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Detransitivisation as a support strategy for causative *bring*[1]

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This article presents diachronic corpus analyses of causative *bring* (BRING$_{caus}$) which provide new insights into a fairly novel research paradigm in language change: the role of 'Moderate Transitivity Contexts' (MTCs) as a refuge for waning verbs and as a breeding ground for waxing verbs (see Mondorf 2010, 2011, 2016; Rohdenburg 2014b; Schneider & Mondorf 2015). It argues that the modulation of transitivity serves as a support strategy for a formerly well-established verb that is leaving the language.

The potential of semantic transitivity for the development of explanatory principles in language change has been hinted at by Hopper & Thompson (1980: 279). Empirically investigating the diachronic stages of detransitivisation for a recessive English verb we gain first systematic, empirically validated insights into the link between transitivity and language change.

This article adduces support for the claim that BRING$_{caus}$ + *to*-infinitive has (almost completely) lost its ability to take fully fledged direct objects. There are, however, at least three, partly overlapping contexts, in which this verb can stand its ground: with reflexives, modals and negation. What these contexts have in common is that they reduce the clause's transitivity, defined by Hopper & Thompson (1980: 251) as 'the effectiveness with which the verbal action takes place'. Assuming that the higher the transitivity, the stronger the effect of the verbal action is on the object, these detransitivised contexts can be interpreted as alleviating the effect of the verbal action.

1 Introduction

The domain of causative verbs has undergone marked changes over the past centuries. The use of GET$_{caus}$ is increasing, while BRING$_{caus}$ is more restricted in use (see e.g. Hollmann 2003 and references therein). A comparison between English and German reveals that BRING$_{caus}$ is undergoing systematic changes regarding its verbal territory (see Mair 1990a: 88). While in Late Modern English BRING$_{caus}$ was still acceptable with fully fledged direct objects (1), this use is becoming obsolete in Present-day English (2). By contrast, German still permits transitive uses of BRING$_{caus}$ (3).[2]

(1) [...] she **brought** miss Harriot to confess, [...]. (Haywood, Eliza F. *Betsy Thoughtless* 1751)
(2) ?I **brought** him to laugh.
(3) Er **brachte** Deutschland zum Lachen: […] (*Nordwest-Zeitung Online* 6 Oct 2014)
'He brought Germany to laugh.' (lit.)

[1] We are indebted to Matthias Eitelmann, Günter Rohdenburg, Florian Dolberg and two anonymous reviewers for very helpful comments and corrections of an earlier draft of this article.

[2] Note, however, that the German use of the cognate *bringen* is likewise restricted to certain syntactic frames, e.g. constructions with a nominalised verb (*zum Lachen*) or correlative structures (*Ich brachte ihn dazu zu lachen*).

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This area of lexical change also reveals marked British–American differences:[3] American English is more advanced in substituting BRING$_{caus}$ (4) with GET$_{caus}$ (5) or MAKE$_{caus}$ (6), though the three verbs need not be completely synonymous.[4] The historical development of this distribution is as yet far from clear.

(4) Or suppose that I am eating escargots for the first time and cannot **bring** myself to forget the disgustingly slimy look and feel of snails in the garden. (BNC)
(5) The only way we could **get** him to do it was to turn on the TV to the World Cup. (COCA)
(6) He **made** us laugh. He **made** us cry. (Barack Obama on CNN 2014)

We distinguish between the traditional concept of 'syntactic transitivity', gauged in terms of the presence or absence of a direct object, and 'semantic transitivity', measured as 'the effectiveness with which the verbal action takes place' (Hopper & Thompson 1980: 251). While the former refers to argument roles (e.g. subject, object), the latter has alternatively been referred to as event structure (see Zacks & Tversky 2001) or participant roles (see Goldberg 1995: 43), thereby relating to arguments required by the verb semantics (e.g. agents, patients). Hopper & Thompson's (1980: 253) conception of transitivity is thus a feature characterising clauses rather than verbs. Assuming with Hopper & Thompson (1980: 251) that semantic transitivity is a graded notion, the present article investigates whether 'Moderate Transitivity Contexts' (MTCs) serve as a refuge for weakly entrenched verbs or verb senses. The quantitative and qualitative diachronic analyses of the erosion of BRING$_{caus}$ presented here show that this verb has undergone systematic detransitivisation during the past 400 years: fully transitive uses of BRING$_{caus}$ which were still possible in Early Modern English (7) have come to be hardly acceptable in Present-day English (8).

Early Modern English:

(7) (a) So that She **brought** the Old man to allow her fourty Shillings per week to keep the House; [...]. (EEPF: Head, Richard & Francis Kirkman. *The English Rogue* 1671)
(b) [...]; then I turn'd it, and made one side of it smooth, and flat, as a Board from End to End; then turning that side downward, cut the other side, till I **brought** the Plank to be about three Inches thick, […]. (ECF: Defoe, Daniel. *Robinson Crusoe* 1719)

Present-day English:

(8) (a) *She **brought** the old man to allow her ….
(b) *I **brought** the plank to be three inches thick…

[3] Leonard Talmy (p.c.) points out that in his variety of American English he would replace BRING$_{caus}$ with GET$_{caus}$ in most – if not all – cases.

