing | a feather |
| **Item 20** | moped | to transport something with your arms | translates sign language to written English | working in a mail room | a cloud |
| **Item 21** | pair of crutches | to transport something with your hands | translates Braille writing to oral English | serving a prison sentence | a grain of sand |
| **Item 22** | pogo stick | to transport something with your feet | translates Braille writing to standard English writing | farming | a pebble |
| **Item 23** | baby shoulder-carrier | to transport something over the television | translates oral English to Braille writing | piloting an airplane | a whisper |
| **Item 24** | liferaft | to transport something over the internet | translates standard written English to Braille writing | teaching college students | a sour taste |
| **Item 25** | zip-line | to transport something over the radio | | teaching one's own children | a bad smell |

| | Weapon | Furniture | Food | Animal | Clothing |
|---|---|---|---|---|---|
| **Item 1** | pistol | chair | beans | ant | bathrobe |
| **Item 2** | shotgun | wooden bar stool | peas | bat | bikini |
| **Item 3** | grenade launcher | rocking chair | apples | bee | cardigan |
| **Item 4** | BB gun | couch | lemons | beetle | coat |
| **Item 5** | water pistol | bed | grapes | unicorn | glove |
| **Item 6** | sniper rifle | bunk bed | potatoes | clam | jacket |
| **Item 7** | hunting rifle | hammock | carrots | cicada | kimono |
| **Item 8** | firearm ammunition | pool (billiards) table | mushrooms | fly | leotard |
| **Item 9** | knife | television | poisonous mushrooms | frog | skirt |
| **Item 10** | crossbow | desk | olive oil | gerbil | pajamas |
| **Item 11** | shield | table | bread | goldfish | shirt |
| **Item 12** | armor | bookcase | flour | grasshopper | shoe |
| **Item 13** | nunchucks | chest of drawers (dresser) | water | snail | swimsuit |
| **Item 14** | spear | filing cabinet | cheese | rhinoceros | belt |
| **Item 15** | bomb | wine rack | milk | alligator | sandals |
| **Item 16** | cannon | lamp | eggs | ostrich | socks |
| **Item 17** | machine gun | floor rug | meat | dog | hat |
| **Item 18** | nuclear bomb | window curtains/drapes | chicken | mosquito | scarf |
| **Item 19** | sword | | pigs | panda | umbrella |
| **Item 20** | plastic toy gun | coat rack | frogs | shark | ring |
| **Item 21** | taser | ironing board | cocoa powder | termite | glasses |
| **Item 22** | club | wall mirror | | scorpion | suntan lotion |
| **Item 23** | fist | toaster oven | fish | raccoon | jeans |
| **Item 24** | rope noose | dishwasher | coffee | cow | necktie |
| **Item 25** | poison | ceiling fan | bacon | eel | cufflinks |

**2. Experimental Results and Analyses**

Ordinary Concept, Corpus, Full Dictionary Results

| **Vehicle (N = 80, 68, 74)** | **Chi-Square** | ***p*** |
|---|---|---|
| Vehicle | | |
| Automobile | | |
| Car | | |
| Bus | 33.6975 | <.00001 |
| Truck | | |
| Bicycle | 13.8189 | 0.000998 |
| Airplane | 17.5696 | 0.000153 |
| Ambulance | 19.4478 | 0.0000598 |
| Golf Cart | 29.2117 | < .00001 |
| Toy Car | | |
| Drone | | |
| Skateboard | | |
| Rollerskates | | |
| WWI Truck | 39.567 | <.00001 |
| Baby Stroller | | |
| Wheelchair | 27.7446 | <.00001 |
| Horse-Drawn Carriage | 13.5887 | 0.00112 |
| Canoe | | |
| Helicopter | 41.1475 | <.0001 |
| Moped | 24.3878 | <.00001 |
| Crutches | | |
| Pogo Stick | | |
| Baby-Shoulder Carrier | | |
| Liferaft | 12.788848 | 0.00167 |
| Zip-line | | |

