**Appendix A** Semantic features of the broad-range rules

|  |  |
| --- | --- |
| **Broad range rules for PO-dative ("A causes B to go to C")** | |
| **a** | A acts on B, causing it to go (either literally or metaphorically) to C |
| **b** | The verb can denote a change of possession but does not necessarily do so |
| **c** | The verb's meaning is defined by the identity of B more than the identity of C |
| **d** | B literally moves |
| **e** | The verb specifies both the event that causes the transfer (either literal or metaphorical) of B and the movement (either literal or metaphorical) of B |
| **f** | The event that causes the transfer (either literal or metaphorical) of B and the movement (either literal or metaphorical) of B take place at the same time |
| **g** | The verb highlights the manner of the transfer, more than its end result |
| **Broad range rules for DO-dative ("A causes C to have B")** | |
| **h** | A has B and then causes it to enter into the possession of C |
| **i** | The transfer (either literal or metaphorical) is successful and complete |
| **j** | A no longer possesses B after he/she has transferred possession of B to C |
| **k** | After the event, C is in possession of B |
| **l** | C is capable of possessing (either literally or metaphorically) B |
| **m** | A acts on C, causing him/her to possess (either literally or metaphorically) B |
| **n** | When A performs the action, he/she must have C in mind |
| **o** | C's reaction to the event is part of the meaning of the verb |
| **p** | The verb's meaning is defined by the identity of C more than the identity of B |