[4] MAKE, GET and BRING are so-called analytic causatives. While lexical causatives, such as *die–kill* or the morphological causatives *rise–raise*, *fall–fell* (see Comrie 1985: 331) in e.g. *X raised Y*, imply less conceptual distance, analytic causatives, such as *X made Y rise*, tend to encode more conceptual distance (see also Haiman 1983: 783). In the analytic structure, Y serves as subject of the subordinate clause. A similar relation of conceptual distance holds between direct objects and prepositional objects (see also Moravcsik 1978 and Comrie 1981: 167 on direct case for patients that are directly affected by the verbal action vs indirect case for patients that are indirectly affected, and Haiman 1983: 792 for the iconic relationship between form–meaning pairs concerning the 'bulkiness' of direct vs indirect case).

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Theoretical implications of the phasing-out of BRING$_{caus}$ arise from the observation that the only contexts in which BRING$_{caus}$ is still acceptable in Present-day English are those in which some degree of detransitivisation takes place, i.e. contexts that score low on a set of transitivity parameters (discussed in sections 2.2.1–2.2.6) such as affirmation (negation rather than affirmation), mode (irrealis rather than realis), participants (one participant rather than two), etc., as illustrated by example (9):

(9) I just can't **bring** myself to do it. (COCA)

Note that this finding is well in line with Mair (1990a: 88), who shows that BRING$_{caus}$ mainly occurs with reflexives or passives, both contexts which score low on transitivity.

This article provides synchronic and diachronic data from British English corpora showing that the causative use of the verb BRING displays a highly systematic pattern that is able to shed new light on the principles governing language change. It adduces empirical support for a systematic decline in the overall use of BRING$_{caus}$ in recent centuries, as well as a shift in the range of syntactic templates or constructions in which this verb can be used. Thus, we observe two related developments:

I. There has been an erosion of BRING$_{caus}$.
II. The erosion of BRING$_{caus}$ goes hand in hand with a detransitivisation process.

It is worth noting here that moderate transitivity may not be equated with intransitive uses. Some degree of transitivity seems to be retained in MTCs, but the full force of the verbal action is attenuated. In these semantic niches the effect of the verbal action on the object is reduced. The data introduced here provide first indications that successive stages of detransitivisation usher formerly fully transitive verbs out of the language system, a process that can be assumed to function as a support strategy.

The concept of 'support strategies' is based on the assumption that in a wide array of variation phenomena speakers employ techniques geared towards reducing processing effort (see Mondorf & Pérez-Guerra, Introduction to this issue; Mondorf 2009 and references therein). This article argues that MTCs serve as a support strategy, i.e. a processing-based modulation of the distribution of certain linguistic features in line with the cognitive accessibility of the construction. Recessive BRING$_{caus}$ is weakened in its causative force by no longer occurring in fully transitive contexts. By maintaining its syntactic frame (S V Od) but semantically weakening the causative force of BRING$_{caus}$, language users systematically adapt the intensity of the verbal action expressed by this verb to the decreasing relevance of BRING$_{caus}$ in the language system. Wallace (1982: 213) relates such grounding properties of transitivity to more general cognitive constraints:

> (1) People are more interested in other human beings (or at least in animate entities); (2) People tend to place themselves at the center of attention; (3) Individuated – especially concrete, definite, singular, countable – entities are more apt to attract interest than their opposites: (4) The real, the certain, the positive, the immediate, the bounded, the

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completed, and the dynamic are more effective in moving discourse forward, to constitute the foregrounded portion of a text, than their respective contrasting properties, which form the supportive background.

The declining frequency of BRING$_{caus}$ goes hand in hand with an erosion of its effect on its direct object. While syntactically it is still a fully fledged transitive verb, it can only serve in highly restricted contexts. Note that this development is related but not identical to semantic bleaching (see Gabelentz 1891: 241). Bleaching of a verb in grammaticalisation would imply a reduction in lexical meaning to the benefit of grammatical function. Cases in point are the verb SEE in the conjunction *seeing that* … , or the verbs in the *will-* or *going to*-future. As regards BRING$_{caus}$, its overall frequency is declining and it does not assume more grammatical functions.

The article is structured as follows. While section 1 has set the scene for the research question under investigation, section 2 addresses theoretical prerequisites regarding transitivity as a graded notion as well as the introduction of six detransitivisation strategies which could be applied to BRING$_{caus}$. Section 3 outlines the data followed by three empirical studies of BRING$_{caus}$ in section 4. Finally, section 5 discusses the theoretical implications for the role of MTC*s* in language change.

2 Theoretical prerequisites concerning transitivity

2.1 Syntactic vs semantic transitivity

Traditional conceptions of transitivity relate to morphosyntactic criteria and lead to categorical distinctions. By contrast, Hopper & Thompson (1980: 251) view transitivity as the effectiveness of the verbal action. Their theory of transitivity moves beyond the single criterion of the presence or absence of a direct object. They define ten criteria (see table 1) which measure the extent to which a clause is transitive. These comprise agent-related, patient-related and verb-related criteria (see Givón 1985: 90).

The gradual notion of transitivity can best be illustrated for criterion A 'Participant'. High transitivity contexts imply two or more participants (as in 10):

(10) A murdered B. high transitivity
[+ SYNTACTIC, + SEMANTIC] transitivity

The clause is syntactically transitive as the direct object slot is filled. There is also a patient that is affected by the verbal action, so that the clause is also semantically transitive. The effectiveness of the verbal action of *murder* is high, i.e. the patient B is dead. Thus, we clearly have a highly transitive sentence.

