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RESEARCH

Constraints in contact: Animacy in English and Afrikaans genitive variation – a cross-linguistic perspective

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This paper builds on the observation that the animacy effects we find in English genitive variation are part of a larger cross-linguistic pattern as reflected in possession splits based on animacy (Koptjevskaja-Tamm 2001, 2002; Stolz et al. 2008), which are an expression of *harmonic alignment* in the domain of possession (Aissen & Bresnan 2002; Rosenbach 2008). Focussing on English and Afrikaans, a contrastive corpus analysis of genitive variation reveals similar forms of animacy splits in these two languages, though they differ in the strength of the animacy constraint, with the Afrikaans prenominal possessive (the *se*-genitive) occurring more freely with inanimate possessors than the English *s*-genitive. In a follow-up experimental study it is then shown that the weaker animacy constraint in Afrikaans carries over to the L2 English of Afrikaans speakers in South Africa. This study emphasizes the importance of a cross-linguistic perspective when looking at genitive variation in English and its varieties (1) to recognize that Englishes form part of a typological continuum of possession splits, and (2) to enable us to identify the possible transfer of constraint strengths from one language to another one in a situation where these languages are in contact, as in the case of English and Afrikaans in South Africa.

Keywords: genitive variation in English and Afrikaans; animacy; probabilistic grammar; language contact; typological perspective

1 Introduction

Probabilistic models of grammatical variation were originally much inspired by the idea of *harmonic alignment* (Aissen 1999, 2003). Harmonic alignment is the formal expression of the observation that semantic scales, as the animacy, person or definiteness scale, tend to align with grammatical scales. A classic example is the way these semantic hierarchies align with the grammatical function hierarchy as shown in Table 1.

The generalization is that whatever referent can claim subject position, any referent higher in animacy, definiteness and/or person can claim subject position, too. Languages differ in the precise cut-off point along these scales, their morphosyntactic expression and in the relative importance of animacy, definiteness and person,[1] but the general underlying alignment pattern has proven to be very robust cross-linguistically. It was then observed that instances of grammatical variation in English, like the active – passive alternation, followed the same regularities in quantitative ways (e.g. Bresnan et al. 2001). English doesn't have obligatory constructions for active or passive along these hierarchies, but there is an asymmetry in the quantitative distribution of actives and passives in that

[1] Such harmonic alignment patterns can be driven by one semantic category (see e.g. the person-driven passives in Lummi, cf. Bresnan et al. 2001) or by a combination of semantic categories.

Table 1: Semantic hierarchies aligned with the grammatical function hierarchy.

SUBJ	<	NON-SUBJ
animate	<	inanimate
definite	<	indefinite
1st or 2nd person	<	3rd person

animate and/or definite, and/or 1st or 2nd person referents tend to claim subject position (Bresnan et al. 2001). This accounts for the empirical observation that a passive as in (1) is more likely to occur than a passive as in (2) below.

(1) *I was beaten by a man.*
(2) ??*A tree was cut by me.*

The observation that the same regularities of harmonic alignment underlie both categorical as well as probabilistic patterns across languages led to the insight that these regularities must be somehow hard-wired and be part of what constitutes speakers' knowledge of language, or in other words, their grammars (cf. Bresnan et al. 2001, 2007), strengthened later by Bresnan & Ford's (2010) observation that speakers can predict the likelihood of a grammatical variant to occur in a certain context. These findings initiated a whole new paradigm of research into probabilistic grammar in the area of grammatical variation in English, focussing on the dynamics of probabilitistic genitive and dative grammars over time (e.g. Wolk et al. 2013; Jankowski & Tagliamonte 2014), across modality and genres (e.g. Grafmiller 2014) and across varieties of English (e.g. Hundt & Szmrecsanyi 2012; Szmrecsanyi et al. 2014; Heller et al. 2017; Szmrecsanyi et al. To appear). In the meantime, the originally typologically inspired research has been somewhat neglected in recent work (for a notable exception see however O'Connor et al. 2013).

The present paper intends to bring back cross-linguistic patterns into the study of grammatical variation in English. Focussing on typological possession splits based on animacy (henceforth *animacy splits*), which are an expression of harmonic alignment in the domain of possession, I will compare the impact of animacy in genitive variation in two closely related languages, English and Afrikaans, and locate them on the typological continuum of animacy splits. This will form the basis for a first study on animacy in South African English – a variety so far barely studied in the context of grammatical variation in English (or rather on certain South African English*es*, see section 3 for specifying the varieties of South African English focussed on in the present study).

English is only spoken by 9.6% of the total population as a first language in South Africa, but it is widely used in government, media and education, and most people speak it as a second language (L2). Afrikaans, the language of the Dutch settlers, is spoken by 13.5% of the population as a first language (L1).[2] Most speakers of Afrikaans speak English as a second language, and a great number of English L1 speakers in South Africa speak Afrikaans as a second language. The second part of this paper addresses the question if this rather intense contact with Afrikaans has an impact on the English spoken in South Africa, and specifically so on genitive choice.

In a first step I will compare the role of animacy in English and Afrikaans genitive variation on the basis of a contrastive corpus analysis, using a bidirectional parallel (translation) corpus, to establish how the two languages differ in their choice of genitive

[2] Source: *Latest Census 2011*, Statistics South Africa (2012). Downloadable at: www.salanguages.com/stats.htm.

construction (section 2). It will be shown that Afrikaans exhibits an animacy split in the domain of possession similar to the one in English but that it allows inanimate possessors more freely in prenominal position than English. In a second step (section 3) I will look at the role of animacy in genitive choice in South African Englishes. In an experimental study I will test if the weaker animacy constraint in Afrikaans carries over to speakers of English in South Africa, who either speak Afrikaans as a second language or as a first language. The theoretical implications of the results for approaches to grammatical variation in English will be discussed in section 4. Section 5 concludes the paper.

2 The role of animacy in English and Afrikaans genitive variation

2.1 Genitive variation in English and Afrikaans

English and Afrikaans are two closely related West Germanic languages having very similar means of expressing adnominal possession. Both languages have two major constructions to express a possessive relation on the nominal level that differ in the position of the possessor. In Afrikaans there is a construction where the possessor is in prenominal position, linked by the invariant possessive particle *se* to the possessum, as in *Harry se hart*, comparable to the English *s*-genitive (*Harry's heart*). Afrikaans *se* is phonetically attached to the preceding noun phrase (Deumert 2004: 212) the same way that English possessive *'s* is. And there is a construction where the possessor is in postnominal position and linked by a preposition (*van*, 'of') to the possessum, as in *die hoek van die straat*, comparable to the English *of*-genitive (*the corner of the street*). I will refer to the two Afrikaans possessive constructions as the *se*-genitive and the *van*-genitive, parallel to the terms *s*-genitive and *of*-genitive in English, see also Table 2.[3]

This structural parallelism in the inventory of genitive constructions in English and Afrikaans makes the two languages particularly amenable for a contrastive study. Note that so far there are – to the best of my knowledge – no contrastive studies comparing genitive variation across different languages. It is not the goal of this study to present a fully-fledged contrastive study of English and Afrikaans genitive variation that would cover all factors in a comprehensive probabilistic model, but rather to focus on the impact of one factor, i.e. animacy. As is well known, animacy is the strongest constraint on genitive choice in English in that animate possessors get preferably realized by the *s*-genitive and inanimate possessors mainly take the *of*-genitive (see Rosenbach 2014 for a summary of the literature; for the latest evidence see also Heller et al. 2017; Szmrecsanyi et al. To appear). According to Donaldson (1993) animacy does not really play a role in

Table 2: Adnominal genitive constructions in English and Afrikaans.

