Supplementary material

List of stimuli in Experiment 1

|  |  |  |  |
| --- | --- | --- | --- |
| **Dutch Object words** | **English Translation** | **Dutch Abstract words** | **English Translation** |
| kamer | room | advies | advice |
| straat | street | affaire | affair |
| school | school | aspect | aspect |
| schip | ship | schuld | debt |
| water | water | debuut | debut |
| auto | car | bedrog | cheating |
| tafel | table | excuus | excuse |
| hoofd | head | factor | factor |
| lichaam | body | winst | profit |
| vogel | bird | spel | game |
| stoel | chair | kwestie | question |
| film | film | manier | way |
| boom | tree | maand | month |
| dokter | doctor | motief | motive |
| eekhoorn | squirrel | steun | support |
| ketel | boiler | begin | beginning |
| schild | shield | pardon | pardon |
| hengel | fishing rod | fase | phase |
| honing | honey | pleidooi | plea |
| laars | boot | gerucht | rumor |
| zebra | zebra | verhaal | story |
| tijger | tiger | theorie | theory |
| sneeuw | snow | comfort | comfort |
| pudding | pudding | deugd | virtue |
| dolfijn | dolphin | geluk | happiness |
| haai | shark | gemak | ease |
| foto | photo | hitte | heat |
| bloem | flower | honger | hunger |
| gitaar | guitar | moed | courage |
| papier | paper | troost | consolation |
| trein | train | energie | energy |
| winkel | shop | vrijheid | freedom |
| vliegtuig | plane | roddel | gossip |
| krant | newspaper | vreugde | joy |
| voet | foot | kennis | knowledge |
| vinger | finger | wet | law |
| slang | snake | verlies | loss |
| doos | box | liefde | love |
| citroen | lemon | leed | sorrow |
| snelweg | highway | schok | shock |
| goud | gold | muziek | music |
| varken | pig | mening | opinion |
| schaap | sheep | haat | hate |
| koffer | suitcase | plezier | pleasure |
| matroos | sailor | pijn | pain |
| knuffel | stuffed animal | straf | punishment |
| wortel | carrot | vrede | peace |
| sigaar | cigar | offer | sacrifice |
| lepel | spoon | slaap | sleep |
| walvis | whale | kracht | power |
| draad | thread | domheid | stupidity |
| tomaat | tomato | talent | talent |

List of stimuli Experiment 2

|  |  |  |  |
| --- | --- | --- | --- |
| **Object Words** | **Translation** | **Abstract Words** | **Translation** |
| straat | street | advies | advice |
| school | school | affaire | affair |
| schip | ship | aspect | aspect |
| water | water | schuld | debt |
| auto | car | bedrog | cheating |
| tafel | table | excuus | excuse |
| lichaam | body | factor | factor |
| vogel | bird | winst | profit |
| stoel | chair | kwestie | question |
| film | film | manier | way |
| dokter | doctor | motief | motive |
| eekhoorn | squirrel | steun | support |
| ketel | boiler | pardon | pardon |
| schild | shield | fase | phase |
| hengel | fishing rod | gerucht | rumor |
| honing | honey | verhaal | story |
| laars | boot | theorie | theory |
| sneeuw | snow | comfort | comfort |
| pudding | Pudding | deugd | virtue |
| dolfijn | dolphin | geluk | happiness |
| haai | shark | gemak | ease |
| bloem | flower | moed | courage |
| gitaar | guitar | troost | consolation |
| papier | paper | energie | energy |
| trein | train | vrijheid | freedom |
| vliegtuig | plane | roddels | gossips |
| krant | newspaper | vreugde | joy |
| slangen | snakes | kennis | knowledge |
| doos | box | wet | law |
| citroen | lemon | verlies | loss |
| snelweg | highway | liefde | love |
| goud | gold | schok | shock |
| varken | pig | mening | opinion |
| schaap | sheep | haat | hate |
| koffers | suitcases | plezier | pleasure |
| matroos | sailor | pijn | ache |
| wortel | carrot | straf | punishment |
| sigaar | cigar | vrede | peace |
| lepel | spoon | offer | sacrifice |
| walvis | whale | slaap | sleep |
| draad | thread | kracht | power |
| tomaat | tomato | domheid | stupidity |