By contrast, reflexive objects are coreferential with the subject. Hence, there is only one participant:

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Table 1. *Criteria for measuring transitivity (based on Hopper & Thompson 1980: 252)*

		High transitivity	Low transitivity
A	Participant	2 or more participants	1 participant
B	Kinesis	action	non-action
C	Aspect	telic	atelic
D	Punctuality	punctual	non-punctual
E	Volitionality	volitional	non-volitional
F	Affirmation	affirmative	non-affirmative
G	Mode	realis	irrealis
H	Agency	agent high in potency	agent low in potency
I	Affectedness of the object	object totally affected	object not affected
J	Individuation of the object	object highly individuated	object non-individuated

(11) A murdered himself. moderate transitivity
[+ SYNTACTIC, – SEMANTIC] transitivity

Syntactically the sentence is transitive, because the direct object slot is filled. Semantically, however, there is no second participant, as the agent and the patient are the same person. Why can we argue that the effectiveness with which the action takes place is lower with reflexives? After all A is as dead as B in (10). The reason is that there is some potential for control or volition, because the patient can, at least theoretically, stop the agent (see Primus 1999). Semantically, the action is not considered a 'fully fledged' murder – which is reflected in our legal system and the lexical split between *suicide* and *murder*. Thus, while there is some degree of transitivity involved, it is lower than that of example (10).

Now consider the syntactically intransitive use illustrated in (12). Here, there is no patient. The effectiveness can only be gauged in terms of agent- and verb-related properties.

(12) A murdered. intransitive
[– SYNTACTIC, + SEMANTIC] transitivity

Actually, we can argue that the syntactically intransitive example (12) is more transitive than e.g. *A slept*, because the verb *murder* is intrinsically transitive, i.e. it entails that someone has been murdered. This does not apply to the verb *sleep*. And to push things even further, there is a potential for some degree of transitivity even for the intrinsically intransitive verb *sleep*, because *sleep* can be used with a cognate object, as in (13).

(13) Sir Michael was sleeping the sleep of the just. (*OED*: Thackeray, William Makepeace. *Vanity Fair* 1848)

Thus, we see that the degrees of transitivity are even more fine-grained than table 1 suggests. Since the present study is concerned with $\text{BRING}_{\text{caus}}$, transitivity parameters

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Table 2. *Moderate Transitivity Contexts of* BRING$_{caus}$ *in relation to Hopper & Thompson's (1980: 252) criteria for measuring transitivity*

	Transitivity factors and factor levels	Relation to Hopper & Thompson's (1980: 252) criteria measuring transitivity
1	Reflexiveness REFLEXIVE, NON-REFLEXIVE	A Participant
2	Animacy of the subject ANIMATE, INANIMATE	H Agency, E Volitionality
3	Modality MODAL, NON-MODAL	G Mode, E Volitionality
4	Negation AFFIRMATION, NEGATION	F Affirmation
5	Finiteness FINITE, NON-FINITE	H Agency
6	Voice PASSIVE, ACTIVE	H Agency, E Volitionality

not applicable to this verb are ignored here. Instead we concentrate on those contexts in which BRING$_{caus}$ occurs in Present-day English and gauge them in terms of their degree of transitivity.

2.2 Moderate Transitivity Contexts

We will focus on the modulation of transitivity by means of six parameters that are fairly easy to operationalise. As some of Hopper & Thompson's (1980) ten criteria for transitivity cover more than one parameter (e.g. Agency is a function of both Volition and Animacy; Modality corresponds to the criteria Volition and Irrealis, etc.), these criteria have been split into separate parameters for an empirical analysis. Table 2 shows how the six parameters used in this study are linked to Hopper & Thompson's criteria and the following sections detail how they affect transitivity.

2.2.1 Detransitivisation by means of reflexiveness

Reflexives have restricted transitivity, because the direct object is coreferential with the subject (see Hopper & Thompson 1980: 277). Hence the effectiveness with which the verbal action is transferred to a patient is lower with reflexives (14) than with fully fledged objects (15). The reflexive example still licenses BRING$_{caus}$ today, while non-reflexive examples, such as (14), are at the very least scarce.

(14) […] Amy **brought** herself to utter what she was thinking. (NCF: Gissing, George. *New Grub Street* 1891) REFLEXIVE

(15) […], till I **bring** Mr. Rushford to speak out so explicitly, […] (ECF: Richardson, Samuel. *Familiar Letters* 1750) fully fledged object

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That reflexivity is related to transitivity can also be seen for parameter D 'Punctuality' (see Hopper & Thompson 1980: 252). The Spanish reflexive *se* expresses punctual actions, which are associated with higher degrees of transitivity, while the non-reflexive use signals duration (see García 1975: 269). The reflexive becomes ungrammatical when accompanied by an adverbial expressing duration.

(16) Juan durmió. NON-PUNCTUAL
Juan durmió toda la noche.
'Juan slept all night.'

(17) Juan **se** durmió. PUNCTUAL
*Juan **se** durmió toda la noche.
'Juan fell asleep all night.'

2.2.2 Detransitivisation by means of animacy

Inanimate subjects are generally less agentive than animate ones. Silverstein's Hierarchy (1976: 126), displayed in figure 1, is used by Hopper & Thompson (1980: 273) to predict that the transitivity of a clause is reduced whenever (a) the agent ranks low in animacy and (b), even more so, if the agent ranks lower on the scale than the patient.[5,6]

1. p. pronoun > 2. p. > 3. p. > proper name > human > animate > inanimate

Figure 1. Animacy hierarchy (Silverstein 1976: 126)[7]

Decreased agentivity results in a lower effectiveness with which the verbal action is transferred to a patient. In (18) we see that BRING$_{caus}$ occurs with an inanimate subject in nineteenth-century English, while (19) illustrates its use with an animate subject in Present-day English.

