Distinctive metaphors for HAPPINESS near-synonyms in Indonesian

_Gede Primahadi Wijaya Rajeg_

[ORCID ID](https://orcid.org/0000-0002-2047-8621)

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Overview

• Conceptual Metaphor Theory (CMT)

• Principal Metaphor Hypothesis
  - Key previous works (in English) – from introspective to usage-based, quantitative methods

• My study
  - Data & methods
  - Results

• Conclusion
Conceptual Metaphor Theory

Lakoff and Johnson (1980)
Conceptual Metaphor Theory

“The essence of metaphor is understanding and experiencing one kind of thing in terms of another.”

(Lakoff and Johnson 1980:5, italics in original)
ANGER IS FIRE

https://bit.ly/30lFC0Q
ANGER IS FIRE
(Rajeg 2014)

1. penggunaan nama Tiga Diva (…) memantik kejengkelan
use name three diva ignite annoyance

Erwin Gutawa dan Jay Subyakto
NAME and NAME

‘The use of the name of Tiga Diva ignited Erwin Gutawa’s and Jay Subyakto’s annoyance’

2. kasus penyiksaan (…) menyulut kegeraman sejumlah pihak
case torture ignite fury several party

‘The torture case (…) ignited the fury of several parties’

ANGER IS FIRE
(Rajeg 2014)

3. **Api kemarahan berkobar membakar darah di hati**
   fire anger blazing burn blood at liver
   ‘The fire of anger blazes, burning the blood in the liver’

4. **Sesungguhnya sedekah (...) dapat memadamkan kemurkaan Allah**
   in. fact alms can extinguish wrath Allah
   ‘Indeed, alms (...) can extinguish Allah’s wrath.’

ANGER IS FIRE

FIRE domain

• fire
• igniting fire
• fire’s heat
• putting out fire

cross-domain mappings

ANGER domain

• anger
• causing anger
• intensity of anger
• anger ceases

SOURCE DOMAIN

TARGET DOMAIN

8
Few more examples for ANGER
(Lakoff 1987)

(HOT) SUBSTANCE IN A CONTAINER
- *bursting with anger*
- *brimming with rage*
- keep one’s *anger bottled up inside*
- Billy’s just *blowing off steam.*
- *simmer down!*
- you make my blood *boil.*

(DANGEROUS) ANIMAL
- That *awakened* my ire.
- He *unleashed* his anger.
- He has a *ferocious temper.*
- She was *bridling with anger.*
- He started *snarling.*

AN OPPONENT
- You need to *subdue* your anger.
- He was *battling* his anger.
- He *surrendered to* his anger.

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Lexeme-specific approach
(Stefanowitsch 2004, 2006)

(HOT) SUBSTANCE IN A CONTAINER
• bursting with anger
• brimming with rage
• keep one’s anger bottled up inside
• Billy’s just blowing off steam.
• simmer down!
• you make my blood boil.

(DANGEROUS) ANIMAL
• That awakened my ire.
• He unleashed his anger.
• He has a ferocious temper.
• She was bridling with anger.
• He started snarling.

AN OPPONENT
• You need to subdue your anger.
• He was battling his anger.
• He surrendered to his anger.

Principal Metaphor Hypothesis

vis-à-vis semantically similar emotions
Kövecses (1990) on PRIDE

• PRIDE
  - Broad category
  - “Subsumes such varied concepts as self-esteem, conceit, and vanity” (p. 88)

• “special emphasis will be placed on the question of *what kind of pride is characterized by which metaphors*” (p. 88, my italics)
Kövecses (1990) on PRIDE

“My suggestion will be that each of these members of the pride category differ from the prototype of pride, differ from each other, and do so primarily in terms of the principal metaphors and metonymies that characterize them.” (p. 88, my boldface)

Kövecses (1990) on PRIDE: *self-esteem*

“Self-esteem was primarily described in terms of the OBJECT and VALUE metaphors.” (p. 208)