| **q** | C is usually animate |
| **r** | The verb highlights the end result of the transfer, more than the manner in which it occurs |

(from Ambridge et al., 2014, Appendix, Section B)

**Appendix B** Pinker’s (1989) narrow-range semantic verb classes for the dative alternation

|  |  |
| --- | --- |
| **Narrow range alternating verb classes** | |
| **a** | Verbs signifying acts of giving e.g., ‘give’, ‘hand’, ‘sell’, etc. |
| **b** | Verbs of instantaneous causation of ballistic motion e.g., ‘throw’, ‘toss’, ‘kick’, etc. |
| **c** | Verbs of sending e.g., ‘send’, ‘mail’, ‘ship’, etc. |
| **d** | Verbs of accompanied motion in a direction e.g., ‘bring’ and ‘take’. |
| **e** | Verbs of future having e.g., ‘offer’, ‘promise’, ‘allow’, etc. |
| **f** | Verbs of type of communicated message. e.g., ‘tell’, ‘show’, ‘teach’, etc. |
| **g** | Verbs of instrument communication e.g., ‘radio’, ‘telephone’, ‘fax’, ‘wire’, etc. |
| **h** | Verbs of creation e.g., ‘bake’, ‘make’, ‘build’, ‘cook’, etc. |
| **i** | Verbs of obtaining e.g., ‘find’, ‘order’, etc. |
| **Narrow range non-alternating verb classes** | |
| **j** | Verbs of fulfilling e.g., ‘credit’, ‘present’, etc. |
| **k** | Verbs of accompanied motion in some manner e.g., ‘carry’, ‘pull’, ‘push’, etc. |
| **l** | Verbs of manner of speaking e.g., ‘shout’, ‘whisper’, ‘scream’ , etc. |
| **m** | Verbs of choosing e.g., ‘choose’, ‘pick’, ‘select’, etc. |
| **n** | Verbs of communication of proposition and propositional attitudes e.g., ‘say’,  ‘assert’, etc. |

(from Gropen, et al., 1989:243-244)