	Prenominal genitive			**Postnominal genitive**		
	possessor	**possessive marker**	**possessum**	**possessum**	**possessive marker**	**possessor**
English	*Harry*	*'s*	*heart*	*the corner*	*of*	*the street*
	↓ *s*-genitive			↓ *of*-genitive		
Afrikaans	*Harry*	*se*	*hart*	*die hoek*	*van*	*die straat*
	↓ *se*-genitive			↓ *van*-genitive		

[3] The term *genitive* is used here in the general sense of an adnominal construction expressing a possessive (or genitive) relationship and not in the sense of a morphological genitive.

Afrikaans genitive choice, however, as Afrikaans can (allegedly) use the *se*-genitive freely with both animate and inanimate possessors:

> "There are rules in English which determine which nouns can take *'s*; it is not usual, for example, to use it with inanimate objects, e.g. *that building's roof* is better said *the roof of the building*, but *that dog's tail* is quite acceptable. This distinction does not exist in Afrikaans, thus *dié gebou se dak* and *dié hond se stert*." (Donaldson 1993: 99)

As I will argue in the following section, this statement is rather surprising from a cross-linguistic perspective and – as the empirical analysis will show – not quite correct.

2.2 Animacy splits in possession

If a language has two means of expressing adnominal possession, animacy is often a decisive factor determining the choice of construction. In the typological literature such possession splits based on animacy (animacy splits) are well known (e.g. Koptjevskaja-Tamm 2001, 2002; Stolz et al. 2008). According to this view languages exhibiting an animacy split have distinctive constructions to encode animate and inanimate possessors. An example is Dutch, which uses the inflectional genitive, or the linking pronoun, with animate possessors while the postnominal *van*-construction is obligatory with inanimate possessors.[4] Thus, it is *Jans huis* or *Jan z'n huis* (both 'Jan's house') but *het dak van het huis* ('the roof of the house'). The prenominal construction is ungrammatical with an inanimate possessor (**het huis' dak*, **het huis z'n dak*).

This categorical view on possession splits has been modified by probabilistic approaches to grammar and grammatical variation in English showing that the same principles governing grammaticalized animacy splits crosslinguistically are present in English genitive variation in a probabilistic way (cf. Aissen & Bresnan 2002; Rosenbach 2002, 2008; O'Connor et al. 2013). In other words, English does not have two distinct constructions for animate and inanimate possessors respectively – in fact, the *s*-genitive can be used with both. However, the *s*-genitive gets more frequently realized with animate possessors than with inanimate possessors, so the animacy split shows in terms of a statistical bias. If we take a closer look at these animacy splits, we notice that they are usually directed: prenominal position prefers possessors high in animacy and postnominal position favours possessors low in animacy. This systematic alignment of a semantic scale (animacy) with a structural position (pre- versus postposed) constitutes an instance of harmonic alignment in the domain of adnominal possession.[5]

We would therefore expect an animacy split in Afrikaans, too, especially as Dutch, the language it historically derives from, clearly shows a grammaticalized one. A first indication that this is indeed the case comes from a recent study by Kirsten (2016) on grammatical changes in Afrikaans in a diachronic corpus covering different genres and a period of 100 years. One of the phenomena she looked at were genitives, and one of the factors coded in her study is animacy. On the basis of the distributions given in her thesis I calculated the relative frequency of the *se*-genitive and the *van*-genitive for animate and inanimate possessors for the most recent of her time periods, 2001–2010, as illustrated in Figure 1.

[4] Dutch also still has an inflectional postposed genitive as in *de smaak des honings* ('the taste of honey'), but such constructions are very archaic and often formulaic (see also Stolz et al. 2008: 394).

[5] Theoretically, it is not quite clear yet what precisely constitutes the structural scale for possessive constructions. Aissen & Bresnan (2002), in their unpublished materials, suggest a SPEC position versus a non-SPEC position. In this paper I will simply follow the surface property of word order, distinguishing between pre- and postnominal position of the possessor.

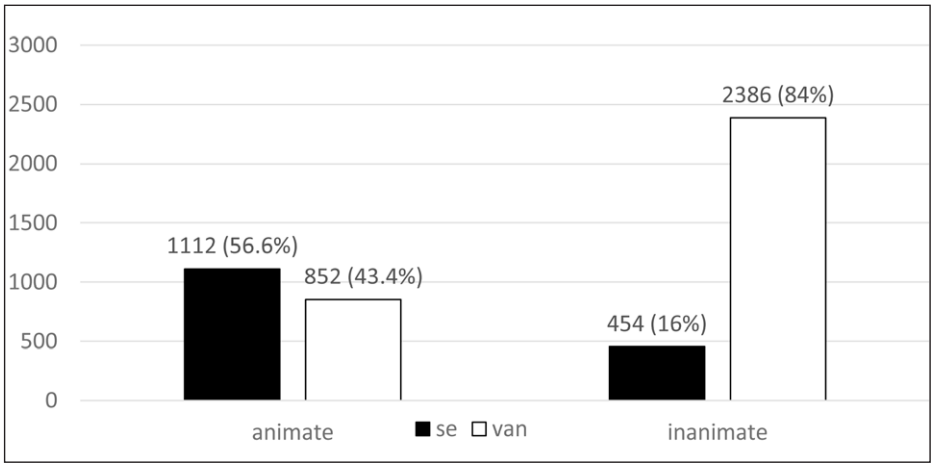

Figure 1: Distribution of Afrikaans *se*- and *van*-genitive accoding to animacy: 2001–2010 (based on Kirsten 2016).

Figure 1 shows that – pace Donaldson (1993) – animacy plays a role in genitive choice in Afrikaans. The *se*-genitive is more frequent with animate possessors (56.6%) than with inanimate possessors (16%) and this difference is highly significant statistically (chi square, $p < 0.001$). Afrikaans therefore clearly has a quantitative animacy split.

