Your 60th birthday is here!
Individual concepts in existential possessive constructions in Turkish

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1 Introduction

Coming from German or English, it seems natural to encode possession as a transitive relation combining the possessor and the possessum.

(1) Der Klaus hat ein-en Schlips.
DEF.M.SG.NOM Klaus have.PRS.3SG INDEF.M.SG-ACC tie
'Klaus has a tie.'

A glance at the *World Atlas of Language Structures* (WALS) (Stassen 2013, based on Stassen 2009) shows that this pattern is indeed wide-spread – it is exemplified by 63 languages in a sample of 240 languages, occurring not only in Europe but also in Africa and in the Americas. Stassen also notices a historic drift towards this construction. The smallest group in his survey express possession by an adnominal possessive construction, as in 'the tie of Klaus exists' (with 22 languages the smallest group in the sample, mostly in central Asia, Northern India and the Pacific). As an example, consider Turkish:[1]

(2) a. Klaus-un kravat-ı var.
Klaus-GEN tie-3SG.POSS exist.3SG
'Klaus has a tie.'

b. Kravat-ım yok.
tie-1SG.POSS not:exist.3SG
'I don't have a tie.'

For a referential use of adnominal possessives, cf. (3).

(3) Klaus-un kravat-ı gardırop-ta asılı.
Klaus-GEN tie-3SG.POSS wardrobe-LOC hang
'Klaus's tie is hanging in the wardrobe.'

The manner how possession is expressed in Turkish is remarkable from an English or German viewpoint, as nominal possessives like *my tie* presuppose existence of the object, hence assertion results in a tautology. Also, the existence of nominal possessives should be impossible to be negated, as this would result in a presupposition violation.

I would like to propose an analysis of predicative possessive constructions that reconciles their presuppositional nature with their use in existential possessive constructions. The idea is that the possessor phrases are interpreted as individual concepts.

[1] There is also a locative construction (cf. Göksel & Kerslake 2005), e.g.:

(i) Klaus-ta bir kravat var.
Klaus-LOC one tie exist.3SG
'Klaus has (is wearing) a tie.'

2 Predicative possession in Turkish

Individual concepts were introduced by Montague (1973) to account for sentences like:

(4) The temperature is ninety and rising.

From (4) we cannot conclude that ninety is rising. Why not? *Temperature* denotes a function from world/time indices to a temperature degree, and the predicate *rising* needs information about the temperature at more than just one index.

There are other uses of individual concepts. For example, Gupta (1980) presents an analysis of common nouns like *passenger* as applying to individual concpets. Grosu & Krifka (2008) propose that the subject of (5) denotes an individual concept that is defined only for the addressee's claims, and in Krifka (2021) I show that the noun *outfit* in sentences like (6) should refer to combinations shirts and pants that exist only at certain times.

(5) The gifted mathematician that you claim to be should have solved this problem.
(6) These two shirts and two pants make four outfits.

I propose that *Klaus'un kravatı* in (2a) and (3) is interpreted in a similar way, namely as referring to an individual concept that is defined only for those world-time indices at which the tie of Klaus exists. The two occurrences even share the uniqueness presupposition, but notice that this presupposition does not have to be satisfied at the world-time index of evaluation of the sentence.

The expression of adnominal possession is subject to intense study starting with Seiler (1983); see Ortmann (2018) for a recent study that brings together typological and semantic aspects, and Öztürk & Erguvanlı Taylan (2016) for the full range of adnominal possessives. Glossing over details, we can assume the interpretation (7), which maps an index of interpretation i and an entity x to truth if x is owned by Klaus in i and is a tie in i. We can now propose a meaning for the existence predicate EX: It maps predicates P to Truth iff they are non-empty at the index of evaluation, i_0:

(7) Klaus'un kravatı $\lambda i \lambda x[\text{POSS}(i)(x)(\text{KLAUS}) \wedge \text{TIE}(i)(x)], = \text{KT}$