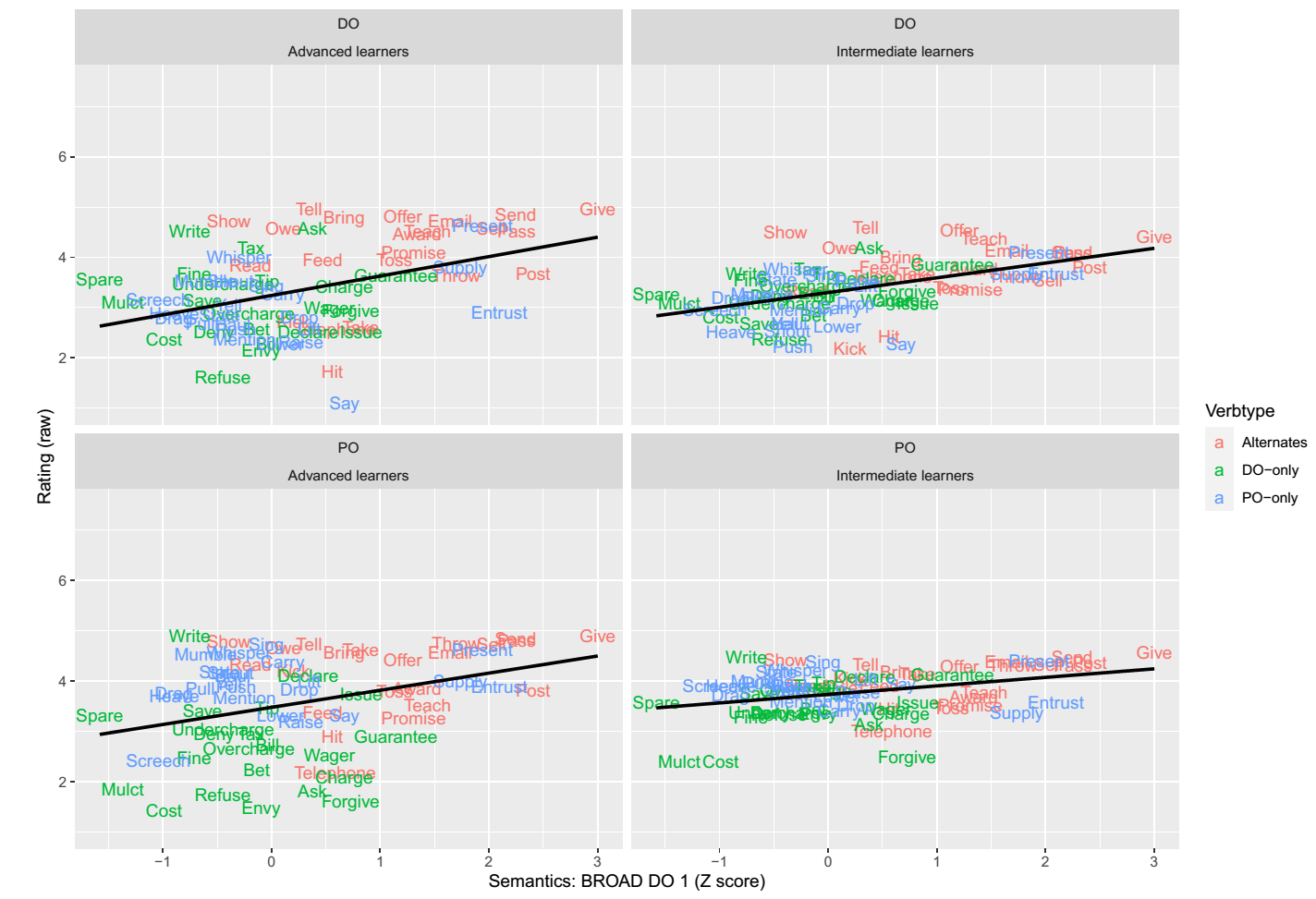
**Appendix C Stimuli in the Experiment**

|  |  |  |
| --- | --- | --- |
| 1 | PO | Cindy fed the milk to Julia. |
| 1 | DO | Cindy fed Julia the milk. |
| 2 | PO | Joyce gave the card to Eva. |
| 2 | DO | Joyce gave Eva the card. |
| 3 | PO | Diana passed the pen to Jack. |
| 3 | DO | Diana passed Jack the pen. |
| 4 | PO | Simon sold the cake to Diana. |
| 4 | DO | Simon sold Diana the cake. |
| 5 | PO | Andy posted the book to Jane. |
| 5 | DO | Andy posted Jane the book. |
| 6 | PO | Steven sent the flower to Mary. |
| 6 | DO | Steven sent Mary the flower. |
| 7 | PO | Jennifer hit the ball to Linda. |
| 7 | DO | Jennifer hit Linda the ball. |
| 8 | PO | John kicked the ball to David. |
| 8 | DO | John kicked David the ball. |
| 9 | PO | Jack threw the apple to Susan. |
| 9 | DO | Jack threw Susan the apple. |
| 10 | PO | Lucy tossed the coat to Diana. |
| 10 | DO | Lucy tossed Diana the coat. |
| 11 | PO | Peter brought the tea to Wendy. |
| 11 | DO | Peter brought Wendy the tea. |
| 12 | PO | Mike took the bread to Kelly. |
| 12 | DO | Mike took Kelly the bread. |
| 13 | PO | David awarded the house to Alex. |
| 13 | DO | David awarded Alex the house. |
| 14 | PO | Nina offered the fruit to Sandy. |
| 14 | DO | Nina offered Sandy the fruit. |
| 15 | PO | Lucy owed $100 to Tina. |
| 15 | DO | Lucy owed Tina $100. |
| 16 | PO | Jack promised the hat to Susan. |
| 16 | DO | Jack promised Susan the hat. |
| 17 | PO | Bob read the news to Donald. |
| 17 | DO | Bob read Donald the news. |
| 18 | PO | Judy showed the photo to Kate. |