- don’t *overestimate* yourself (p. 99)
- she *values* herself *highly* (p. 99)
- He *cast off* his *dignity* (p. 101)
- He *disposed of* his *dignity* (p. 101)
Kövecses (1990) on PRIDE: *conceit*

“Characteristic of conceit are the metaphors THE CONCEITED PERSON IS UP/HIGH and THE CONCEITED PERSON IS BIG metaphors.” (p. 208)

• Do you think he’s a little bit *upish*? (p. 102)
• She has a *swollen* opinion of herself. (p. 102)
Kövecses (1990) on PRIDE: 

vanity

“And vanity is set apart from the other senses by means of the VANITY IS A (SENSUAL OR INDULGENT) PERSON metaphor.” (p. 208)

• Her _vanity_ is just _insatiable_. (p. 105)
• It only _fed_ her _vanity_. (p. 105)
• She _indulged_ her _vanity_. (p. 105)
Kövecses (1991) on HAPPINESS

• Two prototypical models of HAPPINESS
  - HAPPINESS-AS-A-VALUE
  - HAPPINESS-AS-AN-EMOTION/IMMEDIATE RESPONSE

• Each model is
  - characterised by certain metaphors
  - referred to by different lexical items

HAPPINESS-AS-A-VALUE

• HAPPINESS IS LIGHT (p. 30)
  - When she heard the news, she *lit up*.
  - There was a *glow of happiness* in her face.
  - She was *shining with joy*.

• HAPPINESS IS A (DESIRED) HIDDEN OBJECT (p. 38)
  - I have *found happiness*.
  - The *pursuit of happiness* is our inalienable right.
  - I am *searching for happiness*.

• HAPPINESS IS A VALUABLE COMMODITY (p. 38)
  - You can’t *buy happiness*.
  - She *gave* him a lot of *happiness*.

HAPPINESS-AS-AN-EMOTION

• HAPPINESS IS FLUID IN A CONTAINER (p. 33)
  - He bubbled over with joy.
  - The sight filled them with joy.
  - He was overflowing with joy.

• HAPPINESS IS A CAPTIVE ANIMAL (p. 35)
  - His feelings of happiness broke loose.

• HAPPINESS IS AN OPPONENT (p. 36)
  - She was overcome by joy.
  - Happiness took complete control over him.

• HAPPINESS IS NATURAL FORCE (p. 37)
  - I felt a surge of happiness.

Kövecses’s (1991) verdict on happiness and joy

“What seems more appropriate to assume is that happiness appears to be more inclusive word in that it can refer to happiness as a value and occasionally to happiness as an emotion as well, and that the word joy seems to be primarily reserved for denoting the emotion.” (p. 40, italics in original, my boldface)
Questions

Assuming the metaphors identified can occur with more than one emotion synonym:

• *how do we assess* (or *claim/judge?*) that metaphor X, but not metaphor Y, is the primary characteristic of word 1 but not word 2?

• In other words, *how do we operationalise/measure* the primacy or importance of certain metaphor characterising certain synonyms?
Usage-based approach to Principal Metaphor Hypothesis

Quantitative corpus linguistics
Stefanowitsch (2004, 2006)

Metaphorical Pattern Analysis (MPA)

“A metaphorical pattern is a multi-word expression from a given source domain (SD) into which one or more specific lexical item from a given target domain (TD) have been inserted.” (2006:66)

• bubble/burst/overflow with joy, outpouring of joy, source of happiness (2004:138)
  - syntactic/semantic frame from the source domain LIQUID

Stefanowitsch (2006:96-99): happiness vs. joy

• Depart from Goddard’s (1998) hypothesis
  - *happiness* is less intense and shows “muted quality” than the German *Glück(lich)*, which is more like *joy(ful)*
  
  - German *Freude* (equivalence of *joy*) is more intense than *Glück*, similar like *joy* is more intense than *happiness*.