2.3 Comparing genitive variation in English and Afrikaans: Contrastive corpus analysis

Kirsten's (2016) data suggest that genitive choice in Afrikaans is very similar to genitive choice in English: there is a pre- and a postnominal genitive, and the choice between them is determined by animacy (among other things). However, we do not have any data directly comparing the strength of animacy in English and Afrikaans. Note that we cannot just compare Kirsten's data on Afrikaans genitive variation with a corpus study on English genitive variation, as two different studies never use exactly the same extraction criteria and/or the same coding conventions, so we might well be comparing apples and oranges when doing so. Ideally, we would need a matched cross-linguistic corpus to compare genitive variation between two languages in precisely the same contexts and genres, using the same extraction criteria and coding conventions, so that any differences found can be clearly ascribed to the languages rather than being an artefact of the analysis. The closest we get to a matched cross-linguistic corpus are translations, where we can directly compare the choice of genitive construction in the original and the translation: given the same propositional content and context and all other things being equal (e.g. the genre/text type), how do the two languages differ in their choice of genitive construction? Translations conveniently provide what Johansson (2007: 39) called "the *tertium comparationis*, i.e. the background of sameness against which differences can be viewed and described" for contrastive studies. They are now widely used in "parallel corpora" for quantitative, contrastive studies (see e.g. Aijmer & Altenberg 2013 and references cited therein), but to the best of my knowledge they have so far not been used to compare relative frequencies for instances of grammatical variation across two languages.[6] To

[6] Stolz et al. (2008) used a self-assembled parallel corpus based on Harry Potter translations for their cross-linguistic study on possession splits and quantified some of the data, but in a way that only gave the internal distribution of genitive variants (e.g. which portions of a genitive construction are animate as opposed to inanimate) rather than looking at genitive *variation* and giving *relative frequencies* of genitive variants. They conclude their analysis on Afrikaans as follows: "… the new *se-genitive* in Afrikaans has been generalised in such a way that it nowadays combines freely with all semantic classes of possessors and possesses: […] Thus, there is no possession split of the Low German kind." (Stolz et al. 2008: 390). In so doing they fail to notice the regularities of probabilistic types of possession splits, though note that they seem to regard only grammaticalized patterns with obligatory marking as animacy splits in the first place.

Table 3: Parallel corpus English – Afrikaans – texts used.

Language	English	Afrikaans
Original	J.K. Rowling: *Harry Potter and the Sorcerer's Stone*. Chapters 1–10.	Etienne van Heerden: *Die Swye van Mario Salvati*. Chapters 1–12.
Translation	Etienne van Heerden: *The Long Silence of Mario Salvati*. Chapters 1–12.	J.K. Rowling: *Harry Potter en die Towenaar se Steen*. Chapters 1–10.
number of genitive tokens extracted	652	736

reduce an impact of *translationese*, i.e. features typical of translation, on the results, such parallel corpora ideally contain both originals and translations in each language. As there is no established parallel corpus available for English and Afrikaans, I constructed my own little corpus. Table 3 gives an overview of the texts used.

I chose the Afrikaans novel *Die Swye van Mario Salvati* by Etienne van Heerden and its English translation and the first of the Harry Potter novels (*Harry Potter and the Sorcerer's Stone*), which is one of the very few books translated from English into Afrikaans. Both translators are native speakers of the language they translated to.[7] I did not use the complete novels but only the first 12 chapters of the van Heerden novel, and the first 10 chapters of the Harry Potter novel. This is a rather small corpus but as genitives are a very frequent variable it was possible to extract a sufficient number of genitive tokens for a quantitative analysis (1386 in total). I followed the criteria of extracting genitive constructions in Szmrecsanyi et al. (To appear) for extracting both English and Afrikaans genitives. Most importantly, only potentially alternating constructions were included.[8] I coded for animacy using a binary distinction between [+animate] and [–animate] possessors. All humans and higher animals were coded as [+animate], and all other possessors were coded as [–animate].[9]

Table 4 gives some examples from the corpus, where both English and Afrikaans use the prenominal genitive construction in a given context ('o' in brackets indicates that this example comes from the original, 't' stands for the translation as the source).

These examples illustrate that the Afrikaans prenominal *se*-genitive can be used with the same range of semantic classes of possessors as the English *s*-genitive: human proper nouns, definite as well as indefinite human common nouns, collective nouns, inanimate nouns, locative and temporal nouns. And like English, Afrikaans has measure genitives, a specific type of genitive construction where the possessor indicates a value, size or duration. Afrikaans also shares group genitives with English, where the possessive marker has scope over the whole NP rather than the head noun of the possessor. All this indicates

[7] The van Heerden novel was translated into English by Isobel Dixon, an L1 speaker of English, born in South Africa, and who's been living in the UK since 1993. Janie Oosthuysen, who translated the Harry Potter novel into Afrikaans, is an L1 speaker of Afrikaans born in South Africa and living there.

[8] To the best of my knowledge there is no literature defining the variable for Afrikaans genitive variation. Johanita Kirsten (p.c.) has been applying the guidelines used in the Bresnan et al. (2017) dataset, which are based on English, to the Afrikaans genitives data from the 2001–10 interval of her corpus (Kirsten 2016). She hasn't found a single context where the two languages diverge in their range of choice contexts for genitives, so these guidelines seem safe to generalize to Afrikaans.

[9] Ideally, we would like to use a more fine-grained categorization of animacy, as it is well-known that certain non-human noun classes such as collective, temporal or locative nouns behave differently from other inanimate possessors in English (cf. Rosenbach 2008, 2014). The number of tokens for such non-human possessors in the corpus however were too small, so these noun classes were all collapsed within the [–animate] category. For some illustrative examples for prenominal genitives with various non-human noun classes from the corpus please see Table 4.

Table 4: Examples for correspondences between English *s*-genitives and Afrikaans *se*-genitives in English/Afrikaans parallel corpus.

possessor	English	Afrikaans
human proper noun	*Harry's letter* (o)	*Harry se brief* (t)
human definite noun	*his uncle's face* (o)	*sy oom se gesig* (t)
collective noun	*the other team's seeker* (o)	*die ander span se Soeker* (t)
inanimate noun	*the train's open door* (t)	*die trein se oop deur* (o)
temporal noun	*the previous night's drinking* (t)	*die vorige aand se doppe* (o)
locative noun	*Mount Improbable's cliff-faces* (t)	*Berg Onwaarskynlik se kranse* (o)
indefinite noun	*a man's trunk* (t)	*'n man se lyf* (o)
measure genitive	*million of pounds' worth of masonry* (t)	*miljoene ponde se messelwerk* (o)
phrasal (group) genitive	*[Lily an' James Potter]'s son* (o)	*[Lily en James Potter]se seun* (t)