| 18 | DO | Judy showed Kate the photo. |
| 19 | PO | Bruce taught the history to Colin. |
| 19 | DO | Bruce taught Colin the history. |
| 20 | PO | Jim emailed the news to Peter. |
| 20 | DO | Jim emailed Peter the news. |
| 21 | PO | Kathy telephoned the choice to Bob. |
| 21 | DO | Kathy telephoned Bob the choice. |
| 22 | PO | Julie told the fact to Simon. |
| 22 | DO | Julie told Simon the fact. |
| 23 | PO | Lucia carried the chair to Kevin. |
| 23 | DO | Lucia carried Kevin the chair. |
| 24 | PO | Maggie hauled the luggage to Lucy. |
| 24 | DO | Maggie hauled Lucy the luggage. |
| 25 | PO | Franklin pulled the desk to Jackson. |
| 25 | DO | Franklin pulled Jackson the desk. |
| 26 | PO | Lisa pushed the bike to Andy. |
| 26 | DO | Lisa pushed Andy the bike. |
| 27 | PO | Diana dragged the motor to John. |
| 27 | DO | Diana dragged John the motor. |
| 28 | PO | Monica dropped the key to Peter. |
| 28 | DO | Monica dropped Peter the key. |
| 29 | PO | Nancy heaved the box to Peter. |
| 29 | DO | Nancy heaved Peter the box. |
| 30 | PO | James sang the song to Mike. |
| 30 | DO | James sang Mike the song. |
| 31 | PO | Lynn lifted the notebook to Mike. |
| 31 | DO | Lynn lifted Mike the notebook. |
| 32 | PO | Jason lowered the mirror to Ken. |
| 32 | DO | Jason lowered Ken the mirror. |
| 33 | PO | Mandy raised the flag to Cherry. |
| 33 | DO | Mandy raised Cherry the flag. |
| 34 | PO | Jimmy mumbled the song to Roger. |
| 34 | DO | Jimmy mumbled Roger the song. |
| 35 | PO | Tony screeched the danger to David. |
| 35 | DO | Tony screeched David the danger. |
