

Morphological directionality, semantics, and syntax of the psych-alternation

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INTRODUCTION. Languages differ with respect to the morphological structure of their verbal inventory in the psych domain: Some languages derive intransitive experiencer-subject (ES) verbs from transitive experiencer-object (EO) verbs (see (1a)) by morpho-syntactic operations such as stative passivization (e.g. German, English), reflexivization (e.g. German, Spanish), or mediopassive voice (e.g. Greek, Icelandic). Other languages employ transitivizing operations of causativization (see (1b)), e.g. by means of causative affixes (e.g. Turkish, Japanese, Yucatec Maya) or the embedding under causative predicates (e.g. Korean, Chinese).

(1) *Morphological structure of experiencer verbs*

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|----|---------------------------------|---|---|----------|
| a. | transitive EO basis | → | intransitive ES derivation | |
| | <i>ekeln</i> ‚disgust‘ | | <i>sich ekeln</i> ‚REFL disgust‘ | (German) |
| b. | intransitive ES Basis | → | transitive EO derivation | |
| | <i>pwukkulepta</i> ‚be ashamed‘ | | <i>pwukkulepkey hata</i> ‚be.ashamed:ADVR do‘ | (Korean) |

Beyond some marginal variation, the psych verb inventory of every language displays a strong bias towards a preferred morphological pattern, as summarized in (2).

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|-----|------------------|---------------------------|----------------------------|
| (2) | <i>Type</i> | <i>subtype 1</i> | <i>subtype 2</i> |
| | intransitivizing | mediopassive: Icelandic | reflexive: Spanish |
| | transitivizing | morph. causative: Finnish | periphr. causative: Korean |

The aim of the present study is to test predictions about the semantic and syntactic properties of the alternating pairs depending on the morphological directionality in (2). In particular, the examined properties relate to (a) the type of stimulus instantiating the subtypes agent, causer, subject matter (Pesetsky 1995, Arad 1998); (b) the event structure type (*Aktionsart*), and (c) the canonicity of the syntactic behavior of the EO argument. For this purpose, we will present detailed empirical data for the languages in (2) and we will consider the generalizability of our findings for the morphological types at issue on the basis of data from previous research.

First, causativity implies agentivity if the subject role is taken by a potentially agentive (i.e. human) participant (Van Valin & Wilkins 1996; Demirdache & Martin 2015). Hence (overtly) causative EO verbs of transitivizing languages are expected to be in general potentially agentive. In contrast, the (base) transitive EO verb of an intransitivizing language may be semantically causative or not. Indeed, it has been shown for many languages of this well-investigated type that the class of transitive EO verbs includes both causative and non-causative stative items (among many others Pesetsky 1995, Arad 1998, Grafmiller 2013 on English; Fabregas & Marín 2014 on Spanish). The lack of causativity comes along with the subject matter type of stimulus introduced in Pesetsky 1995 which is thus found with transitive EO verbs in the latter type of languages but generally not in the former one.

Second, concerning the *Aktionsart* of psych verb alternants, recent work has argued for languages of both directionality types that the transitive exemplars are either pure states, inchoative states, causative states or changes of state (see Marín & McNally 2011 on Spanish; Pylkkänen 2000 on Finnish; Choi & Demirdache 2014 on Korean). In transitive (causative) EO verbs we find a potential interaction of event structure with the stimulus type to the effect that subject matter stimuli come along with states, causer stimuli come along with either inchoative states or changes of state whereas structures with agentive stimuli denote dynamic events (accomplishments, activities) (Arad 1998, Landau 2010; contra Marín 2014 who claims for Spanish that potential agentivity does not have an effect on event structure).

Based on the morphological and semantic distinctions between the two language types, we expect (non-)canonical syntactic behavior (such as peculiarities in word order, passivization,

binding, extraction, etc.) in intransitivizing languages, but generally not in regularly causativizing languages. This expectation is in line with observations that non-canonical psych syntax is related to stativity and non-agentivity (Arad 1998, Landau 2010, Verhoeven 2010).

METHOD. For each language, the inventory of alternating psych verbs was elicited by a questionnaire featuring the basic emotion domains in terms of typical emotion triggering situations. We applied pertinent semantic tests on the event structure and the stimulus properties in the resulting inventories per language. This includes the *culminativity test* which identifies the (change of) state in the experiencer object and the availability of an agentive interpretation of the stimulus (Martin & Schäfer 2015), see (3). In order to distinguish causer from subject matter stimuli we tested the compatibility of the target verbs with situations in which the stimulus is not the matter but only the trigger of the emotion (cf. *The medical report worried/concerned the patient, but the patient didn't worry / (#) wasn't concerned about the report itself (but rather about her health)*; cf. Pesetsky 1995, Reinhart 2002). Event structure properties such as stativity, telicity, punctuality were tested by the compatibility of a verb structure with state vs. event modifiers (Marín & McNally 2011, Fabregas & Marín 2014).

(3) *Culminativity test*

<i>Juan/el comentario</i>	<i>alegró</i>	<i>a María</i>	<i>(#) pero</i>	<i>ella</i>	<i>no se dio</i>
John/the comment	please:PRT.3.SG	to Maria	but	she	not REFLgive:PRT.3.SG
<i>cuenta y</i>	<i>siguió</i>	<i>indiferente.</i>			
account and	remain:PRT.3.SG	indifferent			

‘John/the comment pleased Mary, but she didn’t realize it and remained indifferent.’

MAIN RESULTS. We obtained the following results for Spanish and Korean (which will be complemented by currently ongoing parallel studies on Icelandic and Finnish): (a) Spanish EO verbs are divided into those denoting inchoative states and those denoting punctual changes (Marín & McNally 2011), while Korean EO verbs denote caused states or caused inceptive changes of state. (b) For Korean, the culminativity test (3) identifies potential agentive interpretations of the stimulus for all EO verbs (independently of punctuality, see also Beavers & Choi forthc.). In contrast, in Spanish, cancelling the culmination of the change of state with EO verbs identifies potential agents only for those verbs denoting inchoative states but not for punctual verbs. Furthermore, Spanish EO verbs systematically distinguish between causer and subject matter subjects by means of accusative vs. dative marking of the experiencer. In Korean transitive EO verbs only take causer subjects, while subject matter subjects occur in structures with either nominative or dative experiencers.

Finally, our expectation concerning non-canonical syntactic behavior is corroborated for Korean causative EO verbs which behave syntactically canonically in all relevant tests (see also Temme & Verhoeven 2016 on word order). Spanish EO verbs divide between a group of potentially agentive and (in this reading) syntactically canonical verbs and a group of necessarily non-agentive verbs which display non-canonical syntactic behavior (Landau 2010, Marín 2014).

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