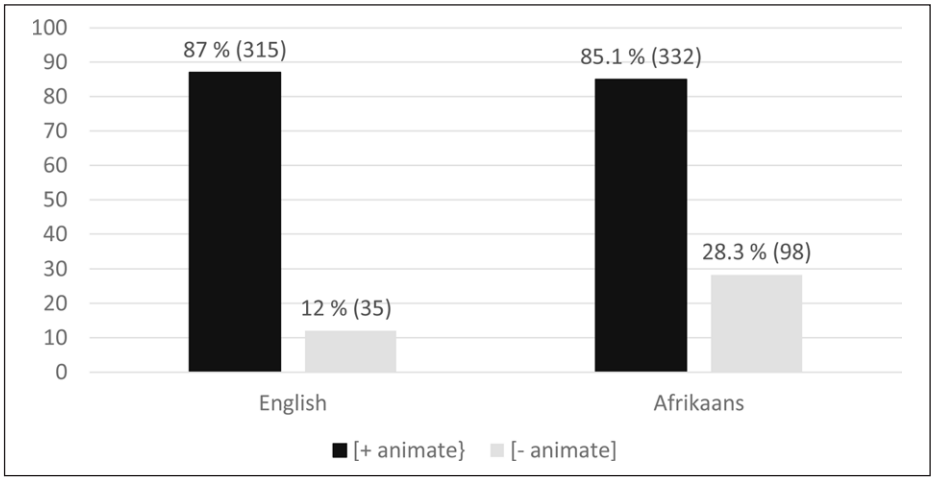

Figure 2: English/Afrikaans parallel corpus study: relative frequency of the English *s*-genitive and the Afrikaans *se*-genitive according to animacy (absolute numbers given in brackets).

a strong overlap in both the semantics and structure of the prenominal genitives in the two languages.

Figure 2 gives the relative frequency of the English *s*-genitive and the Afrikaans *se*-genitive for [+animate] and [–animate] possessors.

As expected, in both English and Afrikaans the prenominal genitive is more frequent with animate possessors than with inanimate ones, confirming the animacy splits observed for both languages. Note, however, that Afrikaans uses prenominal *se*-genitives more often with inanimate possessors compared to the English *s*-genitive (28.3% vs. 12%) and this difference is highly statistically significant (chi-square, $p < 0.001$).

Let us now have a look at how English expresses inanimate possessors expressed by the prenominal *se*-genitive in Afrikaans; see Table 5 for some examples.

The obvious alternative for expressing an inanimate possessor in English is the *of*-genitive, as in *the roof of the car*. There are however other alternatives, too. In quite a number of cases English has a noun modifier (*the greenhouse roof*) where Afrikaans has a *se*-genitive with inanimate possessor (*die kweekhuis se dak*). Note, incidentally, that this is yet more evidence for the fact that noun modifiers can have possessive meaning and can be an alternative to the *s*-genitive and the *of*-genitive in English (cf. Rosenbach 2007,

Table 5: Examples for English correspondences to Afrikaans *se*-genitives with inanimate possessors.

Afrikaans *se*-genitives (with inanimate possessor)	**English**	**possessor in English**
die motor se dak (t)	*the roof of the car* (o)	*of*-genitive
die kweekhuis se dak (t)	*the greenhouse roof* (o)	noun modifier
die huisie se voordeur (o)	*the front door* (t)	not expressed
die twee slaapkamertijies se meubels (o)	*the furniture in the two bedrooms* (t)	prepositional phrase (with *in*)
die munisipaliteit se kothuisie (o)	*the municipal cottage* (t)	adjective

2010; Szmrecsanyi et al. 2016). There were also quite a few cases where English didn't express the possessor but only the possessum (*the front door*), but Afrikaans would use a full possessive construction (*die huisie se voordeur*). Other (and less common) alternatives were prepositions other than 'of' as in *the furniture in the two bedrooms* or an adjectival construction *the municipal cottage*.

To sum up the contrastive corpus study: Afrikaans and English are actually very similar in their expression of possession and in their animacy splits. In both languages the whole range of semantic classes of possessor, from human to inanimate, can be used with the prenominal genitive, but inanimate possessors can be used more freely prenominally in Afrikaans than in English. As the two languages are so similar and only differ in the degree to which the prenominal genitive can be used with inanimate possessors, the question arises if the strength of the animacy constraint would carry over in a situation of contact.

3 Can animacy effects carry over from Afrikaans to English? – An experimental study for South African Englishes

In South Africa, English and Afrikaans have been in close contact for almost 200 years. It has been argued that this contact situation has left its traces in the grammar of the emerging postcolonial variety of South African English (Jeffery & van Rooy 2004; Wasserman & van Rooy 2014). Note that the status of English spoken in South Africa is highly complex. Strictly speaking, there isn't even any such thing as a monolithic South African English, but rather we are looking at different types of Englishes co-existing in South Africa. We can, roughly, distinguish the following varieties of South African English:

a) English spoken as a first language, the transplanted colonial variety, usually referred to as *White South African English* (WSAfE),[10]
b) English spoken as a first language by groups of speakers who have shifted from their original first language to English, like Indian English or Black South African English,
c) and various L2 Englishes spoken by groups of speakers who have a different L1 (Afrikaans or one of the Bantu languages spoken in South Africa).

In the following I will focus on *White South African English* (WSAfE), the transplanted colonial variety, and Afrikaans L2 English.

[10] For the term *White South African English* (WSAfE) see Bowerman (2004). White South African English itself is not homogeneous but consists of different types, partly due to the different stages of colonialization, bringing in settlers from different regional areas and different socio-economic backgrounds to South Africa (cf. e.g. Lass 2002: §2; Rossouw & van Rooy 2012: §1; Schneider 2007: §5.9).

To test if the weaker animacy effects in Afrikaans carry over to these two South African Englishes I conducted an experimental study, adopting the basic design of my previous forced-choice (questionnaire) studies of English genitive variation (cf. Rosenbach 2002, 2005). In the present study I tested one condition ([–animate] possessors) across different subject groups, to compare the relative frequency of the English *s*-genitive with inanimate possessors across these groups.

3.1 Subjects

The subject groups were:

1. L1 speakers of WSAfE, with L2 Afrikaans (henceforth referred to as *WSAfE*)
2. L1 speakers of Afrikaans, with L2 English (henceforth referred to as *Afrikaans L2 English*)
3. L1 speakers of British English, with no knowledge of Afrikaans (henceforth referred to as *BrE*), as a control group.

In the questionnaire participants were asked to indicate their first language ('English', 'Afrikaans', 'Kaaps', or 'other')[11] or whether they were bilingual in the sense of having simultaneously acquired two languages during childhood, considering them both as their mother tongue. Participants also had to indicate if they were born and raised in South Africa and if not, where. If in doubt I checked the personal details with participants. Only monolingual speakers of English and Afrikaans were included, who clearly had either as their first language. Participants then had to self-assess, on a scale of 0 – 10 (0 = very poor, 10 = excellent), their proficiency in the respective second language (Afrikaans or English). In cases where the proficiency in the second language was rated as poor (less than 4), I again double-checked with participants. The criterion for inclusion in this study was the confirmation that participants felt confident having a basic conversation in the second language. On average, the L2 knowledge of Afrikaans of the L1 English subject group was 6 (s.d. = 1.7) and the L2 knowledge of English of the L1 Afrikaans group was 7.7 (s.d. = 1.0). The L1 BrE group was the control group for the two South African English groups. Participants were either visitors to our farm or members of our local community (McGregor/Robertson valley, Western Cape). 130 subjects in total were tested:

- 44 L1 speakers of WSAfE (average age 55.2 years),
- 43 Afrikaans L2 English speakers (average age 49.3 years) and
- 43 L1 BrE speakers (average age 57 years).