  - “[s]peaking metaphorically, emotions such as *Glück* and *bonheur* fill a person to overflowing, leaving no room for any further desires or wishes” (Goddard 1998:93, cited from Stefanowitsch 2004:140, my boldface)
Stefanowitsch (2006:96-99): *happiness* vs. *joy*

Distribution of metaphorical patterns evoking LIQUID IN A CONTAINER metaphor (Stefanowitsch 2006:100 Table 6)

<table>
<thead>
<tr>
<th>Token frequency</th>
<th>patterns referring to LIQUID/CONTAINMENT in general</th>
<th>patterns referring to FULLNESS, PRESSURISED, BURSTING CONTAINER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>20</td>
</tr>
</tbody>
</table>

$p_{fisher-exact} < 0.01$, **

See also Stefanowitsch (2004:141-142)
Stefanowitsch (2006:96-99): happiness vs. joy

Distribution of metaphor referring to the so-called QUEST model (data from Stefanowitsch 2006:97)

TRYING TO ATTAIN EMOTION IS SEARCHING FOR EMOTION

- newfound happiness, pathway to happiness,
- look for happiness, pursuit of happiness
- snatch at/grab/capture happiness

See also Stefanowitsch (2004:143)
Stefanowitsch (2006)

“if metaphorical mappings interact with individual lexical items such that there are differences, for example, between near-synonyms or antonyms, then the existence and nature of these differences must be accounted for.” (p. 70).

My study
(Rajeg 2019a: Ch. 7)

Target words

• Based on the results in Shaver et al. (2001) on the categorical structure of Indonesian emotion lexicon

• 5 prototypical members/terms for the category of HAPPINESS in Indonesian
  - *senang* ‘happy/happiness’ as the basic category-label
Target words

Top-5 representative members of *senang*:
- *ceria* ‘cheerful’
- *gembira* ‘excited; enthusiastic’
- *riang* ‘very happy; joyous’
- *bahagia* ‘happy’
- *senang* ‘happy’

Ordering reflects measure of their categorical prototypicality (Shaver et al. 2001:217)

Focus is on the nominalised form with *ke-/an* affix deriving abstract nouns
Corpus data

• *Indonesian Leipzig Corpora Collection* (ILCC) (Goldhahn et al. 2012; Quasthoff & Goldhahn 2013)
  - Scrambled-sentence corpus files from online materials (mostly online newspapers)
• Ten corpus files available when downloaded in May 2015
  - Up to 98,006,421 million word-tokens
• The largest, open-access Indonesian corpora to date (cc-by license)

## Corpus data

<table>
<thead>
<tr>
<th>No</th>
<th>Corpus files</th>
<th>Size (in word tokens)</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>ind_mixed_2012_1M-sentences.txt</td>
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<tr>
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<td>7</td>
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<td>9</td>
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<tr>
<td></td>
<td><strong>TOTAL SIZE</strong></td>
<td><strong>98,006,421</strong></td>
</tr>
</tbody>
</table>
Frequencies of the target words in the ILCC files

- senang 'happy'; kesenangan 'pleasure' (14531)
- bahagia 'happy'; kebahagiaan 'happiness' (6178)
- gembira 'excited'; kegembiraan 'joy' (4387)
- ceria 'cheerful'; keceriaan 'cheerfulness' (880)
- riang 'joyous'; keriangan 'cheerfulness' (528)

Multiple Distinctive Collexeme Analysis (MDCA)

• Contrasts more than two, semantically similar (grammatical) constructions in terms of their preferred lexical collocates (i.e. collexemes)

• Hilpert (2006, 2008) contrasts Germanic future constructions across multiple diachronic periods
  - Change in distinctive collexemes across periods are indicative of semantic change of the constructions

Multiple Distinctive Collexeme Analysis (MDCA)

• Contrasts more than two, semantically similar (lexical) constructions (i.e. near-synonyms) in terms of their preferred conceptual metaphors
  - Co-occurrence freq. of METAPHORS x SYNONYMS

• Distinctive metaphors for a given word are indicative of the prominent metaphorical profiles of the word in comparison to the other words
  - Repelled metaphors can also be identified
Multiple Distinctive Collexeme Analysis (MDCA)