| 36 | PO | Bob shouted the news to David. |
| 36 | DO | Bob shouted David the news. |
| 37 | PO | John whispered the secret to Edison. |
| 37 | DO | John whispered Edison the secret. |
| 38 | PO | Susan yelled the word to Betty. |
| 38 | DO | Susan yelled Betty the word. |
| 39 | PO | Emma mentioned the bill to Emily. |
| 39 | DO | Emma mentioned Emily the bill. |
| 40 | PO | Peter said the excuse to Jack. |
| 40 | DO | Peter said Jack the excuse. |
| 41 | PO | Lucy stated the policy to Tina. |
| 41 | DO | Lucy stated Tina the policy. |
| 42 | PO | Selina entrusted the cash to Ann. |
| 42 | DO | Selina entrusted Ann the cash. |
| 43 | PO | David presented the picture to Lydia. |
| 43 | DO | David presented Lydia the picture. |
| 44 | PO | Peter supplied the coffee to Joyce. |
| 44 | DO | Peter supplied Joyce the coffee. |
| 45 | PO | Bob guaranteed the car to David. |
| 45 | DO | Bob guaranteed David the car. |
| 46 | PO | Andy issued the book to Frank. |
| 46 | DO | Andy issued Frank the book. |
| 47 | PO | David cost the coin to Jack. |
| 47 | DO | David cost Jack the coin. |
| 48 | PO | Jim spared the time to John. |
| 48 | DO | Jim spared John the time. |
| 49 | PO | Kevin envied the ring to Mike. |
| 49 | DO | Kevin envied Mike the ring. |
| 50 | PO | Peter refused the computer to Simon. |
| 50 | DO | Peter refused Simon the computer. |
| 51 | PO | John asked the question to Tina. |
| 51 | DO | John asked Tina the question. |
| 52 | PO | Susan saved the food to Eva. |
| 52 | DO | Susan saved Eva the food. |
| 53 | PO | Emily forgave the mistake to Diana. |
