

Psych-Predicates: How They Are Different

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Abstract

This paper is concerned with characterizing psych-predicates in Korean and possibly in Japanese in the GL spirit. We focus on the the status of the Experiencer (or 'judge') in relation to other arguments and examine the first-person subjectivity data (constraint). The relevant cause and effect relation and consequent coerced event function is postulated for coherent interpretation.

Keywords: psych-predicates, experiencer, first-person (subjectivity) data, causation.

1 Introduction

We will characterize psych-predicates = experiencer-predicates and predicates of personal taste in Korean, focusing on the status of the Experiencer in relation to arguments and examining the first-person subjectivity data (constraint). The relevant cause and effect relation and consequent coerced event function is postulated for coherent interpretation. **2** will show data and raise issues; **3** will discuss issues in the GL spirit; and **4** will conclude the discussion.

2 Data and Issues

Consider (1) (Lee 2010), where description of psych state in the present tense by **the first-person** but not by the third or second person is acceptable. Here the 'judge' is the speaker. This first-person subjectivity constraint is observed in Korean and Japanese.

- (1) na/?*ku/?*ne -nun ecirep-ta
I/he/you -TOP dizzy-DEC
'I am/?*he is/?*you are dizzy.'
- (2) watashi-wa/?*kare-wa/?*anata-wa sabishi
'lonely' desu
'I am/?*he is/?*you are lonely.'

However, even in the present, if the psych-adjective takes a verbalizer *-e hay* 'show signs of being *psych-Adj*,' a third-person with it becomes quite acceptable, as in (2).

- (3) ku-ka ecirep *-e hay*
he -NOM dizzy-E do
'He shows signs of being dizzy.'

Because the speaker sees his act of, say, turning in circles as evidence to utter (2), Tenny (2006) calls the Japanese counterpart *-garu* an evidential, which also lifts the person restriction as in Korean. In English, 'He is dizzy' may be

uttered on the basis of the speaker's seeing him turn in circles or hearing from him or someone else¹ and is not distinct from 'I am dizzy.' The past form of (1) is fine with the 3rd-person subject (*Ku-nun ecirew-ess-ta* 'He was dizzy'); it may be assumed that there could have been conveyance of information from him to the speaker). With a modal (conjecture) or future marker attached to the psych-adjective, the 1st-person constraint is waived. Korean has a clearer reportative evidential, as in (4), which also lifts the first-person restriction.

- (4) *ku-ka ecirep -tay [-tay: reportative]*
 he-NOM dizzy-REPORT -DEC
 'He says he is dizzy' or
 'He is said to be dizzy.'

On the other hand, in an interrogative sentence in the present tense, the second person subject, not the first person subject, is acceptable, asking the hearer = the speaker-to-be about her/his psychological state. The perspective is shifted from the current speaker to the next speaker, who is the hearer, who will answer the question. At the point of answering the question, the person who answers or speaks is the one who is entitled to know her/his own internal psychological state.

- (5) *ne ecirewu-nya?*
 you dizzy -Q
 'Are you dizzy?'

The cause of spins may be from drinking on an empty stomach. But utterances can appear without expressing causes and such psych-Adjectives as 'dizzy,' 'lonely' may form a sentence with just an Experiencer. In a cause adjunct clause, the Agent is typically co-referential with the 1st-person Experiencer in the main clause psych-predicate. The drinker and the one who feels dizzy must be the same person, in accordance with argument coherence in causation structure in GL (Pustejovsky 1995).

Then, let us observe the following type, which some authors call 'predicates of personal taste' (Lasersohn, 2005; Stephenson, 2007).

¹ We can posit some abstract hidden evidentiality of learning about or simulating the psych state of the third-person statement.

- (6) The roller coaster is fun (for me).
 (7) a. This walnut is tasty (for me/for him).
 b. Walnuts are tasty.

They require the Stimulus subject/Topic unlike (1). Instead, the 1st-person Experiencer or evaluator is an optional adjunct.