(8) Klaus'un kravatı var $\text{EX}(i_0)(\text{KT})$, where $\text{EX}(i)(P)$ iff $P(i) \neq \emptyset$

However, *Klaus'un kravatı* comes with an uniqueness interpretation. The first choice would be to involve the iota operator, but considering cases of plural-marked expressions such as *Klaus'un kravat-lar-ı* 'the ties of Klaus' and number-marked expressions such as *Klaus'un üç kravat-ı* 'the three ties of Klaus' this definiteness is best captured by the MAX operator as defined in (9), were σ(P(i)) refers to the sum of all objects that P(i) applies to. This is a function that maps indices i to the sum of all individuals that P applies to in i, under the presupposition that this sum itself falls under P in i. In this way, existence and uniqueness are satisfied.

(9) $\text{MAX}(P) = \lambda i.\ P(i)(\sigma(P(i))) \ .\ \sigma(P(i))$

We can assume that in the Turkish genitive-possessive construction the possessed noun incorporates this MAX operator, leading to a definite interpretation; the possessor is an argument that has to be realized by a genitive noun.

(10) Klaus'un kravatı $\lambda y\ \text{MAX}(\lambda i \lambda x[\text{POSS}(i)(x)(y) \wedge \text{TIE}(i)(x)])(\text{KLAUS})$
$= \text{MAX}(\lambda i \lambda x[\text{POSS}(i)(x)(\text{KLAUS}) \wedge \text{TIE}(i)(x)])$

This does not strictly imply that Klaus only has a single tie; the world-time index can be additionally restricted by the situation, and uniqueness then is satisfied in this situation. The representation format also captures cases like *Klaus'un kravat-lar-ı* 'Klaus's ties' and *Klaus'un üç kravat-ı* 'Klaus's three ties'.

The analysis of predicative possessives as in (2a) now proceeds as follows. The existence predicate *var* denotes a function that maps an individual concept c and a world-time index i to truth, if c(i) is defined, and to falsity otherwise, cf. (11). Expression of existence and non-existence is exemplified in (12) and (13).

(11) $\text{EXIST}(i)(c) = 1$ iff c(i) is defined, = 0 else

(12) Klaus'un kravatı var $\text{EX}(i_0)(\text{KT})$

(13) Klaus'un kravatı yok $\neg\text{EX}(i_0)(\text{KT})$

Notice that *yok* and *var* are intensional predicates; they take an intensional meaning as argument. Non-extensional predicates, when applied and an index i to an individual concept c, reduce this to c(i), as in the following analysis of (3).

(14) Klaus'un kravatı gardıropta asılı. $\text{HANG\_IN\_WARDROBE}(i_0)(\text{KT}(i_0))$

The analysis in (12) and (13) does not capture the fact the genitive argument typically forms an immediate constituent of the sentence. For example, adverbs may occur between the possessor and the possessum (Göksel & Kerslake 2005):

(15) Ayten-in İstanbul-da iki arkadaş-ı var.
Ayten-GEN Istanbul-LOC two friend-3SG.POSS exist.3SG
'Ayten has two friends in Istanbul.'

According to Öztürk & Taylan (2016), the possessor argument can be topicalized, leading to the following structure for (12) (here simplified):

(16) $[_{\text{TP}}$ *Klaus'un* $\lambda t_1[_{\text{PredP}}\ t_1\ [[_{\text{DP}}\ t_1\ [_{\text{nP}}\ [_{\text{NP}}$ *kravat*] *-ı*]] *var*] $T^0]]$

That is, *Klaus'un* moves from the specifier position of the possessive DP to the specifier position of the TP, leaving a trace. This does not change the essence of the individual concept analysis, as the DP with the trace now is just interpreted as containing a free variable that is supplied by the moved constituent later; the possessive marker, here *-i*, expresses this relation via agreement.