| 53 | DO | Emily forgave Diana the mistake. |
| 54 | PO | Ben denied the invitation to Eric. |
| 54 | DO | Ben denied Eric the invitation. |
| 55 | PO | Bill bet the book to Paul. |
| 55 | DO | Bill bet Paul the book. |
| 56 | PO | Edward billed the lunch to Ken. |
| 56 | DO | Edward billed Ken the lunch. |
| 57 | PO | John charged the expense to Robert. |
| 57 | DO | John charged Robert the expense. |
| 58 | PO | Peter fined the money to Daniel. |
| 58 | DO | Peter fined Daniel the money. |
| 59 | PO | Henry overcharged the phone to James. |
| 59 | DO | Henry overcharged James the phone. |
| 60 | PO | Diana declared the decision to Jack. |
| 60 | DO | Diana declared Jack the decision. |
| 61 | PO | Martin mulcted the wallet to Steven. |
| 61 | DO | Martin mulcted Steven the wallet. |
| 62 | PO | Michael taxed $10 to Oliver. |
| 62 | DO | Michael taxed Oliver $10. |
| 63 | PO | Sam tipped the money to Roger. |
| 63 | DO | Sam tipped Roger the money. |
| 64 | PO | Tom undercharged the bag to William. |
| 64 | DO | Tom undercharged William the bag. |
| 65 | PO | Alice wagered the gold to Barbara. |
| 65 | DO | Alice wagered Barbara the gold. |
| 66 | PO | Daisy wrote the letter to Betty. |
| 66 | DO | Daisy wrote Betty the letter. |

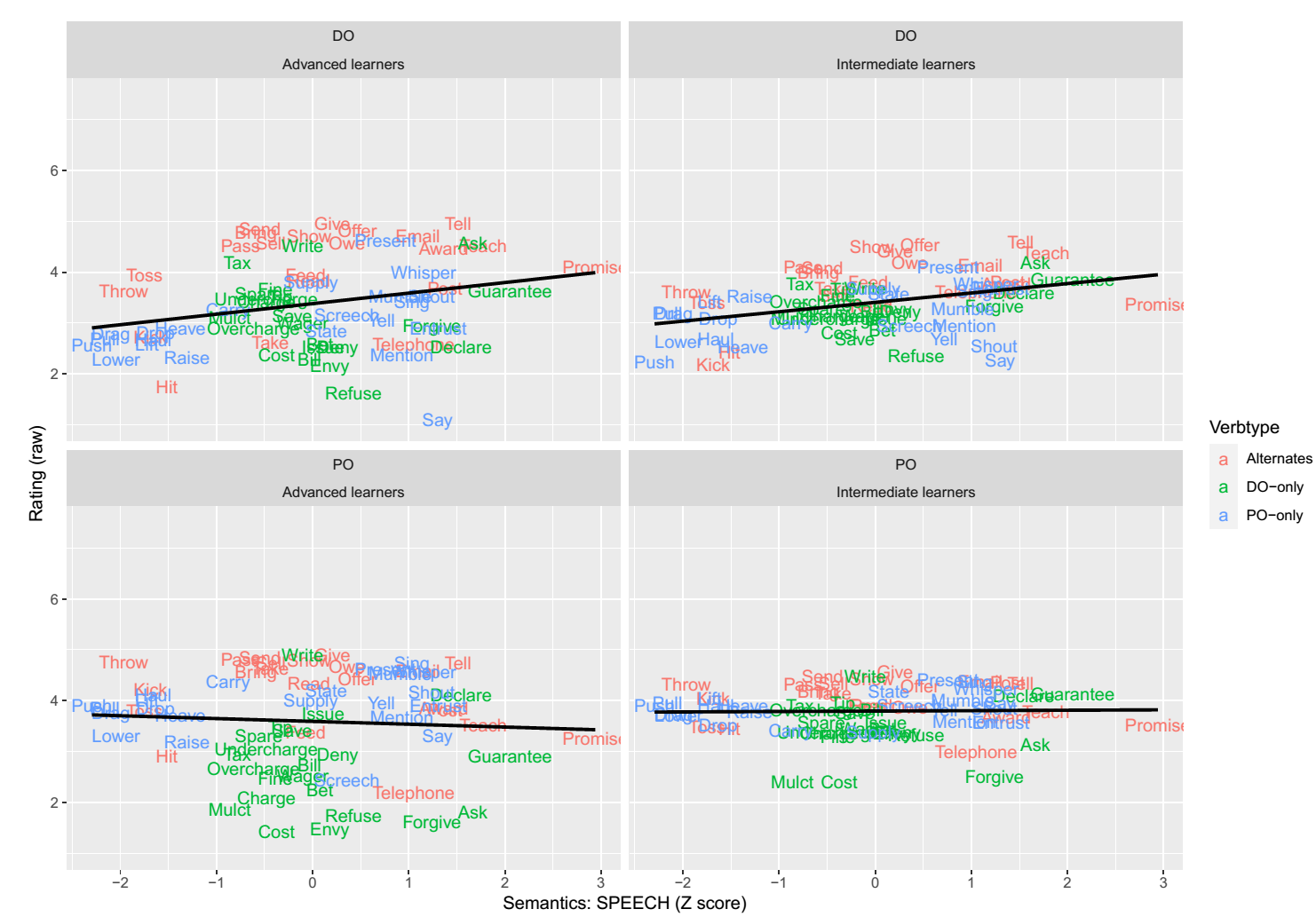
**Appendix E** Figures depicting the relationship between other predictors and DO and PO ratings (**Figure S1-S6)**



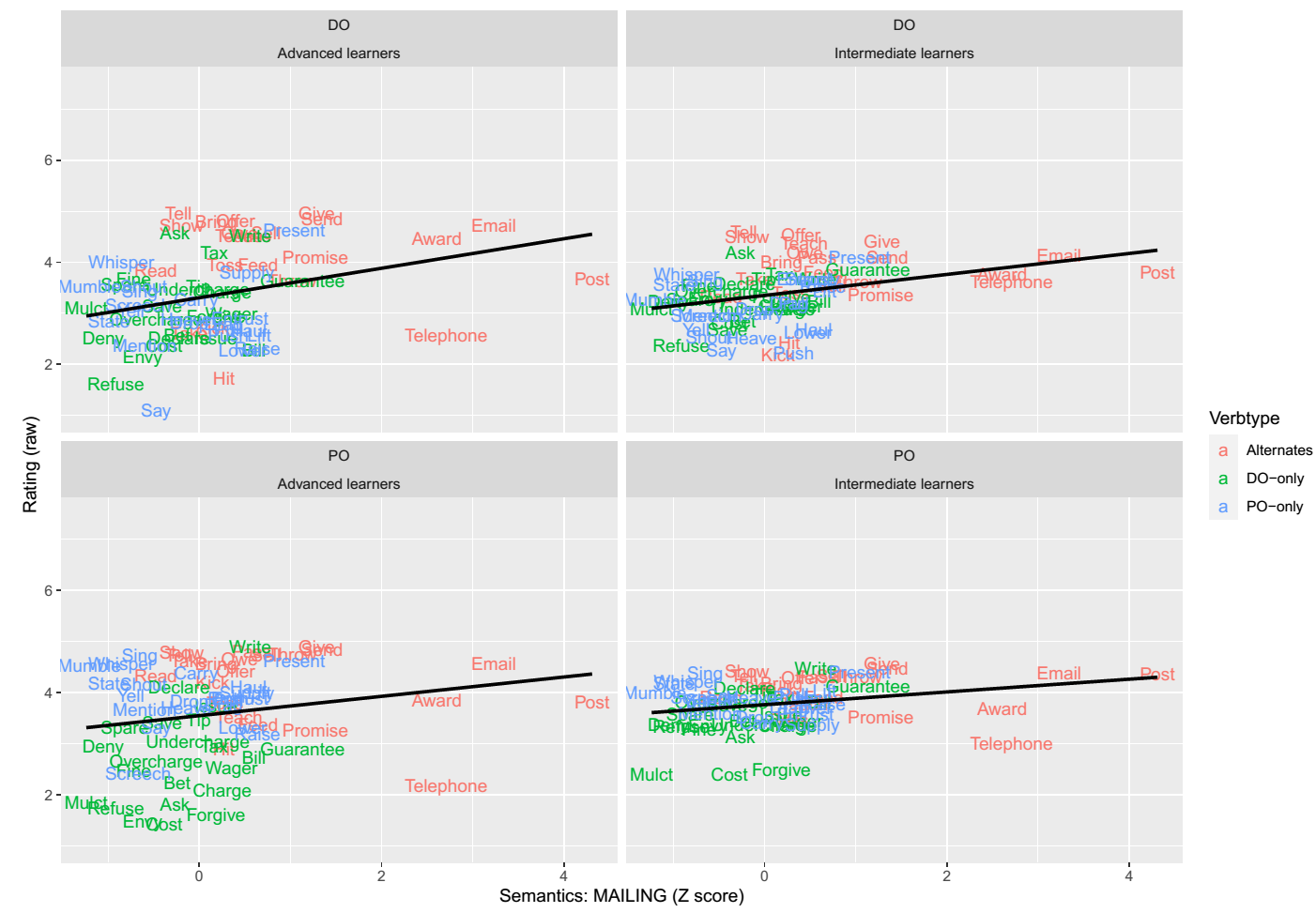
**Figure S1** Relationship between the semantics “Broad PO” predictor and participants’ raw sentence ratings on the 5-point scale.



