Translative Case in Finnish: A Force-Dynamic Account Olga Kagan (Ben-Gurion University of the Negev)

In Finnish, translative case is strongly associated with the notion of change (cf. e.g. Fong 2003, Matushansky 2008 and references therein). It is assigned to predicative complements of such verbs as *tulla* 'become' and *muuttua* 'change', 'turn (into)' (1) and to resultative phrases (2):

- (1) Toini tul-i sairaa-ksi. Toini.n become-past.3s ill-tra 'Toini became ill.'
- (2) Ravist-i-n mato-n puhtaa-ksi. shake-past-1s carpet-a clean-tra 'I shook a/the carpet clean.'

However, as pointed out by Fong (2003), the view that translative case entails change is challenged by its appearance on complements of such verbs as *jäädä* 'remain' and *jättää* 'leave':

- (3) Matti jä-i vanha-ksi-poja-ksi.
 - Matti.nremain-past.3s old-tra-boy-tra

'Matti remained a bachelor.'

Thus, (3) does not entail a change. On the opposite, Matti is entailed to remain in the same state which held of him originally. One way to account for instances like (3) is by putting forward a modal analysis according to which the translative is licensed not only when an event of change actually takes place but also when it is expected (but possibly never occurs). This line of analysis is proposed by Fong (2003). Indeed, (3) is associated with an expectation that Matti would get married, plausibly with his desire to get married, which ultimately remains unfulfilled. Fong demonstrates that in this respect the translative-taking *jäädä* differs from the essive-taking *pysyä*, which, too, can be translated as 'remain'. Thus, if *jäi* in (3) is substituted by *pysyi*, the sentence no longer implies that Matti desired to get married, and the predicate must appear in essive case.

However, such an analysis would mean that the translative is compatible with a change in two directions: both from P to not P and from not P to P (where P is the property denoted by the predicate). Thus, in (1), the change is from not being sick to being sick (from not P to P). In contrast, in (3), the previously expected, potential, change is from being a bachelor to not being a bachelor (from P to not P). However, if this were the case, we would expect (1) to be ambiguous. It should mean either that Toni became ill or that he recovered from sickness. Contrary to this expectation, the second reading is unavailable.

Instead, I propose that translative case-marking is sensitive not to the notion of change per se but rather to an inherent component of change: energy being exerted for the purposes of the P-state to hold. I follow Talmy's (2000) insight that the semantics of such verbs as *stay*, *keep* and *remain* (unlike *be*) involves **force dynamics**. (Copley and Harley (2015) informally define force as "an input of energy that arises from the objects and properties in a situation.") Roughly, with such verbs, force is entailed to be exerted in order for the situation to remain unchanged. This makes the above-listed verbs more dynamic than classical statives. To illustrate, *The ball kept (on) rolling along the green* (Talmy 2000:412) is compatible with a situation whereby the ball has a tendency to remain in place, but the tendency is overcome by an external force acting on it. Analogously, I propose, the use of *jäädä* in (3) suggests that Matti has a tendency / desire to get married, but other circumstances (for instance, girls saying "No") force him to remain in the bachelor state. In contrast, *pysyä* is purely stative. It implies no force or dynamics and is used merely to assert that no change of state took place.

I propose that translative marking signals that force is exerted in order for the P-situation to hold (i.e. in order for the argument to have the property denoted by the translative predicate). This may happen in two types of situations. The prototypical case is one whereby originally, the argument lacks the property P and force is exerted in order for it to come to have the property. In other words, a change from not P to P takes place. Naturally, this is the configuration that is most closely associated with the translative. However, another type of situations is compatible with the necessary configuration as well: ones in which force is exerted in order for the argument to remain in the state in question and **not** to undergo a change. This happens when a change is for some reason expected or natural, there is a tendency for a change, and then force / energy exertion is needed in order to overcome this tendency. Such a situation is signaled by *jäädä*, and this is why this verb is accompanied by a translative complement.

I follow Copley and Harley (2015), who formalize the concept of force dynamics in a generative linguistic account. Forces are represented as functions from situations to situations, type $\langle s, s \rangle$. The input is the original situation s and the output, a (potentially different) situation s' which is brought about by the exertion of **the net force** of s (the force that arises from all the individuals and properties in s.) I propose that the condition under which translative case is assigned to a predicate is essentially the same as the semantic meaning component contributed by both BECOME v° head (contributed by change of state predicates) and the "dynamic stative" *keep* according to Copley and Harley:

(4) $\lambda p \lambda f.p(fin(f))$ where f is a force, fin(f) is the final situation of f (one that is rendered after f takes the situation of which it is a force as its argument) and p is a predicate of situations, type <s,t> (an analogue of an event predicate within event semantics.)

Roughly, the predicate p is asserted to hold of the situation which results from the exertion of the force f. BECOME and *keep* differ in their presuppositions. Crucially, BECOME presupposes that the initial situation *init(f)* is not a p situation, whereas *keep*, on the opposite, presupposes that it *is* a p situation. Translative case is indeterminate in this respect and, thus, compatible with both options, which is why it is found in both (1)-(2) and (3). The semantics of the two 'remain' verbs is provided below (the presupposed part is underlined). *pysyä* entails that a p-situation holds and presupposes that a p-situation held immediately before the asserted state of affairs.

(5) $[[j\ddot{a}\ddot{a}d\ddot{a}]] = \lambda p \lambda f. p(fin(f)) \underline{\& p(init(f))}$

The above-mentioned contrast between *jäädä* and *pysyä* is further supported by the fact that, when combined with spatial expressions, the former licenses goal cases (illative and allative) and the latter, location cases (inessive and adessive), e.g. (7). Again, intuitively, (7a) but not (7b) creates a feeling that the subject was likely to leave the city but, ultimately, did not.

(7)	a.	Jäin kaupunkiin .	b.	Pysyin kaupungissa.
		I-stayed city _{ILL}		I-stayed city _{INESS}
		literally: 'I stayed to the city'		'I stayed in the city.'

Note that with *jäädä*, there is no motion to the place in question, not even in inertia/expectation worlds (rather, in these worlds, motion is **away from** that place). However, it is implied that force is exerted in order for the argument to be in this place. Naturally, the same is true for events of motion in the direction of this location. This suggests that the 'goal' cases do not signal that motion in a certain direction takes place but rather that force is exerted for the purposes of the argument occupying the relevant location. (For illative, I propose the semantics in (8).) This, in turn, suggests that the notion of force plays a substantial role in the Finnish case system, and possibly in case systems of additional languages. (8) [[illative]] = $\lambda x \lambda y \lambda f$. LOC(y, in[x]) (fin(f))

⁽⁶⁾ $[[pysy\ddot{a}]] = \lambda p\lambda s. p(s) \& \exists s'[p(s') \& \tau(s') \leq \tau(s) \& \forall t [\tau(s') \leq t \leq \tau(s) \to \exists s''[p(s'') \& \tau(s'') = t]]$