• Uses *exact binomial tests*

• Compares the obs(erved) and exp(ected) freq. of each metaphor across the synonyms, given the metaphor overall freq. in the sample
  - which one is more or less freq. than exp. by chance

• Generates probability ($p_{\text{binomial}}$) values of the obs. freq. of the metaphor with a synonym, given the null assumption of equal distribution of the metaphor across the synonyms
  - Log-transformed $p$-value to the base of 10 into the so-called *collostruction strength* (I use *association strength*)
Data and R codes for the quantitative analyses are bundled into an open-source R package *happyr* (Rajeg 2019b) – Open [R notebook](https://gederajeg.github.io/happyr) is also available (Rajeg 2019c)

- Check ‘em out at [monash.figshare](https://figshare.com/articles/monash)
Results
HAPPINESS IS A DESIRED GOAL

• Similar to the QUEST metaphor model (Stefanowitsch 2004, 2006)

• Strongly attracted to:
  - *kebahagiaan* ‘happiness’ (N = 125; AssocStr = 20.208, ***)
  - *kesenangan* ‘pleasure’ (N = 110; AssocStr = 15.265, ***)

• Strongly repelled by:
  - *kegembiraan* ‘joy’ (N = 6; AssocStr = -17.855, ***)
  - *keceriaan* ‘cheerfulness’ (N = 10; AssocStr = -16.982, ***)
  - *keriangan* ‘cheerfulness’ (N = 3; AssocStr = -4.73, *)

• I present the attracted/distinctive metaphors that are significant at $p_{\text{binomial}} < 0.001$ (uncorrected for multiple signif. testing), i.e. $\text{AssocStr} > 3$
• The stars (*) shows the significance levels of the corrected $p_{\text{binomial}}$-value with Holm’s method: *** = $p_{\text{Holm}} < 0.001$; ** = $p_{\text{Holm}} < 0.01$; * = $p_{\text{Holm}} < 0.05$; ms = marginally significant, i.e. $p_{\text{Holm}} \geq 0.05$; ns = not significant, i.e. $p_{\text{Holm}} \geq 1$
HAPPINESS IS A DESIRED GOAL

- **mencari** ‘search for’, **mengejar** ‘chase’, **memburu** ‘hunt’, **pemburu** ‘hunter’, **pengejaran** ‘chasing’
- **capai** ‘reach’, **raih** ‘pull/reach towards the body’, **menemukan** ‘discover, find’, **menggapai** ‘reach out’, **sampai** ‘arrive at’

Aids to goal, impediment, goal/end of a path

*fisher-exact < 0.001, ***
Undesirable tone of *kesenangan* ‘pleasure’

- Attracted metaphors evoking negative valence
  - DECEIVER (N = 17; AssocStr = 9.998, ***)
  - SUBJUGATOR (N = 13; AssocStr = 6.256, ***)
  - ADVERSARY/OPPONENT (N = 12; AssocStr = 3.534, ns)
  - IMPEDIMENT TO MOTION (N = 5; AssocStr = 3.061, ns)

- Other attracted metaphors:
  - FOOD (N = 44; AssocStr = 7.815, ***)
  - POSSESSABLE OBJECT (N = 183; AssocStr = 5.776, **)
DECEIVER metaphor

• Based on lexical items evoking the DECEPTION SCENARIO source-domain frame
  - *kesenangan* maps onto the Deceiver role
  - Change in Experiencer’s mental and behavioural attitude

  • *kesenangan yang menipu* ‘deceiving pleasure’
  • *terpesona dengan kesenangan* ‘spellbound with pleasure’
  • *tergoda oleh kesenangan* ‘enticed by pleasure’
  • *tersesatkan oleh kesenangan* ‘misled by pleasure’
  • *tersihir oleh kesenangan* ‘bewitched by pleasure’
  • *tertipu dengan kesenangan* ‘deceived by pleasure’
  • *terlena dengan kesenangan* ‘lulled/engrossed with pleasure’
  • *tipu muslihat kesenangan* ‘cunning trick of pleasure’
SUBJUGATOR metaphor

