Table 1S. Developed classification of cue – associate relation types with speech formulas and examples

| Relation Type | Subtype | Speech Formula | Examples |
|---|---|---|---|
| 1. *Formal-based* | Phonological **(PHON)** | Is there a similarity in sound, but not in meaning? | *мир 'world" – пир 'feast"* |
| | Morphological **(MORPH)** | Is there a similarity in the form? | *person 'человек' – люди 'people',*<br><br>*friend 'друг' - friendship 'дружба'* |
| *2 Meaning-based* | | | |
| *2.1. Language-based (LANGUAGE)* | | | |
| | 2.1.1. Syntagmatic (cue and associate are of different part-of-speech) | Is this a phrase? | |
| | - Predicative **(PRED)** | | *душа – раду-ется "soul is happy"* |
| | - Attributive CHAR | | *бабушка – ста-рая "granny — old"* |
| | - Object **(OBJ)** | | *встретить – тебя "to meet — you"* |

| | | | |
|---|---|---|---|
| | - Adverbials (**ADV**) | | *думать – усердно "think — hard"* |
| | 2.1.2. Paradigmatic (cue and associate are of the same part-of-speech) | | |
| | - General synonymy (**SIMIL**) | A is B, A supposes B | *настоящий – искренний "real — sincere"* |
| | - Hyponyms (**HYP**) | A is part of *B* and the other way around | *дерево – клен "tree — maple"* |
| | - Antonyms  (**ANT**) | A is the opposite of B | *ненавидеть – любить "hate — love"* |
| 2.2. World-knowledge based (**THEMATIC**) | Cue and associates  are the components of the same situation (**FRAME**) | A - where? – B<br><br>A - when? in what period? B<br>A often has B (B is typical, common, characteristic of A) | *бабушка – де-ревня "granny — village"*<br><br>*бабушка – лето "granny – summer"*<br><br>*бабушка – мор-щины "granny — wrinkles"* |

| | Cause-effect relationships between cue and associate **(CAUSE)** | A is the effect of B/thus B<br>A is the cause of B/ because B | *обещать – надеяться "promise — hope"*<br><br>*stupid — small "глупый – ма-ленький"* |
|---|---|---|---|
| | Functional relations between cue and response **(FUNC)** | role of A *IN* B / A in order to B – or the other way around<br><br>A is the source of B / the source of A is B | *глаз – видеть "eye — see"*<br><br>*мама – жизнь "mum — life"* |
| | An associate contains a reference to some mental category related to a cue word **(MENTAL)** | A manifests B<br>A causes B<br>A triggers B | *granny — love "бабушка – лю-бовь"*<br><br>*mum — love "мама – лю-бовь"* |
| | Response is an attitude to a cue word **(AFFECT)** | B is the emotional assessment of A | *war — terror "война – ужас"* |
| | Stimulus and a response are contextual synonyms or a response illustrates a cue word **(SPECIFIC)** | A is B for respondent<br>A is, for example, B | *плохо – болеть, "badly — to be ill"* |

| | | | счастье – дети "happiness — children" <br><br> want — dream "хотеть – меч-тать" |
|---|---|---|---|
| | Precedents, i.e., allusions to literature, art, etc., symbols (**PRECED**) | A and B belong to one cultural artefact | мир – голубь "peace — dove" <br><br> дерево – война и мир "tree — war and peace" |
| **INDIV** | None of the annotators could explain or classify as any type of the cue – associate relationships | None of the above | help — white "помощь – бе-лое" <br><br> a lot — of peace "много – мира" <br><br> enemy – black hole "враг – черная дыра" |