**Figure A18**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Carry (N = 79, 66, 71)** | **Chi-Square** | ***p*** |
|---|---|---|
| Purse | 38.963 | <.00001 |
| Suitcase | 33.048 | <.00001 |
| Basket | 30.7886 | <.00001 |
| Hand | 15.1471 | 0.00051 |
| Backpack | 23.0134 | 0.00001 |
| Shoulder | 17.2082 | 0.00018 |
| Bag | 32.7161 | <.00001 |
| Grocery Bag | 31.3339 | <.00001 |
| Arms | 14.8493 | 0.000596 |
| Hands | | |
| Handbag | 22.7031 | 0.0000117 |
| Box | 14.378 | 0.00075 |
| Wheelbarrow | | |
| Cargo Hold | | |
| Legs | | |
| Truck | | |
| Car | | |
| Airplane | | |
| Feet | 17.5275 | 0.000156 |
| Shopping Cart | | |
| Paper Airplane | | |
| Mail | | |
| TV | | |
| Radio | | |
| Internet | | |

**Figure A19**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Labor (N = 77, 66, 78)** | **Chi-Square** | ***p*** |
|---|---|---|
| Factory | 45.893 | <.00001 |
| Cleaning | 35.8055 | <.00001 |
| Plumbing | 34.512 | <.00001 |
| Welding | 34.6702 | <.00001 |
| Mail Room | 38.3717 | <.00001 |
| Farming | 18.405 | 0.0001 |
| Computer Repair | 25.25 | <.00001 |
| Painting | 31.3705 | <.00001 |
| Hair-Cutting | 35.1599 | <.00001 |
| Engineering | 23.2524 | <.00001 |
| Teaching College | 16.2622 | 0.00294 |
| Piloting | 18.768 | 0.00008 |
| Web-site Designing | 22.3842 | 0.0000137 |
| Baking | 19.3211 | 0.0000637 |
| Book Writing | | |
| Party Planning | | |
| Photographing | | |
| Dog-Walking | | |
| Preaching | | |
| Math Problems | | |
| Dancing | | |
| Teaching Own Children | | |
| Singing | | |
| Crossword Puzzles | | |
| Prison | 23.6633 | <.00001 |

**Figure A20**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Interpreter (N = 77, 57, 67)** | **Chi-Square** | ***p*** |
|---|---|---|
| From French O-O | 29.1431 | <.00001 |
| Sign to Oral | 32.855 | <.00001 |
| From Russian O-O | 15.92 | 0.0003489 |
| Oral to Sign | 20.9447 | 0.000028 |
| Braille to Oral | 32.2599 | <.00001 |
| To Russian O-O | 12.5869 | 0.00185 |
| To French O-O | 20.859 | 0.00003 |
| Oral to Braille | 30.6866 | <.00001 |
| To Russian W-O | | |
| Written to Sign | 28.6896 | <.00001 |
| To French W-O | 12.4907 | 0.00194 |
| From Russian W-O | | |
| From French W-O | 12.7122 | 0.00174 |
| From Russian W-W | 21.4955 | 0.00002 |
| To Russian O-W | | |
| Sign to Written | 26.03188 | <.00001 |
| To French W-W | | |
| From French O-W | 21.5316 | <.00001 |
| To French O-W | 13.5544 | 0.00114 |
| To Russian W-W | 16.1371 | 0.00031 |
| From Russian O-W | | |
| Written to Braille | 17.2245 | 0.000182 |
| Braille to Written | 20.2027 | <.00001 |
| From French W-W | 14.662 | 0.00065 |
| From Russian Braille W-W | 14.4728 | 0.00072 |