3.2 Conditions and items

One condition was being tested, i.e. inanimate possessors, and compared across the three subject groups mentioned above. The actual items tested were taken from the English corpus analysed in section 2.3. To allow a possible transfer from Afrikaans, only items were chosen which had the prenominal *se*-genitive in the Afrikaans text/translation and where the English text/translation either had an *s*-genitive or an *of*-genitive and a noun modifier wouldn't be a possible choice.[12] Only definite possessors were included, as indefinite

[11] Kaaps is a variety of Afrikaans spoken by certain groups of the Coloured community in Cape Town and exhibits some features different from mainstream Afrikaans. None of the participants in this study indicated to speak it as their first language.

[12] With certain inanimate possessors noun modifiers can be an alternative to the *s*-genitive or the *of*-genitive in English (see e.g. Afrikaans *die skool se besems* vs. English *the school brooms*, or *die perron se nommer* vs. English *the platform number*; see also section 2.3 above).

possessors are often ambiguous between a specifying and a classifying interpretation. So, for example, *a car's door* can be interpreted both as the door of a specific car (*[a car]'s door* = specifying genitive) or a door typical of cars (*a [car's door]* = classifying genitive). Only specifying genitives alternate regularly with *of*-genitives, however, while classifying genitives usually have other variants (cf. Rosenbach 2002: §2.3). Apart from ruling out potential other variants (as noun modifiers) or possible ambiguities the items were further controlled for the major determinants of genitive choice,[13] in particular:

- Definiteness & noun class of the possessor: only definite common noun possessors were included.
- Final sibilancy of the possessor: only possessors not ending in a final sibilant were considered.
- Length of the possessor: only short possessors and possessums were included (1–2 words excluding determiners).[14]

3.3 Task

When handing out the questionnaires, subjects were informed that this study was looking at the use of English in South Africa, specifically how people would choose among two alternative options in language. The questionnaire contained clear instructions how to do the study, urging subjects for a quick and spontaneous choice and reassuring them that there never was a right or a wrong answer, so they wouldn't get the impression they were being evaluated.

The items were all presented within the narrative context of the original English text/translation. A number of other choices (grammatical or lexical) were included as fillers to distract the subjects from the fact that this study was testing genitive choice.[15] Certain fillers, like the choice between 'stoep' and 'veranda' in (4) below, were supposed to mislead participants into thinking that these were the critical items being tested ('stoep' is a very common Afrikaans loan word in WSAfE). It was a short task that could be completed within 15 minutes. In (3) and (4) below two examples from the questionnaire are given:

(3) *The San were here first. They'd occupied the cave on the mountain and they'd left their paintings on the walls for* ***[generations to come/coming generations]*** *to puzzle over in* ***[wonderment/amazement]***.

When he was ***[finished/done]***, *the captain blew the paint dry carefully and showed the picture to the guide, who nodded approvingly. Earlier he had waited outside* ***[the mouth of the cave/the cave's mouth]*** *while Captain Grid crept down beside the walls, touching the paintings with hungry fingertips as* ***[though/if]*** *he wanted to steal them from the rocks.*

(4) *She felt self-conscious as she locked the car. They watched every movement. It was obviously* ***[unnecessary/not necessary]*** *to lock it here, she thought, and this city habit would probably be interpreted* ***[wrongly/in the wrong way]***. *But when she turned to the storekeeper and the people sitting on* ***[the stoep/the veranda]***, *she*

[13] For an overview of determinants of English genitive variation see Rosenbach (2014: §3.1).

[14] In a few cases items with a premodifier to the possessor or possessum were included, as in example (4) below, to rule out a noun modifier as a possible alternative (e.g. *the roof's shade – the roof shade*; but *the veranda roof's* shade – ???*the veranda roof shade*).

[15] At the end of the questionnaire participants were invited to comment on the study. Neither there nor in personal communication did anyone indicate to have been aware of the fact that this study specifically looked at genitive constructions. On the contrary, when people commented, it was usually on one of the other (filler) choices.

said, 'Good-day', in her ***[friendliest/most friendly]*** *voice.*
'I'm looking for lodgings.'
The man rubbed his jaw. 'You're from Cape Town?' he asked cautiously. 'Tourist?'
She shook her head. 'No. Business.' She looked round again. Some children who'd been sitting in ***[the shade of the veranda roof/the veranda roof's shade]*** *had drawn closer. They were listening* ***[in an inquisitive way/inquisitively].***

The questionnaire contained 11 such passages, each with a context for genitive choice and interspersed with various fillers, as in examples (3) and (4) above. The order of presentation of these passages was the same for each subject, and as such kept constant across subject groups.

The experimental design is summed up in Table 6.

The results are given in Figure 3. The different columns give the relative frequency of the *s*-genitive (versus the *of*-genitive) with inanimate possessors for the three subject groups, absolute number of tokens are given in brackets (for *s*-genitives only).

Figure 3 shows that the WSAfE L1 group use the *s*-genitive the least frequently with inanimate possessors of all subject groups. The difference in the relative frequency of the *s*-genitive between the WSAfE L1 group (26.4%) and the BrE control group (30.2%) is however not statistically significant (chi square, $p = 0.1978$). The Afrikaans L2 English group shows the highest use of the *s*-genitive with inanimate possessors (37.4%), which is significantly more frequent than the usage in the BrE control group (chi square, $p = 0.018$) and the usage in the WSAfE L1 group (chi square, $p = 0.00026$). In other words, Afrikaans

Table 6: Experimental design.

Subject groups	White South African English (WSAfE)	Afrikaans L2 English	British English (control group)
Subjects	• L1 WSAfE & L2 Afrikaans • 44 subjects	• L1 Afrikaans & L2 English • 43 subjects	• L1 BrE, no knowledge of Afrikaans • 43 subjects
Conditions tested	• [–animate] possessor • 11 items		

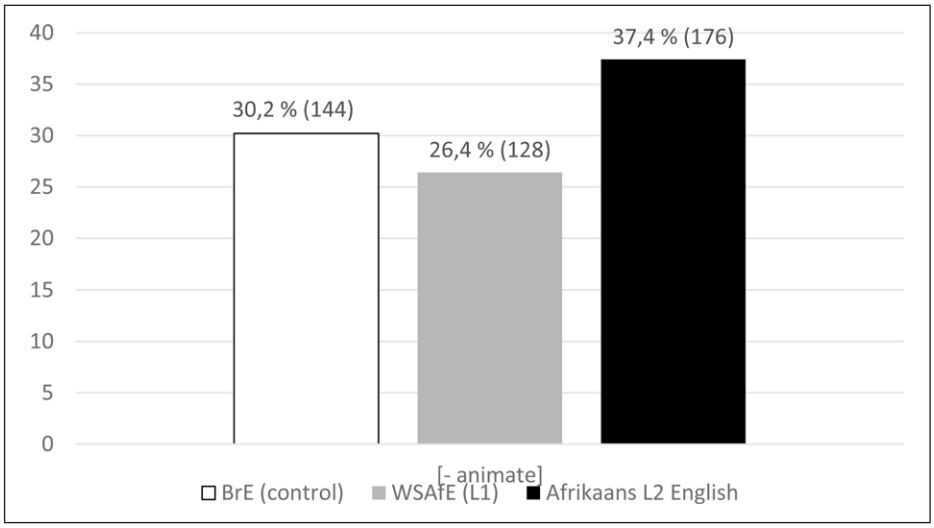

Figure 3: Experimental study: relative frequency of *s*-genitive with inanimate possessors across the 3 subject groups.

