

# Hindiwh2

<http://www.phil.uu.nl/staff/vermaat/grail/fragments/hindi/hindiwh2.pl>

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# 1. Fragment properties

## 1.1. Postulates

$\diamond_{wh}A \bullet_1 (B \bullet_1 C) \vdash (\diamond_{wh}A \bullet_1 B) \bullet_1 C$	[ <i>Whl1</i> ]
$\diamond_{wh}B \bullet_1 (A \bullet_1 C) \vdash A \bullet_1 (\diamond_{wh}B \bullet_1 C)$	[ <i>Whl2</i> ]
$\diamond_v B \bullet_1 (A \bullet_1 C) \vdash A \bullet_1 (\diamond_v B \bullet_1 C)$	[ <i>Plv2</i> ]
$A \bullet_1 (C \bullet_1 \diamond_v B) \vdash A \bullet_1 (\diamond_v B \bullet_1 C)$	[ <i>Prv2</i> ]
$A \bullet_2 (C \bullet_1 \diamond_v B) \vdash A \bullet_2 (\diamond_v B \bullet_1 C)$	[ <i>Prv2</i> ]
$(A \bullet_2 \diamond_v B) \bullet_1 C \vdash A \bullet_2 (\diamond_v B \bullet_1 C)$	[ <i>VAss</i> ]
$\diamond_{vfin}(A \bullet_2 B) \vdash A \bullet_2 \diamond_{vfin}B$	[ <i>K1v2</i> ]
$\diamond_{vfin}(A \bullet_1 B) \vdash A \bullet_1 \diamond_v B$	[ <i>K2vfin</i> ]
$B \bullet_1 (A \bullet_{nw} C) \vdash A \bullet_{nw} (B \bullet_1 C)$	[ <i>Pnw</i> ]
$(A \bullet_{nw} B) \bullet_1 C \vdash A \bullet_{nw} (B \bullet_1 C)$	[ <i>Pnw1</i> ]
$B \bullet_{se} (A \bullet_1 C) \vdash A \bullet_1 (B \bullet_{se} C)$	[ <i>Pse</i> ]
$A \bullet_{se} (B \bullet_1 C) \vdash (A \bullet_{se} B) \bullet_1 C$	[ <i>Pse1</i> ]
$B \bullet_2 (A \bullet_{nw} C) \vdash A \bullet_{nw} (B \bullet_2 C)$	[ <i>Pnw</i> ]
$(A \bullet_{nw} B) \bullet_2 C \vdash A \bullet_{nw} (B \bullet_2 C)$	[ <i>Pnw1</i> ]
$B \bullet_{se} (A \bullet_2 C) \vdash A \bullet_2 (B \bullet_{se} C)$	[ <i>Pse</i> ]

$$A \bullet_{se} (B \bullet_2 C) \vdash (A \bullet_{se} B) \bullet_2 C \quad [Pse1]$$

## 1.2. Lexicon

**anu** :  $\square_{nom} np - \text{anu}$

**baat** :  $\square_{acc} np \setminus_1 vp - \text{talk}$

**dekhaa** :  $\square_{acc} np \setminus_1 (\square_{nom} np \setminus_1 s) - \text{see}$

**dekhaa** :  $\square_{acc} np \setminus_1 \square_f \diamond_f s - \text{see}$

**jaantaa** :  $(\square_{nom} np \setminus_1 s) /_1 \square_f \diamond_f s - \text{know}(\text{inf})$

**jaantii** :  $\square_v ((\square_{nom} np \setminus_1 s) /_1 \square_f \diamond_f s) - \text{know}(\text{pst})$

**jaantiihai** :  $\square_f \diamond_f s \setminus_1 (\square_{nom} np \setminus_1 s) - \text{know}(\text{pre})$

**jaantiihai** :  $(\square_{nom} np \setminus_1 s) /_1 \square_f \diamond_f s - \text{know}(\text{pre})$

**jaun** :  $\square_{nom} np - \text{john}$

**karegii** :  $\square_v ((\square_{nom} np \setminus_1 s) /_1 vp) - \text{will}$

**karegii** :  $vp \setminus_1 (\square_{nom} np \setminus_1 s) - \text{do}(\text{fin})$

**karnaa** :  $\square_{acc} np \setminus_1 \square_f \diamond_f s - \text{do}(\text{inf})$

**karnaahai** :  $\square_{acc} np \setminus_1 s - \text{do}(\text{pre})$

**kaun** :  $(\square_f \diamond_f s /_{nw} (\diamond_{wh} \square_{wh} \square_{nom} np \setminus_{se} \square_f \diamond_f s)) \bullet_{nw} (\diamond_{wh} \square_{wh} \square_{nom} np \setminus_{se} \diamond_{wh} \square_{wh} \square_{nom} np)$