Lasersohn (2005) makes use of Kaplan's (1978) distinction between *character* and *content*, and between *context* of utterance and *index* of evaluation. Lasersohn adds a *judge* to the *index* of evaluation, which becomes a triple <w,t,j> of world, time, and judge.

- (8) $[[\text{fun}]]^{c; w, t, j} = [\lambda x_e. x \text{ is fun for } j \text{ in } w \text{ at } t]$
 (9) $[[\text{tasty}]]^{c; w, t, j} = [[\text{taste good}]]^{c; w, t, j} = [\lambda x_e. x \text{ tastes good to } j \text{ in } w \text{ at } t]$
 (10) $[[\text{This cake is tasty}]]^{c; w, t, j} = 1$ iff this cake is tasty to *j* in *w* at *t*.

However, *j* can shift from *me* the speaker to *him* a non-speaker, depending on a judge salient in the context in English. In Korean, the 1st-person constraint must be kept (such that *j*=I, if *t*=n ('now'/speech time) and the formalism must be adjusted conditionally accordingly. The 1st-person orientation is generally accepted. The shifting from it to attitude holder (in attitude report sentences such as, *Mary thinks this cake is tasty*)

One clear distinction between the type of (1) and that of predicates of personal taste is that the latter can have a generic statement such as (7b) but not the type of (1). See the contrast: (10a) vs. (10b).

- (10) a. ???*hankwukin-un ecirep-ta*
 Koreans -TOP dizzy
 'Koreans are dizzy.'
 b. *hankwukin-un hwal-ul cal sso-n-ta*
 'Koreans are excellent archers.'

Furthermore, for predicates of personal taste, the following faultless/subjective disagreement is agreed on:

- (10) a. John: This cake is tasty.
 b. Mary: No, it's not tasty.

Here both speakers have said something true, so

long as each was sincere. Thus the disagreement does not seem to be one that can be resolved.

But for Experiencer-present psych-predicates, as in (1), the same disagreement is not warranted, as in (11). Other than the speaker is not entitled to disagree on the 1st-person speaker's expressed psychological state (therefore, 11b). (11c) is not relevant in the context.

- (11) a. John: I am dizzy. (angry, lonely, sad)
 b. Mary: ??No, you are not dizzy.
 c. Mary: ??No, I am not dizzy.

There are debates between **relativists** and **contextualists**. In work on context-dependence, some authors have argued that certain types of sentences such as those of personal taste and epistemic modality give rise to a notion of relative truth: truth relative not only to a world and time of evaluation, but also to something like a “context of evaluation” (Egan et al. 2004), “context of assessment” (MacFarlane, 2005) or a “judge” (Lasersohn 2005).

An alternative contextualist approach argues that the context-dependence enters in passing from “character” in the sense of Kaplan (1989) to the actual proposition expressed (“content”): what proposition is expressed may vary from context to context, but once the proposition is fixed, its truth-conditions are not “relative”, and no extra parameters need to be added to indices of evaluation (Stanley 2007). Positing implicit content, this commonly employed linguistic strategy leads to contextualism, e.g. for Kratzer's appeal to implicit “in view of” clauses providing the implicit domains of various modals. The posited implicit content becomes part of the proposition expressed (or of the semantic content). This is relevant for propositional attitude ascriptions and for sentential anaphora, etc. (Partee 2009).

Regarding (11a), Stojanovic (2011) inherits some aspect of the Kaplanian view (1989) with the following sequence (modified):

- (12) a. Mary (pointing at John): He is dizzy.
 b. Jane: That's what he said, too.

Based on the ‘*same-saying*’ between (11a) and (12a) and the truth of the related report in (12b), she proposes that the content of (11a) is a function that takes an individual (with a world, a time and other things) and returns value True iff the individual is dizzy (in that world and at that time). John is asserting this content of himself. The content associated with (12a) is the very same function, and Mary is asserting this content about John. The contents are the same and the function corresponds to the property of being dizzy. By having an operator that binds the variable for the 1-st-person oriented interpretation of the sentence, the property claim makes it ‘judge-free’ (Pearson, forthcoming). However, there is a language-specific constraint that blocks the shift from (11a) (‘I’ expression) to (12a) (‘he’ expression) in the present tense, namely, in Korean and Japanese. “He was dizzy” in the past is acceptable. This constraint must be represented.