L2 speakers of English are more likely to use the *s*-genitive with inanimate possessors and say *the cave's mouth* or *the car's roof* rather than *the mouth of the cave* or *the roof of the car* than L1 speakers of WSAfE or British English. The results of this experimental study thus indicate that the Afrikaans L1 has an impact on genitive choice on the L2 English of the Afrikaans speakers but that the L2 Afrikaans of the WSAfE speakers doesn't affect the choice of genitive construction in their L1 English.

3.4 Possible confounds – proficiency in the L2 and attitude?

Note that the average L2 proficiency of Afrikaans of the WSAfE L1 group was a bit lower (and a bit more heterogeneous) than that of the L2 English of the Afrikaans speakers. It is therefore possible that there would be an L2 Afrikaans contact effect if the WSAfE subjects had a greater proficiency in the L2. And although both English and Afrikaans are acknowledged as official languages (of the 11 official languages) in South Africa, there is a certain asymmetry in the perception of the two languages. English is more widely used in education and media, doubtless because of its status as a global language, and as such appears to be functionally more elaborated and prestigious than Afrikaans today. In addition, Afrikaans still bears the stigma of being the language of Apartheid. Prestige and attitude have been well-known factors determining speakers' choices of linguistic variables in sociolinguistic research since Labov's (1972) pioneering study on Martha's Vineyard. It is therefore possible that subjects' attitude towards English and Afrikaans might have affected their choice of genitive in the experimental study. Certainly phonological variables are very salient markers and as such efficient flags of identity and/or attitude. It is not clear however if syntactic variables can do the same thing. The relative frequency of the *s*-genitive with inanimate possessors seems a poor marker of identity/attitude, as people would rarely be aware of it. It does not seem likely that a speaker would use *the cave's mouth* rather than *the mouth of the cave* to signal his or her positive attitude towards Afrikaans.[16] That said, there was one participant in this study who chose the *s*-genitive in 6 out of 11 cases (= 54.5%), which was about twice as often as the average of the WSAfE group (26.4%).[17] He stressed that he has a high regard for Afrikaans and thinks it is a language more beautiful and expressive than English. It is possible that his frequent use of the *s*-genitive with inanimate possessors is due to Afrikaans influence, enhanced by his highly positive attitude towards this language. This is an isolated example and purely anecdotal evidence though. Future studies will need to look at this more systematically, though the problem remains how to precisely operationalize attitude in an empirical study (see e.g. Preston 2004).

4 Theoretical implications

In the following I will first discuss the relevance of this study for approaches to grammatical variation in English and probabilistic grammar (§4.1) and then consider the possible impact of L2 acquisition (§4.2) vis-à-vis language contact (§4.3) on the results.

4.1 Animacy splits, harmonic alignment and probabilistic grammar

The schema in Table 7, adapted from Rosenbach (2008: 165), visualizes the animacy splits introduced in section 2.2 and locates some of the major native varieties of English on a typological continuum, in between Afrikaans, which shows the weakest animacy

[16] Sali Tagliamonte (p.c.) never found any social correlates for syntactic variables in her extensive work on grammatical variation in English.

[17] This participant was actually excluded from the analysis as his language background did not conform to the requirements for this study. English is his first language and he has a good command of Afrikaans as his L2, but he was born in Ireland and then grew up mostly in the Netherlands before emigrating to South Africa as an adolescent.

Table 7: Varieties of English as part of the typological continuum of animacy splits.

	Afrikaans		American English		British English		New Zealand English		Dutch	
possessor	**prenominal genitive**	**postnominal genitive**	**prenominal genitive**	**postnominal genitive**	**prenominal genitive**	**postnominal genitive**	**prenominal genitive**	**postnominal genitive**	**prenominal genitive**	**postnominal genitive**
high in animacy (& referentiality)	*my huis*		*my house*		*my house*		*my house*		*mijn huis*	
	Anna se huis	*die huis van Anna*	*John's house*	*?? the house of John*	*John's house*	*?? the house of John*	*John's house*	*?? the house of John*	*Jans huis/Jan z'n huis*	*het huis van Jan*
	die man se huis	*die huis van die man*	*the man's house*	*the house of the man*	*the man's house*	*the house of the man*	*the man's house*	*the house of the man*	*de man z'n huis*	*het huis van de man*
	die trein se deur	*die deur van die trein*	***the train's door***	*the door of the train*	***the train's door***	*the door of the train*	***the train's door***	*the door of the train*	****de treins deur; *de trein z'n deur***	*de deur van de trein*
low in animacy (& referentiality)	**increasing frequency of the *s*-genitive with inanimate possessors (=decreasing effect strength of animacy constraint)**									

split, and Dutch, which shows the strongest animacy split of these three languages. Note, incidentally, that animacy splits are not restricted to Germanic languages; more languages are given in Koptjeveskaja-Tamm (2002), Stolz et al. (2008) and O'Connor et al. (2013).[18]

The examples in Table 7 are arranged according to the animacy scale, with animate possessors being on top and inanimate possessors at the bottom.[19] (Note that animacy splits are often characterized by a combination of animacy and referentiality, so the typological pattern introduced here is a somewhat simplified one.) The generalization is that whatever possessor can occur prenominally, any possessor higher in animacy can occur prenominally, too, with at least the same or higher frequency. Table 7 thus reads like an implicational scale, subsuming both the categorical and the stochastic generalization. Afrikaans has an animacy split which is very similar to the one in English, but it more freely allows inanimate possessors in prenominal position than English (cf. section 2.3). In other words, *die trein se deur* is more likely to be used than *the train's door*. Dutch is the most restrictive of the languages in Table 7 as it has a grammaticalized animacy split with distinctive constructions for animate and inanimate possesssors, disallowing a prenominal genitive with an inanimate possessor (**de treins deur; *de trein z'n deur*).

When we compare different varieties of English, especially in studies using comparable datasets and criteria of coding (cf. Heller et al. 2017; Szmrecsanyi et al. To appear) it is striking to see that animacy almost always turns out to be (a) the most important factor in genitive choice and (b) the factor showing most variation in effect strength across different Englishes. American English is a variety closer to Afrikaans (in allowing *s*-genitives with inanimate possessors more freely than other Englishes),[20] while New Zealand English shows a much greater reluctance to use the *s*-genitive with inanimate possessors and as such is closer to Dutch (Hundt & Smrecsanyi 2012; Szmrecsanyi et al. To appear).[21] In general, animacy has proved to be one of the most volatile factors in English genitive variation, not only across varieties of English, but also across modality and genres (Grafmiller 2014) and across time (Wolk et al. 2013). What is important, however, is that all the observed variation (across region, modality/genre or time) follows the regularities of animacy splits.