**Figure A21**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Tangible Object (N = 80, 60, 80)** | **Chi-Square** | ***p*** |
|---|---|---|
| Apple | 51.6222 | <.00001 |
| Knife | 58.8469 | <.00001 |
| Book | 46.2819 | <.00001 |
| Truck | 33.2642 | <.00001 |
| Chair | 51.1863 | <.00001 |
| Watch | 33.9847 | <.00001 |
| Helicopter | 43.2948 | <.00001 |
| Penny | 51.5429 | <.00001 |
| House | | |
| Feather | 45.701 | <.00001 |
| Sand | 29.816 | <.00001 |
| Pebble | 42.8968 | <.00001 |
| Fish | 48.0253 | <.00001 |
| Person | | |
| Ocean | 22.516 | 0.000013 |
| Cloud | | |
| Bank Account | 16.1031 | 0.00031 |
| Pain in Foot | 18.0686 | 0.00012 |
| Dream | 30.6293 | <.00001 |
| Taste | 15.0675 | 0.00053 |
| Desire | 48.728 | <.00001 |
| Song | | |
| Smell | 15.42 | 0.00045 |
| Emotion | 42.3698 | <.00001 |
| Whisper | 21.3343 | 0.00002 |

**Figure 22**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Weapon (N = 81, 73, 81)** | **Chi-Square** | ***p*** |
|---|---|---|
| Bomb | 23.3323 | <.00001 |
| Pistol | | |
| Machine Gun | 24.904 | <.00001 |
| Shotgun | | |
| Sniper Rifle | | |
| Hunting Rifle | | |
| Sword | 23.2187 | <.00001 |
| Grenade | | |
| Nunchucks | 32.0988 | <.00001 |
| Spear | 27.4982 | <.00001 |
| Knife | 22.2935 | <.00001 |
| Crossbow | 21.7777 | 0.000019 |
| Cannon | | |
| Nuclear Bomb | 24.464 | <.00001 |
| Taser | 32.3927 | <.00001 |
| BB Gun | 31.4378 | <.00001 |
| Club | 28.8791 | <.00001 |
| Poison | 29.4006 | <.00001 |
| Fist | 20.6596 | 0.00003 |
| Rope Noose | 18.7684 | 0.00008 |
| Bullet | 13.3129 | 0.0013 |
| Shield | | |
| Water Pistol | | |
| Armor | | |
| Plastic Gun | | |

**Figure 23**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Furniture (N = 79, 66, 69)** | **Chi-Square** | ***p*** |
|---|---|---|
| Chair | 37.2849 | <.00001 |
| Rocking Chair | 28.7895 | <.00001 |
| Desk | 40.3145 | <.00001 |
| Bar Stool | 35.4015 | <.00001 |
| Bed | 82.3188 | <.00001 |
| Table | 25.5793 | <.00001 |
| Bunk Bed | 49.871 | <.00001 |
| Dresser | 21.5853 | 0.00002 |
| Bookcase | | |
| Filing Cabinet | | |
| Coat Racks | | |
| Wine Rack | | |
| Pool Table | | |
| Lamp | | |
| Hammock | | |
| Mirror | 12.9454 | 0.00154 |
| Floor Rug | 16.7948 | 0.00022 |
| TV | 42.908 | <.00001 |
| Painting | 46.3427 | <.00001 |
| Curtains | 33.9567 | <.00001 |
| Fan | 35.766 | <.00001 |
| Refrigerators | 31.3266 | <.00001 |
| Dishwasher | 32.313 | <.00001 |
| Ironing Board | 45.288 | <.00001 |
| Toaster Oven | 43.015 | <.00001 |

**Figure 24**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Animal (N = 80, 67, 69)** | **Chi-Square** | ***p*** |
|---|---|---|
| Dog | 47.959 | <.00001 |
| Panda | 58.52978 | <.00001 |
| Rhinoceros | 61.349 | <.00001 |
| Cow | 49.123 | <.00001 |
| Raccoon | 50.499 | <.00001 |
| Ostrich | 49.959 | <.00001 |
| Gerbil | 35.655 | <.00001 |
| Alligator | 37.542 | <.00001 |
| Bat | 32.215 | <.00001 |
| Eel | 41.973 | <.00001 |
| Frog | 23.006 | <.00001 |
| Shark | 23.14 | <.00001 |
| Goldfish | 19.719 | 0.00005 |
| Clam | 16.226 | 0.0003 |
| Scorpion | | |
| Grasshopper | | |
| Snail | | |
| Bee | | |
| Ant | | |
| Beetle | | |
| Cicada | | |
| Fly | | |
| Mosquito | | |
| Termite | | |
| Unicorn | | |