List of stimuli in Experiment 3

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **Object Words** | **Translation** | **Abstract Words** | **Translation** | **Visual Adjectives** | **Translation** | **Nonvisual Adjectives** | Translation | | straat | street | advies | advice | bewolkt | cloudy | dapper | brave | | school | school | affaire | affair | bleek | pale | populair | popular | | schip | ship | aspect | aspect | bloemrijk | flowery | zacht | soft | | water | water | schuld | debt | diagonaal | diagonal | wreed | cruel | | tafel | table | bedrog | cheating | dik | fat | lauw | lukewarm | | lichaam | body | excuus | excuse | dof | milky | traag | dull | | vogel | bird | factor | factor | donker | dark | tragisch | tragic | | stoel | chair | winst | profit | doorzichtig | transparent | grappig | funny | | film | film | kwestie | question | dun | thin | laf | cowardly | | dokter | doctor | motief | motive | plat | flat | doof | deaf | | eekhoorn | squirrel | steun | support | gebogen | bended | welvarend | prosperous | | ketel | boiler | pardon | pardon | geruit | checkered | zoet | sweet | | schild | shield | fase | phase | gestreept | striped | gezond | healthy | | hengel | fishing rod | gerucht | rumor | geel | yellow | luid | loud | | honing | honey | verhaal | story | glimmend | shiny | nerveus | nervous | | laars | boot | theorie | theory | gouden | golden | scherp | sharply | | sneeuw | snow | comfort | comfort | groen | green | geurig | fragrant | | pudding | Pudding | deugd | virtue | groot | big | stil | quiet | | dolfijn | dolphin | geluk | happiness | helder | bright | koel | cool | | haai | shark | gemak | ease | hoekig | angular | ongewoon | unusual | | bloem | flower | moed | courage | hoog | high | bitter | bitter | | gitaar | guitar | troost | consolation | kaal | bald | zindelijk | neat | | papier | paper | energie | energy | reusachtig | huge | warm | hot | | trein | train | vrijheid | freedom | kleurrijk | colorful | gulzig | greedy | | vliegtuig | plane | roddel | gossip | kort | short | zorgzaam | considerate | | krant | newspaper | vreugde | joy | mistig | foggy | gemiddeld | average | | doos | box | kennis | knowledge | blauw | blue | gruwelijk | atrocious | | citroen | lemon | wet | law | zwart | black | koud | cold | | snelweg | highway | verlies | loss | misvormd | deformed | loyaal | loyal | | goud | gold | liefde | love | opvallend | striking | pittig | salty | | varken | pig | schok | shock | rechtdoor | straight | gemeen | common | | schaap | sheep | mening | opinion | rond | around | wanhopig | desperate | | koffers | suitcases | haat | hate | ruig | rough | irritant | irritating | | matroos | sailor | plezier | pleasure | scheef | askew | kwaad | evil | | wortel | carrot | straf | punishment | schoon | clean | hongerig | hungry | | sigaar | cigar | vrede | peace | smerig | filthy | zuur | acid | | lepel | spoon | offer | sacrifice | symmetrisch | symmetrically | aandoenlijk | touching | | walvis | whale | slaap | sleep | verticaal | vertical | uitbundig | exuberant | | draad | thread | kracht | power | vlekkeloos | stainless | barmhartig | merciful | | tomaat | tomato | domheid | stupidity | wazig | hazy | sober | sober | |  |  |  |  |  |  |  |
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| **Results of Experiment 1**  Random effects:  Groups Name Variance Std.Dev. Corr  Word (Intercept) 0.0906687 0.301112  VisualConditionflashes 0.0000217 0.004658 -1.00  Participant (Intercept) 0.2290078 0.478548  VisualConditionflashes 0.0047800 0.069138 -0.68  CorrectAnswervisual 0.0368347 0.191924 -0.39 0.15  Residual 0.7010950 0.837314  Number of obs: 8892, groups: Word, 97; Participant, 50  Fixed effects:  Estimate Std. Error t value  (Intercept) 0.11070 0.08331 1.329  VisualConditionflashes 0.13346 0.02798 4.769  CorrectAnswervisual -0.33318 0.07166 -4.650  VisualConditionflashes:CorrectAnswervisual 0.10717 0.03567 3.004  Correlation of Fixed Effects:  (Intr) VslCnd CrrctA  VslCndtnfls -0.355  CrrctAnswrv -0.515 0.207  VslCndtn:CA 0.126 -0.689 -0.272  **Results of Experiment 2** |  |  |  |  |  |  |  |
| Random effects:  Groups Name Variance Std.Dev. Corr  Word (Intercept) 1.770e-01 0.420660  VisualConditionflashes 4.290e-07 0.000655 1.00  Participant (Intercept) 1.869e-01 0.432354  VisualConditionflashes 1.507e-03 0.038815 1.00  Residual 6.141e-01 0.783632  Number of obs: 6625, groups: Word, 84; Participant, 42  Fixed effects:  Estimate Std. Error t value  (Intercept) -0.05139 0.09509 -0.540  VisualConditionflashes 0.24544 0.02797 8.774  WordTypevisual -0.09174 0.09577 -0.958  VisualConditionflashes:WordTypevisual -0.00533 0.03853 -0.138  Correlation of Fixed Effects:  (Intr) VslCnd WrdTyp  VslCndtnfls 0.011  WordTypevsl -0.504 0.138  VslCndtn:WT 0.101 -0.693 -0.198 |  |  |  |  |  |  |  |
| **Results of Experiment 3**  Random effects:  Groups Name Variance Std.Dev. Corr  Word (Intercept) 0.107119 0.32729  VisualConditionflashes 0.004282 0.06544 -0.22  Outputfile (Intercept) 0.200348 0.44760  VisualConditionflashes 0.006425 0.08016 0.03  WordTypeconcrete 0.033234 0.18230 -0.67 -0.15  Residual 0.671555 0.81948  Number of obs: 6551, groups: Word, 80; Outputfile, 46  Fixed effects:  Estimate Std. Error t value  (Intercept) 0.21359 0.08642 2.471  VisualConditionflashes 0.20627 0.03339 6.178  WordTypeconcrete -0.51121 0.08311 -6.151  VisualConditionflashes:WordTypeconcrete -0.04576 0.04320 -1.059  Correlation of Fixed Effects:  (Intr) VslCnd WrdTyp  VslCndtnfls -0.182  WrdTypcncrt -0.599 0.180  VslCndtn:WT 0.147 -0.676 -0.294 |  |  |  |  |  |  |  |