These findings relate to one of the lead questions set out by the editors to this special issue to contributors: *to what extent are different constraints universal or socio-culturally malleable*? As far as animacy is concerned, it appears that there are constraints on the observed volatility of the factor animacy, as evidenced in animacy splits, and these constraints form a stable pattern. We still know very little about the nature of the animacy constraint. Psycholinguistic research gives ample evidence that animate referents tend to occur first whenever the language systems offers a word order choice (cf. MacDonald 2013 and literature cited therein). This suggests that there is some sort of cognitive

[18] O'Connor et al. (2013) in fact list 17 languages with what they call the *Monolexemic Possessor Construction* (MLP), all following an accessibility hierarchy of nominal categories (one of which is animacy). This MLP is characterized by a highly salient (animate, highly discourse accessible) and short prenominal possessor and as such is fully consistent with the generalization made in the present paper.

[19] As "inanimate" I consider here all possessors that are not animate, comprising collective, temporal, locative nouns and other inanimate nouns.

[20] There are a number of studies that show that American English is more advanced in the use of the *s*-genitive with inanimate possessors than British English (e.g. Jahr Sorheim 1980; Rosenbach 2002; Hinrichs & Szmrecsanyi 2007; Szmrecsanyi et al. 2014). Szmrecsanyi et al. (To appear) don't find any such difference between these two varieties, so the evidence is either not fully conclusive, or the results may be different for written as opposed to spoken language (see Jankowski & Tagliamonte 2014 for the latter view).

[21] The data in the Bresnan et al. (2017) genitive dataset analysed in Szmrecsanyi et al. (To appear: section 5.1) shows that the relative frequency of the *s*-genitive with non-animate possessors (collective, temporal, locative and other inanimates) in New Zealand English is significantly lower than in British English or American English (chi square, $p < 0.001$).

bias for the patterns underlying animacy splits and thus harmonic alignment (see also Rosenbach 2008 for discussion). In this sense they may be regarded as universal, though in the modified sense of Evans & Levinson (2009): not as part of a monolithic Universal Grammar but rather as an emergent property of language structure and grammar driven by the interaction of cognitive constraints (see also O'Connor et al. 2013: §4.5 for this view). There appears to be one grammar, at least with respect to animacy, but this grammar is not fixed and various sociocultural factors like regional variety, register/genre, time and (possibly) language contact act like a concertina, boosting and suppressing the frequency of the *s*-genitive along the animacy scale, while being constrained by the general pattern of animacy splits. This view is well in accordance with core assumptions of probabilistic grammar, which precisely allows for such flexibility.

One of the more problematic aspects of probabilistic grammar is the fact that it is hard to find any evidence that would falsify it. It is consistent with both patterns of similarity and variability in grammatical variation across varieties. The strongest empirical claim underlying probabilistic grammar in the area of grammatical variation is harmonic alignment, which is potentially falsifiable by data pointing to reverse alignment patterns (as e.g. more inanimate possessors in prenominal position than animate possessors). It is therefore important to keep the larger typological picture in mind on which harmonic alignment is based when looking at grammatical variation in English in the context of probabilitistic grammar. Varieties of English form part of a typological continuum and are subject to the same constraints that constrain cross-linguistic variation.

4.2 The L2 acquisition of genitive variation

The experimental study in section 3 showed a transfer of Afrikaans to English with L2 speakers of English but not with L1 English speakers. This raises the question if the higher use of the *s*-genitive with inanimate possessors in the Afrikaans L2 English group might be due to features of second language acquisition.

In a recent study Heller et al. (2017) found a difference between *English-as-a native-language* (ENL) and *English-as-a-second-language* (ESL) varieties of English. The latter showed a consistently weaker animacy constraint in that they allowed fewer *s*-genitives with animate possessors. They interpret this as a feature of L2 acquisition, where language learners in general lean more towards the more analytic form (citing Klein & Perdue 1997: 311). The Afrikaans L2 English data in the present study display weaker animacy constraints just like the ESL varieties in Heller et al. (2017). Note however that this weaker animacy effect is constituted differently in the two studies: in the present study it shows as a more frequent use of the *s*-genitive with inanimate possessors (i.e. in a dispreferred context), while in Heller et al.'s study the ESL varieties use the *s*-genitive less frequently with animate possessors (i.e. in a preferred context). In other words, the Afrikaans L2 English speakers in the experimental study lean rather towards the more synthetic form, which does not suggest an impact of L2 acquisition under Heller et al.'s interpretation.

It is difficult to directly compare the results of the present study with those of the Heller et al. study. We currently do not have any data on the use of the *s*-genitive with animate possessors in Afrikaans L2 English, as only inanimate possessors were compared across different subject groups in the experimental study above. Most importantly, however, very little is still known about the L2 acquisition of grammatical variation, let alone genitive variation. It remains to be seen if the weaker animacy effects in L2 English varieties are due to general mechanisms of L2 acquisition or if they derive from contact in the substrate languages of the varieties at hand (something that the Heller et al. study did not look at). In the case of the Afrikaans L2 English data a contact argument is conceivable because of the strong overlap in the L1 and L2 possession systems, as argued in the following section.

4.3 Language contact: Afrikaans influence on English?

The question of whether there is any Afrikaans influence on English in South Africa is being controversially discussed in the literature. The contact situation between the two languages certainly has been a close one ever since the first English settlers arrived in the Cape at the turn of the 19th century (see Schneider 2007: §5.9 for an overview of the contact between English and Afrikaans in South Africa). Schneider (2007: 184) lists a number of possible borrowings in South African Englishes from Afrikaans. However, it has been argued that many allegedly Afrikaans features in South African English can be traced back to (regional) features of the English of the British settlers (cf. Lass & Wright 1986; Mesthrie & West 1995; Mesthrie 2002).