(18) To think of her as your wife **brings** pain enough to kill me. (NCF: Wood, Ellen. *East Lynne* 1861) INANIMATE SUBJECT
(19) […] how easily he **brought** his mount to jump a wall […]. (BNC: wridom1) ANIMATE SUBJECT

[5] Silverstein's (1976: 123) hierarchy has been labelled *Agency Hierarchy* (Hopper & Thompson 1980: 273), *Animacy Hierarchy* (Comrie 1978: 386 and Blake 1987: 195), *Person Hierarchy* (Blake 1976: 286), *Nominal Hierarchy* (Dixon 1979: 88), all cited in Song (2001: 167). The original hierarchy has undergone several stages of modification (see Haspelmath *et al.* 2001).

[6] Hopper & Thompson's (1980) labels A(gent) and O(bject) inconsistently refer to semantic and syntactic arguments alike. We therefore follow Dryer (2007: 252) in using the semantic labels 'agent' (as the more agent-like element in a clause) and 'patient' (as the more patient-like element in a clause).

[7] A more fine-grained scale would have to rely on semantic and possibly even pragmatic criteria, since the third-person pronouns *she* and *he* often refer to more animate entities than *it*, which in turn can refer to *babies*, *animals* or *plants* but also inanimate entities, such as *stones* or *thoughts*.

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2.2.3 *Detransitivisation by means of modality*

Modal verbs also effect moderate transitivity, since they express non-factual meanings or irrealis mode (see Hopper & Thompson 1980: 252).[8] If a verbal action is non-factual, the effectiveness with which it is transferred to the patient is lower than that of a factual action. The following examples illustrate this contrast:

(20) I think a little persuasion from my uncle would **bring** her to accept Gilfil; […] (NCF: Eliot, George. *Scenes of a Clerical Life* 1858) MODAL

(21) It was an object of no common interest which had **brought** him to encounter so many painful remembrances. (NCF: Scott, Sir Walter. *The Heart of Mid-Lothian* 1830) NON-MODAL

2.2.4 *Detransitivisation by means of negation*

Negation expresses non-factual meanings. This reduces the effectiveness with which a verbal action is transferred to a patient (see Hopper & Thompson 1980: 252). In (22) the verbal action is negated[9] and hence we are dealing with an MTC. By contrast, (23) is not detransitivised by means of negation and BRING$_{caus}$ is much less likely to occur.

(22) […] if Richard, in his mild, but steady way, had not **brought** the old woman to listen to it. (NCF: Yonge, Charlotte Mary. *The Daisy Chain* 1856) NEGATIVE

(23) […] for he **brought** Miss Fluellen to acknowledge that men might deceive; […] (NCF: Bage, Robert. *Man As He Is* 1792) AFFIRMATIVE

2.2.5 *Detransitivisation by means of non-finiteness*

Non-finite verb forms, i.e. gerunds, *to*-infinitives and imperatives, are less agentive, because the agent is not expressed in the non-finite clause, but merely implied by featuring in the main clause. This backgrounding or demotion of the agent reduces the effectiveness of the verbal action. Therefore, sentences such as (24) qualify as MTCs, in which BRING$_{caus}$ is still in use, while (25) is more transitive.

(24) […], some Salve must be provided […] to procure the means to **bring** them to enjoy what they so much desire, […] (EEPF: Brathwait, Richard. *The Two Lancashire Lovers* 1640) NON-FINITE

(25) […] at last, he **brought** them all to acknowledge that it was, upon the whole, the best thing […]. (NCF: Edgeworth, Maria. *Patronage* 1814) FINITE

2.2.6 *Detransitivisation by means of passivisation*

Passives score low on transitivity since the patient undergoing the action specified by the verb is put centre stage, i.e. in subject position, while the instigator of the action is backgrounded by being demoted from subject position and often being omitted altogether (see Saaed 2016: 171).

[8] Modal meaning can, of course, also be signalled by other means, such as stress, subordination, downtoning, boosting adverbs, subjunctives, etc. For methodological reasons, the present article restricts itself to investigating the presence or absence of modal verbs in combination with BRING$_{caus}$.

[9] Note that for coding consistency only those clauses in which a negative particle directly referred to the VP containing BRING$_{caus}$ were counted as negated contexts. This excludes, for instance, cases in which BRING$_{caus}$ occurs in a main clause that is modified by an adverbial clause introduced by *unless*, or negative adverbials extending over one or more clauses.

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Table 3. *The corpora (* birth dates, [p] publication dates)*[10]

Timespan	Corpora	Period	Size	Total size
1460–1699	*Early English Prose Fiction* (EEPF)	*1460–1682	10,033,245	15,589,181
	Eighteenth Century Fiction 1 (ECF1)	*1660–99	5,555,936	
1700–99	*Eighteenth Century Fiction 2* (ECF2)	*1700–52	4,755,583	16,565,306
	Nineteenth Century Fiction 1 (NCF1)	*1728–99	11,809,723	
1800–69	*Nineteenth Century Fiction 2* (NCF2)	*1800–69	24,273,802	24,273,802
1960–93	*British National Corpus* (wridom1)	[p]1960–93	19,429,744	19,429,744

(26) You are easily **brought** to reverse your views. (BNC: wridom1) PASSIVE
(27) […]; she **brought** her to lament her situation, […] (NCF: Shelley, Mary Wollstonecraft. *The Fortunes of Perkin Warbeck* 1830) ACTIVE

3 Data

In order to monitor the decreasing use of BRING$_{caus}$ over an extended timespan in British English, this verb has been analysed in four historically stratified corpora. The selection of corpora solely containing prose fiction permits us to keep the factor genre relatively constant over the centuries. Table 3 lists the (sub)corpora adding up to some 76 million words.[11]