**kaunsii** :  $(s/{}_1(\diamond_{wh}\square_{wh}\square_{acc}np\backslash_1s))/_1n$  – which

**khariidii** :  $\square_{acc}np\backslash_1(\square_{nom}np\backslash_1s)$  – buy

**ki** :  $s/{}_2s - \lambda x_0.x_0$

**kisko** :  $(\square_f\diamond_f s/nw(\diamond_{wh}\square_{wh}\square_{acc}np\backslash_{se}s)) \bullet_{nw} (\diamond_{wh}\square_{wh}\square_{acc}np\backslash_{se}\diamond_{wh}\square_{wh}\square_{acc}np) - \langle \lambda x_0.$

**kisse** :  $(\square_f\diamond_f s/nw(\diamond_{wh}\square_{wh}\square_{acc}np\backslash_{se}s)) \bullet_{nw} (\diamond_{wh}\square_{wh}\square_{acc}np\backslash_{se}\diamond_{wh}\square_{wh}\square_{acc}np) - \langle \lambda x_0.$

**kitaab** :  $\square_{acc}np$  – book

**kyaa** :  $((\square_{nom}np\backslash_1s)/_1\square_f\diamond_f s)/_1((\square_{nom}np\backslash_1s)/_1s) - \lambda x_0.(\lambda y_0.(\lambda z_0.((x_0 y_0) z_0)))$

**kyaa** :  $(\square_f\diamond_f s/nw(\diamond_{wh}\square_{wh}\square_{acc}np\backslash_{se}s)) \bullet_{nw} (\diamond_{wh}\square_{wh}\square_{acc}np\backslash_{se}\diamond_{wh}\square_{wh}\square_{acc}np) - \langle \lambda x_0.$

**larkaa** :  $\square_{acc}np$  – boy

**merii** :  $\square_{nom}np$  – mary

**puuchtaahai** :  $(\square_{nom}np\backslash_1s)/_1s$  – asks(pre)

**ravi** :  $\square_{acc}np$  – ravi

**raviine** :  $\square_{nom}np$  – ravi

**siitaane** :  $\square_{nom}np$  – sita

**soctaa** :  $(\square_{nom}np\backslash_1s)/_1\square_f\diamond_f s$  – think(pre)

**soctaahai** :  $\square_f\diamond_f s\backslash_1(\square_{nom}np\backslash_1s)$  – think(pre)

**soctaahai** :  $(\square_{nom}np\backslash_1s)/_1\square_f\diamond_f s$  – think(pre)

**soctai** :  $(\square_{nom}np\backslash_1s)/_1\square_f\diamond_f s$  – think(fem)

tum :  $\square_{nom}np$  – you

whelem :  $\square_{wh}\square_{nom}np$  – what

whemb :  $\square_f\lozenge_f s$  – prop

yaayegaa :  $vp$  – will-go

## 2. Run your examples

1. jaun kitaab khariidii  $\vdash s$
2. Anu larkaa dekhaa jaantiihai  $\vdash s$
3. jaun kyaa khariidii  $\vdash \Box_f \Diamond_f s$
4. kyaa jaun khariidii  $\vdash \Box_f \Diamond_f s$
5. Anu kyaa karnaa jaantiihai  $\vdash \Box_f \Diamond_f s$
6. Anu jaantiihai ki kyaa karnaahai  $\vdash s$
7. Raviine kyaa soctaa ki Anu kisko dekhaa  $\vdash s$
8. Raviine kyaa soctaa whemb  $\vdash s$
9. ki Anu kisko dekhaa  $\vdash \Box_f \Diamond_f s$
10. ki kisko Anu dekhaa  $\vdash \Box_f \Diamond_f s$
11. \*kisko ki Anu dekhaa  $\vdash s$

12. \*Siitaane kyaa soctaa ki kisko raviine dekhaa  $\vdash s$
13. \*Siitaane kyaa soctaa ki whemb  $\vdash s$
14. Kisko Raviine dekhaa  $\vdash s$
15. kisko Siitaane soctaa ki raviine dekhaa  $\vdash \Box_f \Diamond_f s$
16. Siitaane kisko soctaa ki raviine dekhaa  $\vdash \Box_f \Diamond_f s$
17. \*kisko Siitaane kyaa soctaa ki raviine dekhaa  $\vdash \Box_f \Diamond_f s$
18. \* Siitaane soctaa ki kisko raviine dekhaa  $\vdash s$
19. ??Jaun kyaa soctaahai ki merii kisse baat karegii  $\vdash s$
20. Jaun kyaa soctaahai whemb  $\vdash s$
21. ki merii kisse baat karegii  $\vdash \Box_f \Diamond_f s$
22. ki kisse merii baat karegii  $\vdash \Box_f \Diamond_f s$
23. Jaun kyaa soctaahai kaun kisse baat karegii  $\vdash s$
24. tum kyaa socteho ki merine haansse baat kiyaa yaa nahiiN?  $\vdash s$