(17) a. $[_{\text{DP}}\ t_1\ [_{\text{nP}}\ [_{\text{NP}}$ *kravat*] *-ı*]] $\text{MAX}(\lambda i \lambda x[\text{POSS}(i)(x)(x_1) \wedge \text{TIE}(i)(x)])$

b. $\lambda t_1[[_{\text{PredP}}\ t_1$ *kravatı var*] $T^0]$ $\lambda x_1 \lambda i[\text{EX}(i)(\text{MAX}(\lambda i \lambda x[\text{POSS}(i)(x)(x_1) \wedge \text{TIE}(i)(x)])]$

c. $[_{\text{TP}}$ *Klaus'un* $[_{\text{PredP}}$ *kravatı var*$]]$ $\lambda i[\text{EX}(i)(\text{MAX}(\lambda i \lambda x[\text{POSS}(i)(x)(\text{KLAUS}) \wedge \text{TIE}(i)(x)])]$

3 Conclusion

Kornfilt (1997), citing Lewis (1975), stresses that a sentence like (18) should not be rendered idiomatically as 'a very old book of Hassan exists'. This is right, but the individual concept analysis shows how these two meanings are related.

(18) Hasan-ın çok eski bir kitab-ı var.
Hasan-GEN very old one book-3SG.POSS exist.3SG
'Hasan has a very old book.'

(18) could either be treated as involving a property, as in analysis (8), or as an existential quantifier that introduces a discourse referent for individual concepts. Further research is needed.

Author's note

This is a contribution to a Festschrift for Klaus von Heusinger, focusing on a common interest in Turkish and nominal semantics. Unfortunately, space is too restricted to point out similar constructions in Daakie (Vanuatu) from my own field work – see von Prince (2016) for the similar situation in Daakaka.

Abbreviations

1/2/3 – first/second/third person, ACC – accusative, DEF – definite, GEN – genitive, INDEF – indefinite, LOC – locative, M – masculine, NOM – nominative, POSS – possessive, PRS – present tense, SG – singular.

References

Göksel, Aslı & Celia Kerlslake. 2005. *Turkish. A Comprehensive Grammar*. London: Routledge.

Grosu, Alexander & Manfred Krifka. 2007. 'The gifted mathematician that you claim to be': Equational intensional 'reconstruction' relatives. *Linguistics and Philosophy* 30(4). 445–485.

Gupta, Anil. 1980. *The Logic of Common Nouns: An Investigation in Quantified Modal Logic.* New Haven: Yale University Press.

Kornfilt, Jaklin. 1997. *Turkish*. London: Routledge.

Krifka, Manfred. 2021. Counting possible configurations. In Sebastian Löbner, Thomas Gamerschlag, Tobias Kalenscher, Markus Schrenk & Henk Zeevat (eds.), *Concepts, Frames and Cascades in Semantics, Cognition and Ontology*, 43–63. Cham: Springer.

Lewis, Geoffrey. 1975. *Turkish Grammar*. Oxford: Oxford University Press.

Montague, Richard. 1973. The proper treatment of quantification in ordinary English. In Jaakko Hintikka, Julius Moravcsik & Patrick Suppes (eds.), *Approaches to Natural Language. Proceedings of the 1970 Stanford Workshop on Grammar and Semantics*, 221–242. Dordrecht: Reidel.

Ortmann, Albert. 2018. Connecting the typology and semantics of nominal possession: Alienability splits and the morphology-semantics interface. *Morphology* 28(1). 99–144.

von Prince, Kilu. 2016. Alienability as control: The case of Daakaka. *Lingua* 182(1). 69–87.

Öztürk, Balkız & Eser Erguvanlı Taylan. 2016. Possessive constructions in Turkish. *Lingua* 182. 88–108.
Seiler, Hansjakob. 1983. *Possession as an Operational Dimension of Language.* Amsterdam: John Benjamins.
Stassen, Leon. 2009. *Predicative Possession*. Oxford: Oxford University Press.
Stassen, Leon. 2013. Predicative possession. In Matthew S. Dryer & Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology, < https://wals.info/chapter/117>.