In order to retrieve all instances of BRING$_{caus}$, the *Oxford English Dictionary* was checked for post-fifteenth-century spelling variants of Present-day English BRING. For the benefit of automatic retrieval the search by means of *WordSmith* was restricted to those cases in which a form of BRING is accompanied by the infinitival marker *to* within a range of five words to the right.[12] The resulting search strings, designed to allow for most variant spellings, consisted of: *br*ng*/br*t** Context word: *to* 5 Right. All corpus

[10] In table 3 the asterisk (*) indicates birth dates of the authors included in the corpus, while ([p]) indicates publication dates. The *Eighteenth Century Fiction* corpus and the *Nineteenth Century Fiction* corpus have been split into subcorpora in order to provide periods that start or finish at the turn of a century. Because the emergent subcorpora are ordered by authors' birth dates rather than publication dates, birth dates have been chosen for locating the historical texts in time.

[11] Several corpora yielded multiple entries of identical occurrences, which have been eliminated from the tally. As these doublets had to be discarded, the resultant databases are slightly smaller than is suggested by their word quantities. Furthermore, the size of the first part of the *Nineteenth Century Fiction Corpus* (NCF1) as given in table 3 differs by about 3.5 million words from the actual size of the corpus. This discrepancy results from our decision to exclude all works by Anthony Trollope from the data, as his disproportionate use of BRING$_{caus}$ distorted the results: Trollope's works constitute roughly 13 per cent of NCF1, but a whopping 50 per cent of tokens (n = 367) of BRING$_{caus}$ in this corpus.

[12] This procedure retrieved the vast majority of occurrences of BRING$_{caus}$, while particularly long direct objects occurring between BRING and *to* (e.g. *They brought the old man in the garden to confess*) as well as bare infinitives were missed out on. This inaccuracy is considered justifiable when weighing the scarcity of such occurrences against the effort of manually eliminating a huge number of hits in which *to* appears as a preposition.

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hits were manually analysed in order to eliminate cases which did not fit the semantic–syntactic template specified above. Cases that were eliminated from the tally were, for instance, fixed collocations with idiomatic meanings that need not be causative (e.g. *bring to bear*, *bring to pass*) and ambiguous instances where it was not clear whether *bring* is used in a causative sense:

(28) […], had I not promised her to **bring** you to speake with her, she would haue destroyed her selfe ere this: […] (Forde, Emanuel. *Montelyon* 1633) *ambiguous*

Also eliminated were causative uses in which *bring* was not followed by a *to*-infinitive but by an NP introduced by the preposition *to*.

(29) […] and so had brought himself to the Gallows, […] (EEPF: Bunyan, John. *The Life and Death of Mr. Badman* 1680) *no* to-*infinitive*

After this step, 1,420 tokens remained, which were manually coded for the six factors listed in the left column of table 2. As explained in sections 2.2.1–2.2.6 these factors can be matched to Hopper & Thompson's (1980: 252) criteria for measuring transitivity listed in the right column. Tokens were not coded for further parameters, because these would either have remained constant due to the semantics of the verb (e.g. Kinesis) or are difficult to assess (e.g. Affectedness of the Object). All six transitivity parameters are binary categorical factors and time is treated as a categorical factor with four levels (the four time periods).

4 Empirical diachronic study of BRING$_{CAUS}$

The analysis of the data proceeds in three steps: first, we will take a brief look at the decline of BRING$_{caus}$ over time and compare it to the general development of BRING. In a second step, we will examine all transitivity parameters individually in order to test whether BRING$_{caus}$ declined faster in transitive contexts than in intransitive contexts. The third and final step comprises a search for the changing patterns that BRING$_{caus}$ has been used in.

4.1 Decline of BRING$_{caus}$

In order to assess whether BRING$_{caus}$ has generally been decreasing in use over the past 500 years, all instances of BRING were retrieved from the corpora. Figure 2 compares the diachronic development of BRING$_{caus}$ plus *to*-infinitive (dark columns) with all other cases of BRING including non-causative uses (light line).

Initially, both groups are decreasing at the same rate, until, in the nineteenth century, the decline of BRING stalls, while the use of BRING$_{caus}$ plus *to*-infinitive keeps decreasing. By the twentieth century, even BRING is on the decline again, yet more slowly than BRING$_{caus}$ plus *to*-infinitive. Overall, the difference in the decline rates is highly significant, yet has only a very small effect ($\chi^2 = 65.37$, df $= 3$, $p<0.001$, Phi $= 0.04$).

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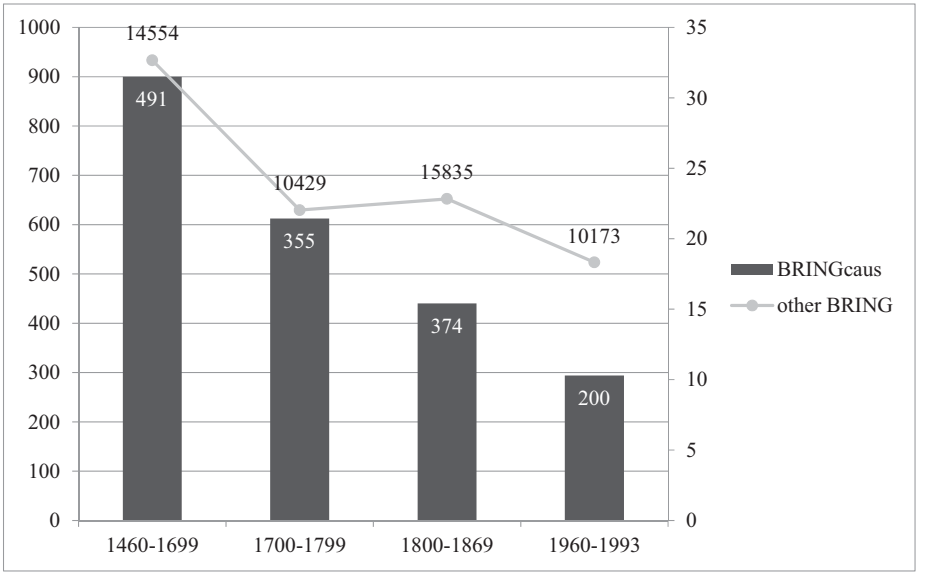