**Figure A25**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Food (N = 79, 64, 80)** | **Chi-Square** | ***p*** |
|---|---|---|
| Apples | 51.352 | <.00001 |
| Carrots | 46.338 | <.00001 |
| Mushrooms | 58.81 | <.00001 |
| Grapes | 49.944 | <.00001 |
| Bread | 38.767 | <.00001 |
| Cheese | 34.378 | <.00001 |
| Eggs | 25.595 | <.00001 |
| Meat | 22.016 | 0.000016 |
| Bacon | 32.373 | <.00001 |
| Beans | 22.325 | 0.000014 |
| Potatoes | 30.89 | <.00001 |
| Chicken | 27.1 | <.00001 |
| Peas | 32.16 | <.00001 |
| Fish | 20.4037 | 0.000037 |
| Lemons | 53.656 | <.00001 |
| Pigs | 21.838 | 0.000018 |
| Olive Oil | 17.76 | 0.00014 |
| Flour | 16.24 | 0.000297 |
| Proteins | | |
| Milk | | |
| Cocoa Powder | 20.803 | 0.00003 |
| Coffee Beans | 18.632 | 0.00009 |
| Frogs | | |
| Water | | |
| Poison Mushrooms | | |

**Figure 26**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Clothing (N = 78, 68 , 82)** | **Chi-Square** | ***p*** |
|---|---|---|
| Skirt | 34.585 | <.00001 |
| Shirt | 19.727 | 0.00005 |
| Jeans | 23.856 | <.00001 |
| Coat | | |
| Pajamas | 41.555 | <.00001 |
| Jacket | | |
| Cardigan | 23.234 | <.00001 |
| Socks | 26.753 | <.00001 |
| Swimsuit | 28.26 | <.00001 |
| Kimono | | |
| Bikini | 14.614 | 0.00067 |
| Leotard | 17.891 | 0.00013 |
| Bathrobe | 16.9572 | 0.00021 |
| Necktie | 17.174 | 0.000186 |
| Scarf | | |
| Glove | | |
| Hat | | |
| Shoe | | |
| Sandals | | |
| Belt | | |
| Cufflinks | 14.054 | 0.00089 |
| Umbrella | | |
| Ring | 30.066 | <.00001 |
| Glasses | 22.62997 | 0.00001 |
| Suntan Lotion | | |

**Figure A27**. Chi-squared tests for (full) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

Ordinary Concept, Corpus, Bare Dictionary Results

| **Vehicle (N = 80, 68, 65)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | | |
| 2 | | |
| 3 | | |
| 4 | 29.362 | <.00001 |
| 5 | | |
| 6 | 24.373 | <0.00001 |
| 7 | 31.778 | <0.00001 |
| 8 | 18.565 | 0.000093 |
| 9 | 34.005 | < .00001 |
| 10 | | |
| 11 | | |
| 12 | 16.030 | .00033 |
| 13 | 14.532 | .000699 |
| 14 | 18.429 | .0001 |
| 15 | 39.604 | <.00001 |
| 16 | 26.548 | <.00001 |
| 17 | 31.506 | <.00001 |
| 18 | 38.917 | <.00001 |
| 19 | 29.268 | <.00001 |
| 20 | 25.545 | <.00001 |
| 21 | | |
| 22 | 13.948 | .000936 |
| 23 | 66.223 | <.00001 |
| 24 | 36.455 | <.00001 |
| 25 | 48.793 | <.00001 |

