**TGrep2 Regular Expressions for Corpus Analysis of Referential Density 2**

1. **Oxford -NINJAL Corpus of Old Japanese**
2. **Predicates**
   1. **Verbal predicates**: (/^VB/ !> /^VB|^ADJ|^N|^L|IP-REL|IP-EMB/) !. /L030919/

**Explication:** /^VB/ = verbs, !> /^VB|^ADJ|^N = not dominated by another part of speech (i.e. not part of a compound) |^L = or a lexicalised compound, |IP-REL|IP-EMB/) = or in a relative/embedded clause, !. /L030919/ = and which don't precede se-/suru

**Result:** 15063

* 1. **Adjectival predicates**: (/^ADJ/ !> /^VB|^ADJ|^N|^L|IP-REL|IP-EMB/) !. /L030125|L031317/ & !. (/L000514/ . /L030125/)

**Explication:** Mostly the same except !. /L030125|L031317/ = doesn't precede ar- or nar- 'become', and & !. (/L000514/ . /L030125/) doesn't precede "mo ar-"

**Result:** 2878

1. **Arguments**
   1. **Subjects and objects that are not in a relative/embedded clause**: /SBJ|OB| PP-ARG| (IP-ARG < VB-ADN | < VB-NML !> /IP-REL|IP-EMB/

**Explication:** /SBJ|OB/ = subjects and objects (both direct and indirect), !> /IP-REL|IP-EMB/ = that are not in a relative/embedded clause

**Result:** 10424

* 1. **Other arguments:** /IP-ARG/ < /VB-NML/

**Result:** 19

**Calculations of RD2**

* **RD2 (without ADJ arguments and predicates, and relative clauses) =** (10424+19)/15063 = **0.69**
* **RD2 (with ADJ arguments and predicates, without relative clauses) =** (10424+19)/(15063+2878)  **= 0.58**

1. **Kainoki Tree Bank**
   1. **Predicates**
   2. **Verbal predicates (no relative clauses):** (/^VB$/ !> /^VB|^ADJ|^N|^L/) !> (/IP-REL|IP-EMB/)

**Result:** 128364

* 1. **Verbal predicates (with relative clauses)**: (/^VB$/ !> /^VB|^ADJ|^N|^L/)

**Result:** 176491

* 1. **Adjectival predicates:** (/^ADJ/ !> /^VB|^ADJ|^N|^L|IP-REL|IP-EMB/) > /IP/

**Result:** 18335

1. **Arguments**
   1. **Arguments (including those in relative clauses):** /SBJ|OB/ !> /IP-SMC-OB/ !< /exp|arb|pro|hearer|hearer+pro|speaker|speaker+hearer|speaker+pro/

**Result:** 247367

* 1. **Gapped arguments** **(in non-verbal relative clauses):**

/NP-[SO]/ < /\\*T\\*/ $.. /ADJ|PRD|PNL|CL/ > /IP-REL/

**Result:** 28053+9 = 28062

* 1. **All** **overt** a**rguments with relative clauses =** 247367-28062

**Result**: 219305

* 1. **Arguments** (**excluding those in relative clauses**):

/SBJ|OB/ !> /IP-SMC-OB/ !< /exp|arb|pro|hearer|hearer+pro|speaker|speaker+hearer|speaker+pro/ !>

/IP-REL|IP-EMB/

**Result:** 161772

* 1. **Arguments of adjectival predicates:**

/SBJ|OBJ/ << /IP/ $.. /^ADJ/

**Result:** 2724

1. **Nominal predication**

/PRD/ $.. /AX/ !.. の|な|に|と

**Result:** 10735 (including zero copulas); 6845 (excluding zero copulas)

**Calculations of RD2**

* **RD2 (without ADJ arguments/predicates, with relative clauses) =** 219305/176491 = **1.24**
* **RD2 (without ADJ arguments/predicates, and relative clauses) =** 161772 /128364 = **1.26**
* **RD2 (with ADJ arguments/predicates, and relative clauses) =**

(219305+2724)/(176491+18335) = **1.14**

* **RD2 (with ADJ arguments/predicates, without relative clauses)** = (161772+2724)/(128364+18335) = **1.12**

+

* **RD2 (with ADJ arguments/predicates, relative clauses, and copulas) =**

(219305+2724)/(176491+18335+6845) = **1.08**

* **RD2 (with ADJ arguments/predicates, without relative clauses, with copulas) =** (161772+2724)/128364+18335+6845) = **1.07**
* **RD2 (without ADJ arguments/predicates, with relative clauses and copulas) =** 219305/(176491+6845) = **1.2**
* **RD2 (without ADJ arguments/ predicates, and relative clauses, with copulas) =** 161772/(128364+6845)= **1.2**