Figure 2. BRING$_{caus}$ + *to*-infinitive vs all other uses of BRING (n = 1,420 vs 50,991)
Note: The curve and bars display uses per million words. Each data point is additionally labelled with the absolute number of occurrences.

Thus what we learn from these data is that BRING$_{caus}$ plus *to*-infinitive is indeed on the decline in British English. Secondly, this decline cannot – at least not exclusively – be attributed to an overall decrease in the use of BRING.

4.2 Separate analyses of six transitivity factors

The following sections provide separate analyses of each of the six factors before proceeding to a combined analysis and determining some important interactions and configurations.

4.2.1 Reflexives

We have argued in section 2.2.1 that reflexives have a lowered transitivity, because the direct object is coreferential with the subject (see Hopper & Thompson 1980: 277). Both the reflexive and the non-reflexive options were available in earlier stages of English.

(30) [...], she could not ***bring*** her self to cry out with that vigour and strength that acute Pains cause Women to do; […] (EEPF: Estcourt, Richard. *The Fair Example* 1706) REFLEXIVE

(31) […] but as he had now **brought** her to confess a former love […] (EEPF: Head, Richard & Francis Kirkman. *The English Rogue* 1671) NON-REFLEXIVE

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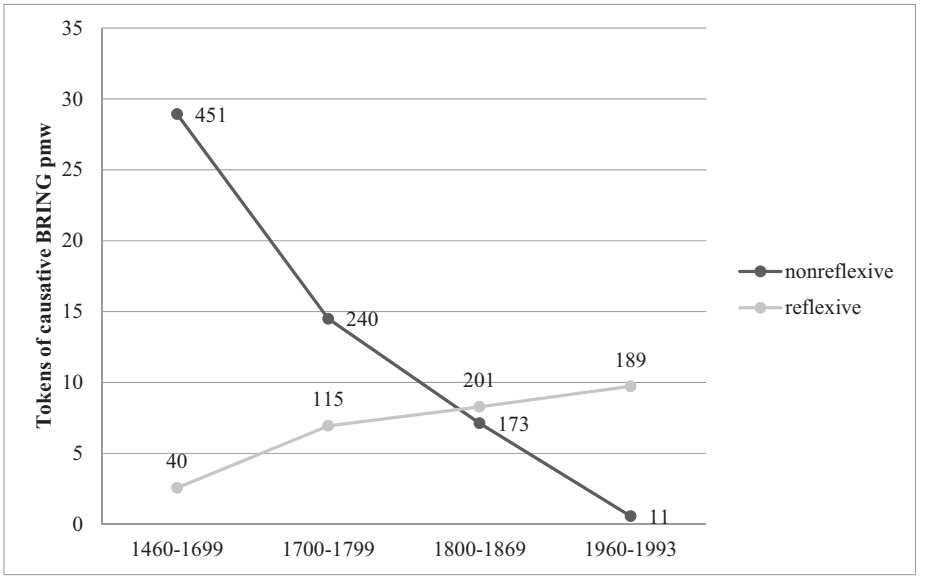


Figure 3. BRING$_{caus}$+ *to*-infinitive in reflexive vs non-reflexive contexts (n = 1,420)
Note: The curve displays the use of BRING$_{caus}$ pmw. Each data point is additionally labelled with the absolute number of data points.

Figure 3 shows that non-reflexive uses of BRING$_{caus}$ have plummeted since the first period, so that by the twentieth century, they arrive at only 0.6 occurrences pmw. Reflexive uses, on the other hand, are on the rise. The effect is of medium strength and highly significant ($\chi^2 = 498.81$, df = 3, $p<0.001$, Phi = 0.59). This contrasts starkly with the general decline of reflexives in many other contexts in both BrE and AmE (see Kirchner 1951: 158; Jespersen 1961: 325–31; Strang 1970: 153; Peitsara 1997: 321; König & Siemund 2000: 48; Rohdenburg 2009: 180, 2014b; Mondorf 2010: 229, 2011: 405).

These findings show that Andersson's (1985) rate of 90 per cent reflexive BRING$_{caus}$ (reported by Mair 1990a: 88) is a twentieth-century phenomenon. Before the nineteenth century, reflexive uses were the minority form.

4.2.2 Animacy

Inanimate subjects are generally less agentive than animate ones (see section 2.2.2). Across all time periods, animate subjects, like the one in (32) are far more common than inanimate ones such as (33). The latter become all but impossible in the twentieth century, as shown by figure 4.