Psych predicates involve direct sensory/perceptual experience by the 1st-person at the core and the direct sensory/perceptual evidential marker *-te* in Korean, which Japanese lacks, also involves the 1st-person at the core and they occur, as in (13). The evidential marker *-te* implicates that the current speaker has direct sensory/perceptual evidence, acquired before speech time by default, regarding its prejacent argument proposition Φ of type $\langle s, t \rangle$. Φ itself is a psych predicate. In (13), therefore, the Experiencer, the 1st-person, which can appear as Topic at S-initial position, coincides with the evidence holder, the 1st-person again, not realizable on the surface.

- (13) a. Ku namwu-ka *po-i-te-ra* [visual]
 the tree-NOM see-PASS-
 ‘The tree was visible to me.’
 b. Kangtang-i *shikkurep-te-ra* [hearing]
 auditorium-NOM noisy- TE-DEC
 ‘[I heard] the auditorium was noisy.’
 c. Pipimpap-i *mas-iss-te-ra* [taste]
 pipimpap-NOM tasty -TE-DEC
 ‘[I tasted] the pipimpap was tasty.’
 d. Kkoch-i *hyangkirop - te-ra* [smell]
 flower-NOM fragrant TE-DEC
 ‘[I smelled] the flower was fragrant.’
 e. Son-i *pwuterep-te-ra* [touch]
 hand-NOM soft -TE-DEC

- ‘[I touched] the hand was soft.’
- f. Ttang-i pal-ey *tah-te-ra* [touch]
 earth -NOM foot-at reach-TE-DEC
 ‘[I felt] my foot touched the earth.’ (in water)
- g. Kapang-i *mwukep-te-ra* [weight]
 bag -NOM heavy- TE-DEC
 ‘[I weighed] the bag was heavy.’
- h. (Na-nun) sulphu-*te-ra* [feeling]
 I-TOP sad -TE-DEC
 ‘[I felt] I was sad.’

The science of consciousness must be based on the 1st person data vs. the 3rd person data involved in this asymmetry (Chalmers 2010, 1995), with the *third-person data* about behavior and brain processes, and *first-person data* about “subjective experience.” Chalmers lists first-person data as follows:

- (14) a. visual experience (e.g. that of color and depth)
 b. other perceptual experiences (e.g. auditory and tactile experience)
 c. bodily experiences (e.g. pain and hunger)
 d. mental imagery (e.g. recalled visual images)
 e. emotional experience (e.g. happiness and anger)
 f. occurrent thought (e.g. the experience of reflecting and deciding)

However, we have one finer distinction between outer-directed and inner-directed in evidentials and psych-predicates in Korean, which we need, even though they may be considered in the same wider subjective experience category. My volitional act, unlike psych predicates, cannot occur with the direct evidential marker *-te*. A psych sentence cannot take a non-1st-person subject if it co-occurs with the evidential marker *-te*. With *-te*, introspection is possible, as in (13), but outer-directed direct observation is odd, as in (15). A volitional act (15) with *-te* shows exact asymmetry in possible subject persons.

- (15) ???Nay-ka pap-ul mek-*te-ra*
 I-NOM rice-ACC eat-TE-DEC
 ‘[I observed] I was eating rice.’

On the other hand, there occurs a very interesting contrast between (16a) and (16b). By the direct evidential marker *-te* (16a) asserts at-issue that ‘he was dizzy’ and implicates that I, the speaker, acquired the evidence by observing it directly at that time, which after all turn out to be odd. Rather, the past tense marking of the same psych proposition at-issue is felicitous in (16b). Because of the past tense, there could have been a time interval in which the speaker could learn about ‘his being dizzy’ or hear/see his saying/showing signs of or simulate ‘I am dizzy.’