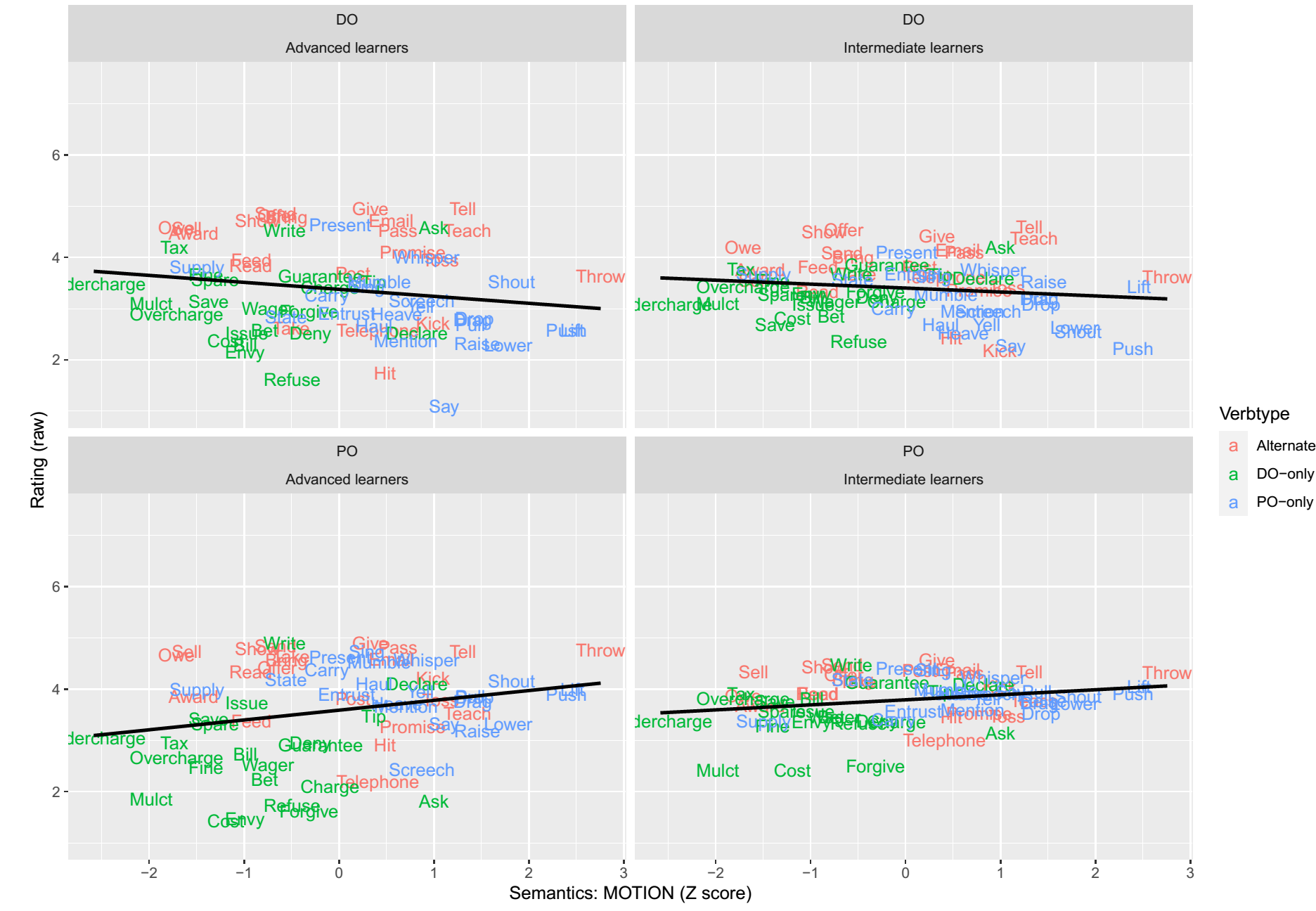
**Figure S2** Relationship between the semantics “Broad DO-1” predictor and participants’ raw sentence ratings on the 5-point scale.