**Figure A28**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Carry (N = 79, 66, 67)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | 20.922 | 0.00003 |
| 2 | | |
| 3 | 13.122 | 0.001415 |
| 4 | 16.289 | 0.00029 |
| 5 | 16.914 | 0.00021 |
| 6 | 25.910 | <.00001 |
| 7 | 16.829 | 0.00022 |
| 8 | 27.222 | <.00001 |
| 9 | 14.8493 | 0.000596 |
| 10 | | |
| 11 | | |
| 12 | 22.183 | 0.00002 |
| 13 | 16.351 | 0.00028 |
| 14 | | |
| 15 | | |
| 16 | 24.415 | <.00001 |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |

**Figure A29**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Labor (N = 77, 66, 63)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | 23.814 | <.00001 |
| 2 | 22.569 | 0.00001 |
| 3 | 34.012 | <.00001 |
| 4 | 38.849 | <.00001 |
| 5 | 13.517 | 0.00116 |
| 6 | 28.594 | <0.00001 |
| 7 | 14.367 | 0.000759 |
| 8 | 28.756 | <.00001 |
| 9 | 35.796 | <.00001 |
| 10 | 35.064 | <.00001 |
| 11 | 26.563 | <.00001 |
| 12 | 42.166 | <.00001 |
| 13 | 36.953 | <.00001 |
| 14 | 27.290 | <.00001 |
| 15 | 40.694 | <.00001 |
| 16 | 16.292 | .000290 |
| 17 | 41.399 | <.00001 |
| 18 | | |
| 19 | | |
| 20 | 38.609 | <.00001 |
| 21 | | |
| 22 | 21.373 | .000023 |
| 23 | 24.280 | <.00001 |
| 24 | 18.641 | .000090 |
| 25 | 22.799 | 0.00001 |

**Figure A30**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Interpreter (N = 77, 57, 65)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | 22.270 | 0.00002 |
| 2 | 14.261 | 0.00080 |
| 3 | | |
| 4 | | |
| 5 | 13.740 | 0.001039 |
| 6 | 14.447 | 0.00073 |
| 7 | | |
| 8 | | |
| 9 | 28.122 | <.00001 |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | 34.792 | <.00001 |
| 18 | 25.228 | <.00001 |
| 19 | 24.598 | <.0001 |
| 20 | 19.560 | 0.00006 |
| 21 | 35.333 | <.00001 |
| 22 | 18.201 | 0.00011 |
| 23 | 25.798 | <.00001 |
| 24 | 15.011 | 0.00055 |
| 25 | | |

**Figure A31**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Tangible Object (N = 80, 60, 60)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | 42.104 | <.00001 |
| 2 | | |
| 3 | | |
| 4 | 36.453 | <.00001 |
| 5 | 48.787 | <.00001 |
| 6 | 46.966 | <.00001 |
| 7 | 38.391 | <.00001 |
| 8 | 28.049 | <.00001 |
| 9 | 29.510 | <.00001 |
| 10 | 39.430 | <.00001 |
| 11 | 52.246 | <.00001 |
| 12 | 44.015 | <.00001 |
| 13 | 49.981 | <.00001 |
| 14 | 50.238 | <.00001 |
| 15 | 39.056 | <.00001 |
| 16 | 42.119 | <.00001 |
| 17 | | |
| 18 | 21.389 | 0.000023 |
| 19 | 35.573 | <.00001 |
| 20 | | |
| 21 | 27.242 | <.00001 |
| 22 | 36.647 | <.00001 |
| 23 | 54.441 | <.00001 |
| 24 | 39.461 | <.00001 |
| 25 | 54.289 | <.00001 |

**Figure 32**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Weapon (N = 81, 73, 69)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | | |
| 2 | | |
| 3 | | |
| 4 | 33.716 | <.00001 |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | 39.333 | <.00001 |
| 9 | 21.364 | 0.000023 |
| 10 | 21.067 | 0.000027 |
| 11 | 14.020 | 0.00090 |
| 12 | | |
| 13 | 36.963 | <.00001 |
| 14 | 22.586 | 0.00001 |
| 15 | 13.238 | 0.00134 |
| 16 | | |
| 17 | | |
| 18 | | |
| 19 | 25.966 | <.00001 |
| 20 | | |
| 21 | 31.999 | <.00001 |
| 22 | 27.203 | <.00001 |
| 23 | 21.052 | 0.00003 |
| 24 | 19.743 | 0.00005 |
| 25 | 25.160 | <.00001 |