- Based on lexical items evoking the SERVITUDE source-domain frame
  - *kesenangan* maps onto the Subjugator role
  - complete control of pleasure over the Experiencer
- *menuruti* *kesenangan* ‘obey/comply with pleasure’
- *memuaskan* *kesenangan* ‘satisfy pleasure’
- *kesenangan* *menguasai* X ‘pleasure rules X’
- *budak* *kesenangan* ‘slave of pleasure’
- *diperbudak* oleh *kesenangan* ‘enslaved by pleasure’
- *melayani* *kesenangan* ‘serve (of someone) pleasure’
- *memperturutkan* *kesenangan* ‘obey pleasure’
CONTAINER metaphors

• Specificity of the entity grounds the split into:
  - CONTAINED ENTITY (unspecified Entity)
  - LIQUID IN A CONTAINER (type-constraint as Liquid)
  - Stefanowitsch (2006) also did split LIQUID IN A CONTAINER and the more generic SUBSTANCE IN A CONTAINER

• LIQUID IN A CONTAINER is only attracted to kegembiraan ‘joy’ (N = 67; AssocStr = 11.824, ***)

• CONTAINED ENTITY is attracted to both:
  • keceriaan ‘cheerfulness’ (N = 122, AssocStr = 8.785, ***)
  • keriangan ‘cheerfulness’ (N = 43, AssocStr = 4.913, **)
CONTAINER metaphors

• *kebahagiaan* ‘happiness’ strongly repels CONTAINED ENTITY (N = 34; AssocStr = -6.099, ***)

• *kesenangan* ‘pleasure’ strongly repels both:
  - CONTAINED ENTITY (N = 16; AssocStr = -13.354, ***)
  - LIQUID IN A CONTAINER (N = 6; AssocStr = -6.806, ***)
CONTAINED ENTITY

- Based predominantly on patterns referring to CONTAINING source-domain frame
  - 80.7% of the tokens of the metaphor across all words
  - HAPPINESS words map onto the Content role (unspecified as liquid)

- Another source-domain frame is BEING IN A BOUNDED REGION
  - HAPPINESS words map on the Located_Entity role (in a Bounded_Region)
CONTAINED ENTITY

**penuh (dengan) keceriaan**
‘full with/of cheerfulness’ (n = 96)

**dipenuhi (dengan/oleh) keceriaan**
‘filled up with/by cheerfulness’

**keceriaan menyesaki/memenuhi X**
‘cheerfulness fills X up’

**ada keceriaan (di) dalam X**
‘there be cheerfulness (at the) inside (of) X’

**keceriaan (di) dalam X**
‘cheerfulness (at the) inside (of) X’

**mengisi X dengan keceriaan**
‘to fill X with cheerfulness’

**Token freq**
LIQUID IN A CONTAINER

RELEASE LIQUID – ‘externalisation of emotion’

- *luapan* kegembiraan ‘overflow of joy’
- *kegembiraan terpancar* ‘joy is spurted’
- *memancarkan* kegembiraan ‘spurt joy’
- *melampiaskan* kegembiraan ‘gush out joy’

HEATING LIQUID – ‘intensification/intensified emotion’

- *meluapkan* kegembiraan ‘to boil over joy’
- *kegembiraan yang meluap-luap* ‘joy that keeps boiling over’

STOP FLOW OF SUBSTANCE – ‘control of emotion’

- *membendung* kegembiraan ‘to dam up joy’
- *dibendung/terbendung* ‘joy is dammed up’

FULLNESS – ‘intensification’

- *dakwah melimpahkan* kegembiraan pada X ‘the preach brims X with joy’
EMBELLISHMENT metaphor

• Attracted only to *keceriaan* ‘cheerfulness’ (N = 9; AssocStr = 4.116, *)

• *keceriaan menghiasi* X ‘cheerfulness *embellishes* X’
  - 6 of 7 tokens have X specified with *wajah* ‘face’