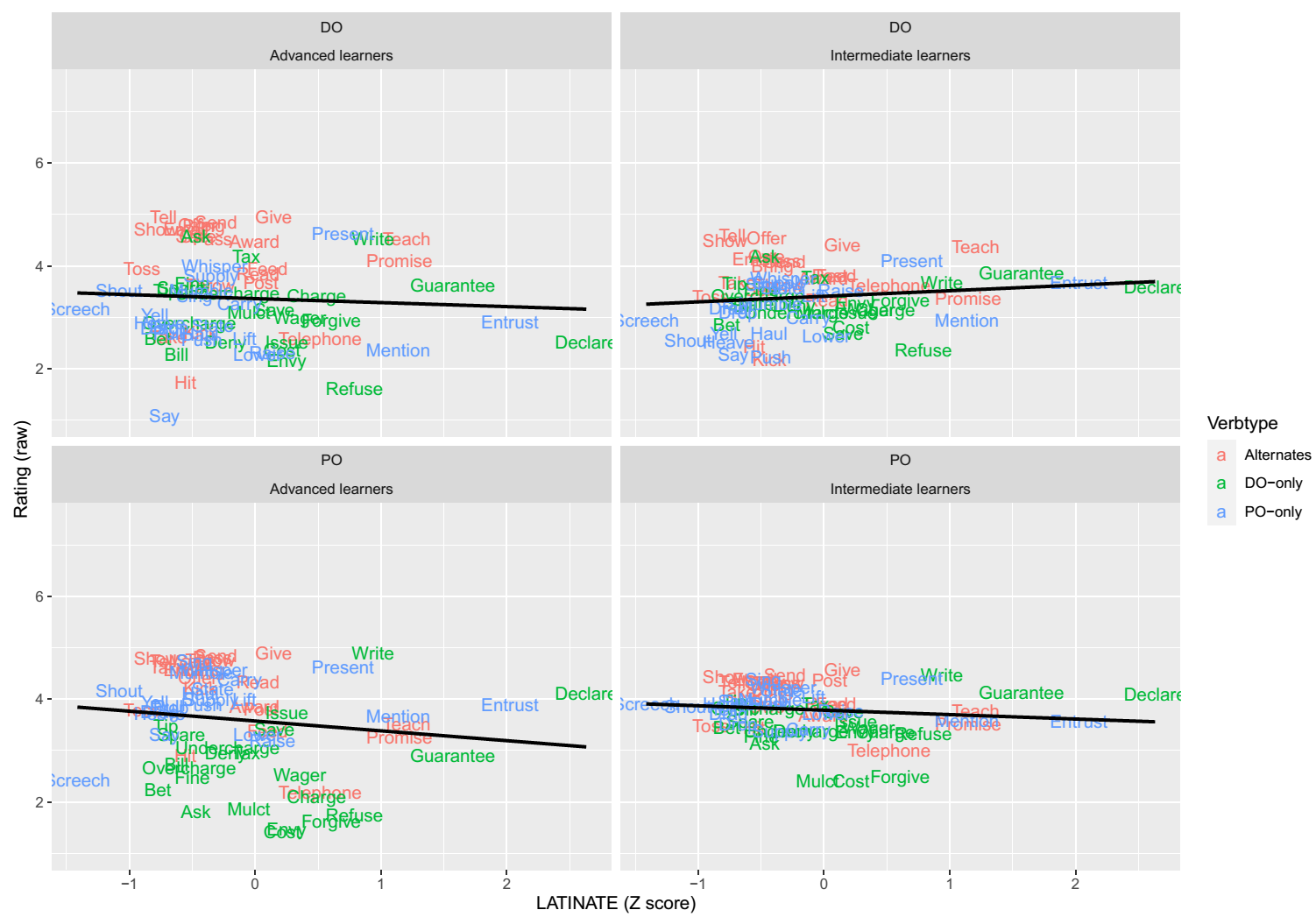
**Figure S3** Relationship between the semantics “Speech” predictor and participants’ raw sentence ratings on the 5-point scale.



**Figure S4** Relationship between the semantics “Mailing” predictor and participants’ raw sentence ratings on the 5-point scale.



**Figure S5** Relationship between the semantics “Motion” predictor and participants’ raw sentence ratings on the 5-point scale.



**Figure S6** Relationship between the morphophonological “Latinate” predictor and participants’ raw sentence ratings on the 5-point scale.