(32) […], he at last **brought** Mansoul to dance after his pipe […] (EEPF: Bunyan, John. *The Holy War* 1682) ANIMATE SUBJECT

(33) This **brought** the Duke to know his Error, [...]. (ECF: Defoe, Daniel. *Memoirs of a Cavalier* 1720) INANIMATE SUBJECT

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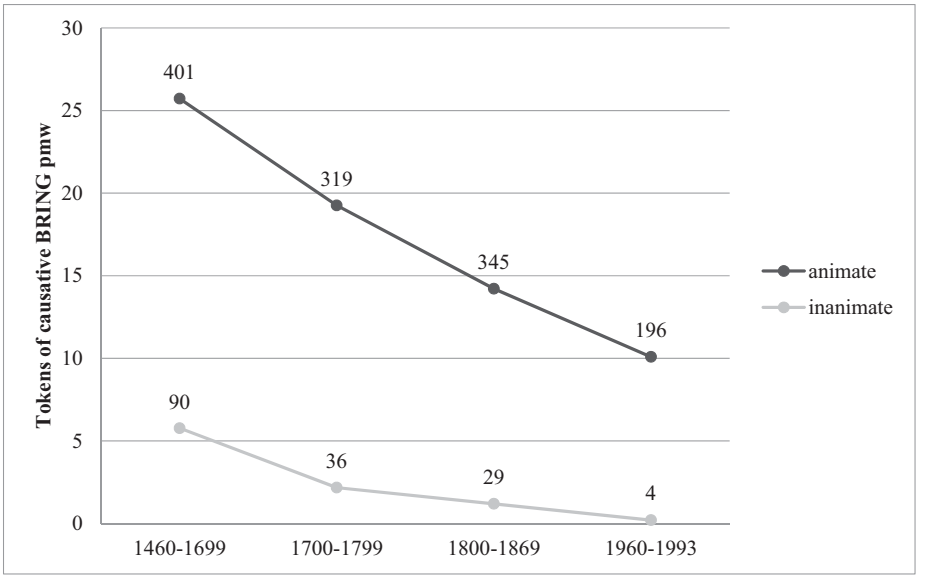


Figure 4. BRING$_{caus}$ + to-infinitive with animate vs inanimate subjects (n = 1,420)
Note: The curve displays the use of BRING$_{caus}$ pmw. Each data point is additionally labelled with the absolute number of data points.

Based on the transitivity principle, we would expect that the decline of BRING$_{caus}$ is delayed in inanimate contexts. What we find, however, is that BRING$_{caus}$ fares better in animate, i.e. high-transitivity contexts. By the end of the four periods, BRING$_{caus}$ with inanimate subjects has declined by 96 per cent as opposed to only 61 per cent in the case of its animate counterpart. While the chi-squared test yields a highly significant result, closer analysis reveals that the effect is small and that the low p-value only hinges on two cells: the comparatively high rate of inanimate subjects in the first period and conversely the low rate of inanimate subjects in the last period ($\chi^2 = 46.99$, df = 3, $p<0.001$, Phi = 0.18).

There is, however, a correlation that requires consideration. As we already know that BRING$_{caus}$ is gravitating towards an almost exclusive use with reflexives, and the semantics of reflexives mostly require animate subjects, the rapid decline of inanimate subjects looks suspiciously like a consequence of the 'takeover' of the reflexive. And indeed this is the case: if we split the data into reflexive and non-reflexive tokens, the effect disappears. While the rate of inanimate subjects among non-reflexive uses of BRING$_{caus}$ vacillates around 19 per cent, across all time periods, reflexive uses of BRING$_{caus}$ have almost exclusively taken animate subjects (average rate of inanimates = 1.5 per cent). With the increase in reflexives over time we thus have a rise in contexts which demand animate subjects, so that animacy as a measure for detransitivisation cannot come to bear here. Moderate Transitivity by means of inanimacy is thus statistically not a supporting factor for BRING$_{caus}$.

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4.2.3 Modality

Modal verbs create moderate transitivity, since they express non-factual meanings or irrealis mode (see section 2.2.3). Figure 5 shows the diachronic influence of modality. Note that in Present-day English BRING$_{caus}$ without modal auxiliaries has become rare. Historically, however, modal and non-modal uses of BRING$_{caus}$ alike were common, as exemplified in (34) and (35):

(34) […] it was sometime before he could **bring** her to permit him to speak to her […] (EEPF: Behn, Aphra. *The Fair Jilt* 1688) MODAL

(35) […]: but as he had now **brought** her to confess a former love […] (EEPF: Head, Richard & Francis Kirkman. *The English Rogue* 1671) NON-MODAL

In modal contexts BRING$_{caus}$ is decreasing much more slowly than in non-modal contexts. The decline of non-modals is roughly parallel to that of the non-reflexive (see figure 3). While we concluded that the similarities in the curves for animates and reflexives can be explained by language-internal reasons, this is not the case for non-modals and non-reflexives. There are no semantic or grammatical *a priori* reasons for reflexives and modals to co-occur and we will see below that they did not always do so.

The chi-squared test confirms that modal contexts are a niche where BRING$_{caus}$ is preserved much better than in non-modal contexts. The effect is highly significant and of medium strength ($\chi^2 = 168.06$, df = 3, $p<0.001$, Phi = 0.34). The distribution of the contributions to chi-square confirms what we can also see in the graph: the