• Expressivity & vibrance (?)
  • Also attracts COLOUR metaphor (not significant at the corrected level)
    - *warna-warni keceriaan* ‘*colourfulness of cheerfulness*’
    - *keceriaan kembali merona* ‘cheerfulness is *blushing* again’
    - *keceriaan semakin marak* ‘cheerfulness is increasingly *striking*’
    - *melunturkan keceriaan* ‘to *fade/bleach* cheerfulness’
CONCLUSION

• Evidence from Indonesian for Principal Metaphor Hypothesis
  - emotion near-synonyms differ in their metaphorical profiles

• Embrace the *usage-based* data from corpora

• Assess the hypothesis using quantitative technique (e.g. distributional statistics)
CONCLUSION

• Indonesian HAPPINESS lexical-field to some extent is carved-up semantically according to similar metaphors distinguishing happiness and joy
  - kebahagiaan ‘happiness’ & kesenangan ‘pleasure’ attract the QUEST-related metaphor (i.e. DESIRED GOAL)
  - kegembiraan ‘joy’, keceriaan ‘cheerfulness’, & keriangan ‘cheerfulness’ attract CONTAINER-related metaphors

• Yet, there’s kesenangan ‘pleasure’ attracting metaphors highlighting negative valence:
  - Being deceived (DECEIVER metaphor)
  - Being under complete control (SUBJUGATOR metaphor)
Thank You!

Where did you find that? I've been searching for it everywhere.

I created it myself.

Correspondence Analysis for the distinctive metaphors (AssocStr > 3)

GLOSS (root — nominalised):
- bahagia 'peaceful and happy' — kebahagiaan 'happiness'
- ceria 'cheerful' — keceriaan 'cheerfulness'
- gembira 'excited; enthusiastic' — kegembiraan 'joy; cheerfulness'
- riang 'very happy; joyous' — keriangan 'cheer(fulness)'
- senang 'happy; to feel well' — kesenangan 'pleasure'

The first two dimensions represent 72.6% of the variation.
Correspondence Analysis for the distinctive metaphors (AssocStr > 3)

The first and third dimensions represent 63.07% of the variation.
Distinctive collocates for *kebahagiaan* ‘happiness’

<table>
<thead>
<tr>
<th>collocates</th>
<th>gloss</th>
<th>n</th>
<th>exp</th>
<th>assoc.str</th>
<th>p.binom</th>
<th>p.holm</th>
<th>dec</th>
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</thead>
<tbody>
<tr>
<td><em>kesejahteraan</em></td>
<td>welfare; well-being</td>
<td>82</td>
<td>32.701</td>
<td>29.646</td>
<td>2.258e-30</td>
<td>1.646e-25</td>
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<td><em>sejati</em></td>
<td>true; genuine</td>
<td>89</td>
<td>37.703</td>
<td>26.595</td>
<td>2.538e-27</td>
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<tr>
<td><em>mencapai</em></td>
<td>to reach</td>
<td>87</td>
<td>42.704</td>
<td>16.944</td>
<td>1.136e-17</td>
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<tr>
<td><em>menemukan</em></td>
<td>to find; to locate</td>
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<td>human</td>
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<td>50.399</td>
<td>10.034</td>
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## Distinctive collocates for *kegembiraan* ‘joy’

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### Distinctive collocates for *keceriaan* ‘cheerfulness’

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### Distinctive collocates for keceriaan ‘cheerfulness’

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MetaNet (MN)

• Hybrid of **Frame Semantics** and (Embodied) **Construction Grammar**
  • formalising CMT for large-scale, computational metaphor analysis
  • MPA’s key step is also adopted

• CM represents mappings between semantic frames and roles mediated via grammatical constructions of the metaphorical expressions

• MN has **repository** for conceptual metaphors and semantic frames
**MetaNet (MN)**

Formalised representation of links between metaphorical construction & the evoked mappings

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**Predicate (source)**: *Direct Obj. (target)*

:Setelah me-lihat wajah ayah=nya yang mem-(p)ancar-kan kegembiraan

'After seeing h(is/er) father's face that spurts (out) joy'

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**HAPPINESS IS LIQUID IN A CONTAINER**

Expression of Happiness is released liquid

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