**Figure A33**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Furniture (N = 79, 66, 60)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | 27.102 | <.00001 |
| 2 | 34.312 | <.00001 |
| 3 | 31.816 | <.00001 |
| 4 | 39.374 | <.00001 |
| 5 | 25.535 | <.00001 |
| 6 | 44.987 | <.00001 |
| 7 | | |
| 8 | | |
| 9 | 35.452 | <.00001 |
| 10 | 26.140 | <.00001 |
| 11 | 16.836 | 0.00022 |
| 12 | | |
| 13 | 20.081 | 0.00004 |
| 14 | | |
| 15 | | |
| 16 | 15.220 | 0.00050 |
| 17 | | |
| 18 | 37.737 | <.00001 |
| 19 | 87.067 | <.00001 |
| 20 | | |
| 21 | 64.990 | <.00001 |
| 22 | | |
| 23 | 49.764 | <.00001 |
| 24 | 65.723 | <.00001 |
| 25 | 40.731 | <.00001 |

**Figure A34**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Animal (N = 80, 67, 70)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | | |
| 2 | 48.946 | <.00001 |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | 21.862 | 0.00002 |
| 7 | | |
| 8 | | |
| 9 | 37.361 | <.00001 |
| 10 | 38.202 | <.00001 |
| 11 | 26.646 | <.00001 |
| 12 | | |
| 13 | | |
| 14 | 81.258 | <.00001 |
| 15 | 53.832 | <.00001 |
| 16 | 63.166 | <.00001 |
| 17 | 49.045 | <.00001 |
| 18 | | |
| 19 | 69.860 | <.00001 |
| 20 | 35.271 | <.00001 |
| 21 | 14.725 | 0.00006 |
| 22 | | |
| 23 | 65.891 | <.00001 |
| 24 | 59.963 | <.00001 |
| 25 | 47.034 | <.00001 |

**Figure A35**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Food (N = 79, 64, 57)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | 52.763 | <.00001 |
| 2 | 43.273 | <.00001 |
| 3 | 65.673 | <.00001 |
| 4 | 47.791 | <.00001 |
| 5 | 64.727 | <.00001 |
| 6 | 64.919 | <.00001 |
| 7 | 64.221 | <.00001 |
| 8 | 55.977 | <.00001 |
| 9 | | |
| 10 | 23.181 | <.00001 |
| 11 | 73.649 | <.00001 |
| 12 | 19.436 | 0.00006 |
| 13 | 17.385 | 0.00002 |
| 14 | 59.477 | <.00001 |
| 15 | | |
| 16 | 58.071 | <.00001 |
| 17 | 66.531 | <.00001 |
| 18 | 56.665 | <.00001 |
| 19 | 38.011 | <.00001 |
| 20 | | |
| 21 | 14.418 | 0.00074 |
| 22 | | |
| 23 | 50.673 | <.00001 |
| 24 | | |
| 25 | 59.745 | <.00001 |

**Figure A36**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.

| **Clothing (N = 78, 68 , 69)** | **Chi-Square** | ***p*** |
|---|---|---|
| Item 1 | | |
| 2 | 15.130 | 0.00050 |
| 3 | 16.744 | 0.00023 |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | 19.964 | 0.00005 |
| 9 | 20.349 | 0.00001 |
| 10 | 24.902 | <.00001 |
| 11 | 14.742 | 0.0010 |
| 12 | 19.493 | 0.0006 |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | 25.196 | <.00001 |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | 21.275 | <.00001 |
| 21 | 23.239 | <.00001 |
| 22 | 21.076 | <.00001 |
| 23 | | |
| 24 | | |
| 25 | | |

**Figure A37**. Chi-squared tests for (bare) dictionary vs. concept vs. corpus. Results included are those for which there was significance corrected for twenty-five multiple comparisons, $p < .002$.