The WSAfE group in the experimental study shows the same pattern of genitive choice as the BrE control group and therefore seems to confirm the view that Afrikaans does not have any impact on English, at least not on the genitive grammar of the postcolonial L1 variety of English spoken in South Africa. At a second glance, things are a bit more complicated though. Note that New Zealand English, another southern hemisphere variety of English, has a much stronger animacy constraint than British English in genitive choice, cf. Hundt & Szmrecsanyi (2012) and Szmrecsanyi et al. (To appear). These studies show that in New Zealand English the use of the *s*-genitive with inanimate possessors is significantly lower than in British English. Given the assumption that southern hemisphere varieties are often found to be rather homogeneous (Trudgill 2004; Schneider 2007, 2008; Roussouw & van Rooy 2012: 3), we would have expected WSAfE to pattern with New Zealand English rather than with British English.[22] Note also that the increasing use of the *s*-genitive with inanimate possessors in English only starts in the course of the 19th century, presumably in press language, with American English leading a development gaining momentum during the 20th century (Jahr Sorheim 1980; Hinrichs & Szmrecsanyi 2007; Wolk et al. 2013; Szmrecsanyi et al. 2014). Jankowski & Tagliamonte (2014) argue that it is one of the rare cases of a change from above, originating in written (press) language and from there spreading to spoken language. It therefore seems doubtful that the British settlers brought this change along (so to speak) in their speech when they came to South Africa in the course of the (early) 19th century, but it cannot be ruled out either. We also still lack evidence for what the animacy constraint in genitive variation looked like in the vernacular regional varieties of the English of those settlers, so it is at present difficult to ascertain empirically if the patterns of genitive variation in WSAfE we find today are a continuation of a change already under way in the specific settler input before separation or if they have been affected by their subsequent contact to Afrikaans. The results of the present study thus allow two interpretations: there are no differences in the choice of genitive construction with inanimate possessors between WSAfE and British English:

1. because the patterns of genitive choice in WSAfE reflect those of the 19th century settlers and the two varieties developed *in tandem* ever since (assuming no *colonial lag* for WSAfE in this area of grammar), or
2. because contact with Afrikaans boosts the frequency of the *s*-genitive with inanimate possessors in WSAfE to make it equal to the one in British English,

[22] The empirical evidence is rather sketchy though. There is some evidence suggesting that Australian and New Zealand English pattern alike with respect to the extension of the *s*-genitive to inanimate possessors (Hundt 1998). Hundt (1998), however, only looked at the distribution of the *s*-genitive and we still lack data on genitive *variation* in Australian English. Moreover, the alleged homogeneity of southern hemisphere varieties of English is largely based on studies on New Zealand and Australian English and on phonological similarities. It is not quite clear yet how precisely South African English fits in there and to what extent the similarities extend to grammar.

> the underlying assumption being that without its contact with Afrikaans WSAfE would rather pattern like New Zealand English, another southern hemisphere variety of English.

So the jury is still out on the issue of possible Afrikaans contact on genitive variation in WSAfE, and for the time being we should stick to the more cautious and simpler interpretation in 1. A diachronic study of WSAfE, tracking the animacy constraint in genitive variation from its beginnings to the present day, would help to shed light on this question. Kirsten's (2016) data indicate that the extension of the Afrikaans prenominal *se*-genitive to inanimate possessors is a very recent development, taking off only from the second half of the 20th century (her 1971–80 time interval). It would therefore be interesting to see if WSAfE shows a continuing increase of the *s*-genitive with inanimate possessors from its beginnings or if there is a sudden increase from the second half of the 20th century. The former would suggest a continuation of the 19th century settler input, while the latter would support an interpretation in terms of language contact from Afrikaans.[23]

For the Afrikaans L2 English group in this study a contact argument can certainly be made: the Afrikaans speakers transfer the type of animacy split in their Afrikaans L1, in particular its greater freedom to use the prenominal *se*-genitive with inanimate possessors, to English. Wasserman & Rooy (2014) provide evidence from a recent corpus study for a higher use of the modals *can* and *must* in WSAfE compared to other native varieties of English, which they attribute to a transfer of the use of the cognate Afrikaans modals *kan* and *moet* to English. As in the case of the Afrikaans L2 English reported in this study we are dealing with a shift in the quantitative distribution of native structures already there in the target language (English), due to the presence of a parallel (or even cognate) construction in the source language (Afrikaans). This constitutes language contact not in the sense of adopting a new structure, but in the sense of boosting a construction in English (the *s*-genitive with inanimate possessors, or *can* and *must*) by the presence of a similar construction in the L1 of the Afrikaans L2 English speakers (the *se*-genitive with inanimate possessors, or *kan* and *moet*), which can be used more freely in the source language Afrikaans. This view of language contact as shifting frequencies of variants is consistent with the one advocated in Heine & Kuteva (2005) and in fact follows naturally from a probabilistic type of grammar. Note, incidentally, that this type of language contact in the form of statistical rather than categorical shifts is well documented in the sociolinguistic literature, often referred to as *indirect transfer* (Silva-Corvalán 1994); see e.g. the case study by Koontz-Garboden (2004) and the literature cited therein. It is not an uncommon phenomenon at all, though it only becomes visible by quantitative variationist studies.

If effect strengths of constraints can carry over from one language to another one, this might have implications for shift- or ESL-varieties of English, where substrate languages are in close contact with English. This is an aspect of English genitive variation, which hasn't been explored so far. English and Afrikaans are two languages that are very close on the typological continuum, which facilitates a transfer of animacy effects from Afrikaans

[23] A reviewer pointed out that it has been suggested that the extension in the use of the Afrikaans *se*-genitive in the first place might be due to English influence (cf. Donaldson 1991: 165, quoting Scholtz 1980). Note that the emergence of the *se*-genitive is now generally attributed to contact and convergence with similar constructions in Creole Portuguese, Malay and Nama (cf. Deumert 2004: 212–4, and references cited therein). If the extension of the *se*-genitive to inanimate possessors is indeed further reinforced by contact with English, then the contact scenario between English and Afrikaans would be even more complex than the one outlined in the present paper, with the two languages (possibly) affecting each other, if at different stages in time. A comparative diachronic corpus study of genitive variation in WSAfE and Afrikaans would help to further assess this question.

to English (and *vice versa*) in a situation of intense contact. It remains to be seen to what extent languages which are very different typologically would allow for such transfer.

5 Conclusions

What do we gain from a larger cross-linguistic perspective when looking at genitive variation in English (or any kind of grammatical variation, for that matter)? First, cross-linguistic variation is an empirical test case for harmonic alignment beyond English. Second, contrasting genitive variation in two (or more) languages helps us to track down possible transfer from one language to the other, especially where these languages are in contact and close on the typological continuum with respect to their animacy splits, as in the present case of English and Afrikaans in South Africa.

Methodologically and theoretically, this paper enters novel ground by 1. presenting a first quantitative *cross-linguistic* study of genitive variation (between English and Afrikaans) based on a parallel translation corpus and by 2. testing and showing that animacy effects may carry over from one language (Afrikaans) to another one (English), at least in the case of the L2 English of Afrikaans speakers in South Africa. Crucially, this constitutes a form of language contact in terms of boosting the frequency of a variant in a context where it is usually strongly disfavoured in English (i.e. the *s*-genitive with inanimate possessors) by the presence of an equivalent variant in Afrikaans (i.e. the *se*-genitive), which can be used more freely in this context.

It remains to be seen if and how future studies can complement and follow up on the present study by constructing comparative probabilistic genitive grammars taking the interaction of all constraints into account and using these to assess possible language contact in the form of constraint effect strengths carrying over from one language to another.

Abbreviations

BrE = British English, WSAfE = White South African English

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Competing Interests

The author has no competing interests to declare.

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