- (16) a. ?*Ku-nun *ecirep-te-ra*
 he-TOP dizzy-TE-DEC
 ‘[I directly perceived] he was dizzy.’
 b. Ku-nun *ecirep-ess-ta*
 he-TOP dizzy-PAST-DEC
 ‘He was dizzy.’

3. GL Concerns: Causation

Now in the GL concerns, the overall causation structure matters (based on Aristotelian qualia) and a coherent causal relation between the causing event (with the AGENTIVE quale) and the resulting event is considered even for psych (experiencer) predicates.

Psych predicates with a Stimulus subject or predicates of personal taste, as in (13), typically involve a metonymic reconstruction of the subject to an event (function) via agentive quale in GL. (*Mary’s watching*) *the movie* frightened her, (*My seeing*) *Bill’s face* scared me, and (*My reading*) *the book* bored me, are examples of coerced activity involving perception/cognition in a transitive causative sentence in English. However, inanimate subjects in a transitive causative sentence are not fully acceptable in Korean. Instead, Experiencer Topic + Stimulus Nominative + Psych predicate is typical (with the Topic alternating with a Dative+Top). Observe (14). If the Experiencer Topic is extra-ordinarily focused, it also gets a Nominative, forming a so-called a double Nominative construction.

- (13) The movie frightened Mary.
 (14) na-nun horangi-ka mwusep-ta
 I-TOP tiger -NOM fear
 ‘I fear a tiger.’

In GL (Pustejovsky 1995), *angry* is as follows in its qualia specification:

$$\left[\text{QUALIA} = \left[\begin{array}{l} \text{FORMAL} = \text{angry} (e_1, <1>) \\ \text{AGENTIVE} = \text{psych_act} ((e_2, <1>, <2>)) \end{array} \right] \right]$$

1. TABLE: Attribute-Value Matrix for *angry*

Unlike in direct causation, as in *kill*, the Experiencer's psych state event e_1 is headed instead of its causative/inchoative process e_2 , where the default second argument is not prominent. Even in the specification of the transitive causative verb *anger*, only the Experiencer argument is prominently represented regardless of the surface realization of the causing sub-event.

In Korean and English, there can be different classes of psych predicates in combination with cause event: one class such as *mianha-ta* 'sorry' that are used with a causal event of the Experiencer's own act not favorable to the other party. The English *sorry* can also be used to show the Experiencer's sympathy with the other party for her/his unfavorable event. A psych predicate *komap-ta* 'thankful/grateful' is used for the other or third party's act as agent, but not for the Experiencer's own act, in the preceding causal event. These are used as semi-performatives when uttered to the addressee in the present tense. Many psych predicates such as *boring*, *scaring*, *frightening*, *surprising*, *pleasing*, *amusing*, *fascinating*, and *fun*, and their Korean equivalents are used with the Experiencer's own perceptual or cognitive causal event. (See Nam (2009) for two classes in Korean.)

Because of the event function coming from the agentive quale of the nominal in the subject position in English and the post-Topic position in Korean, it is well explained why psych predicates, predominantly or underlyingly adjectival, are basically not an individual-level predicate such as *intelligent* and *tall* but a stage-level predicate, as exemplified in GL. Some of them are somewhat lasting, not just instantaneous, in their aroused psychological state but they may be different from real individual-level predicates. Pearson's forthcoming, however, argues that predicates of personal taste are individual-level predicates,

showing **There were cakes tasty*, **There were games fun* in parallel with *There were people tall*, and associating them with genericity (the genericity claim coincides with Lee's 2011 claim). Other approaches in semantics and philosophy of language rarely touch on this event function possibility and a semantically default (logically implicated but not realized) causative/inchoative process event for psych predicates.

4. Concluding Remarks

The 1st-person (present) constraint for psych predicates in Korean and Japanese is the core and starting point of subjectivity. The science of cognition and consciousness must seek clues of evidentiality of learning (and or simulation) in the possible expression of 'Mary is dizzy' vs. the impossible expression of ?*'Mary is dizzy' in Korean and Japanese. Otherwise, we cannot secure the objective state of 'Mary is dizzy' even if we have her brain opened up and take a look at the associated physical states.

The GL principle of argument coherence in the overall psych causation structure and qualia are suggestive but their descriptive contents must be further specified to be further actively applied.

References

- Chalmer, David. 2010. How Can We Construct a Science of Consciousness? In Gazzaniga, M.S. (ed.) *The Cognitive Neurosciences*. MIT Press, Cambridge, (4th Edition).
- Egan, Andy, John Hawthorne, and Brian Weatherson. 2004. Epistemic modals in context. In *Contextualism in Philosophy*, eds. G. Preyer and G. Peter. Oxford: Oxford University Press. brian.weatherson.org/em.pdf
- Kuno, Susumu. 1973. *The Structure of the Japanese Language*. Cambridge, MA: The MIT Press.
- Lee, Chungmin. 1986. Cases for Psychological Verbs in Korean. *Linguistic Journal of Korea* (Eoneo) 1.1.

- Lee, Chungmin. 2010. Evidentials and Epistemic Modals in Korean: Evidence from their Interactions. *Proceed's of PACLIC 24*.
- Lee, Chungmin. 2011. Dynamic Perspective Shifts in Evidentials: Evidence from Korean. LENS 8 Takamatsu, Japan.
- Lee, Chungmin. Forthcoming. Evidentials and Modals: Evidence Prototypicality, Interactions and Shiftability in Korean. In Lee, C. and J. Park (eds.) *Evidentials and Modals*. CRiSPI, Emerald.
- Lim, Dongsik and Chungmin Lee. 2012. Perspective Shifts in Korean Evidentials and the Effect of Contexts. *Proceed's of SALT 22*: 26-42. <http://elanguage.net/journals/index.php/salt>.
- Kaplan, David. 1978. On the Logic of Demonstratives, *Journal of Philosophical Logic*, VIII: 81-98.
- Koev, Todor. 2011. Evidentiality and temporal distance learning. *Proceed's of SALT 21*: 115-134.
- Matthewson, Lisa Forthcoming. Evidence Type, Evidence Location, Evidence Strength. In Lee, C. and J. Park (eds.) *Evidentials and Modals*, CRiSPI, Emerald.
- McCready, Eric. 2010. Evidential Universals. T. In P. Peterson and U. Sauerland (eds.) *UBC WPL: Evidence from Evidentials*. 105-127.
- MacFarlane, John. 2005. Making sense of relative truth. *Proceedings of the Aristotelian Society* 105 321–339. <http://johnmacfarlane.net/makingsense.pdf>.
- Moltmann, Friederike. In-press. Generalizing Detached Self-Reference and the Semantics of the Generic 'one.' *Mind and Language*. <http://semantics.univ-paris1.fr/pdf/one-philos.pdf>
- Nam, Seungho. 2009. Event structures of Experiencer Predicates in Korean: their causal, temporal, and focal sub-structure. At the Int'l Conference on Generative Lexicon Theory, Pisa.
- Partee, Barbara. 2009. Predicates of Personal Taste, Epistemic Modals, First-Person Oriented Content, and Debates about the Implicit Judge(s). Lecture Notes. UMass.
- Pearson, Hazel. Forthcoming. A Judge-Free Semantics for Predicates of Personal Taste. *Journal of Semantics*.
- Pustejovsky, James. 1995. *The Generative Lexicon*. Cambridge: The MIT Press.
- Stanley, Jason. 2007. *Language in Context: Selected Essays*. Oxford University Press.
- Tenny, C. 2006. Evidentiality, Experiencers, and the Syntax of Sentience in Japanese. *Journal of East Asian Linguistics*. 15:245–288.