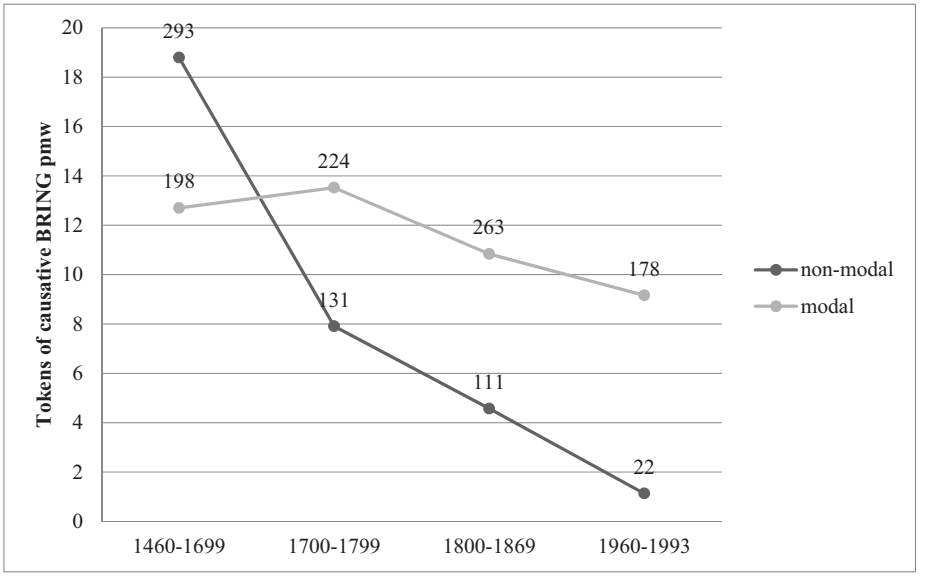


Figure 5. Influence of modality on the use of BRING$_{caus}$ + *to*-infinitive (n = 1,420)
Note: The curve displays the use of BRING$_{caus}$ pmw. Each data point is additionally labelled with the absolute number of data points.

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effect results from the reversal of preferences; while writers preferred non-modal uses of BRING$_{caus}$ in the first period, they have come to prefer modal contexts from the second period onwards. The effect is stronger in reflexive contexts ($p<0.001$, Phi = 0.29), as only 50 per cent of reflexives in the earliest period co-occur with a modal but the rate rises to 92 per cent in the twentieth century. Yet, up until the twentieth century (when almost no non-reflexive tokens remain), it is also observable among non-reflexive tokens, where rates rise from 39 per cent in the first period to 56 per cent in the nineteenth century ($p<0.001$, Phi = 0.15).

4.2.4 Negation

Negation expresses non-factual meanings. As shown in section 2.2.4, this reduces the 'effectiveness with which a verbal action takes place' (Hopper & Thompson 1980: 251). Historically, BRING$_{caus}$ was perfectly acceptable in affirmative (37) as well as in negated contexts (36).

(36) […], she would strive all she could with her Heart, but she verily believ'd she should never **bring** it to consent to a Marriage […] (EEPF: Behn, Aphra. *The False Count* 1682) NEGATION

(37) […] so soon as we had **brought** my Parents to consent. (EEPF: Bellon, Peter. *The Court Secret* 1689) AFFIRMATION

Figure 6 traces the trajectory of change for BRING$_{caus}$ in the presence of negation. While we know that BRING$_{caus}$ has generally gone down over the past 500 years, with negation it has even increased in use.

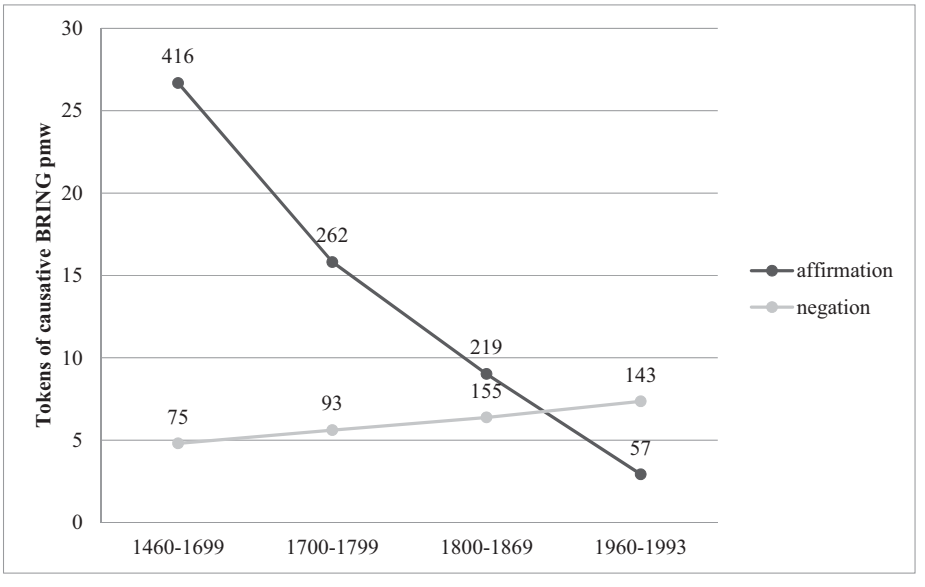


Figure 6. Influence of negation on the use of BRING$_{caus}$ + *to*-infinitive (n = 1,420)
Note: The curve displays the use of BRING$_{caus}$ pmw. Each data point is additionally labelled with the absolute number of data points.

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The chi-squared test confirms that negation has a highly significant effect on the use of BRING$_{caus}$ ($\chi^2 = 223.95$, df = 3, $p<0.001$, Phi = 0.4). The effect results from the reversal of preferences, which is, once again, mostly brought about by the rise of the reflexive: Between the first and the third period, the rate of negated non-reflexives rose by only 9 per cent (from 14 to 23 per cent, $p<0.05$, Phi = 0.1), while negated reflexives skyrocketed from 33 per cent in the first period to 75 per cent in the fourth period ($p<0.001$, Phi = 0.26).

4.2.5 Finiteness

Non-finite verb forms, i.e. gerunds, *to*-infinitives and imperatives, are less agentive, because the agent is not expressed in the non-finite clause, but merely implied by featuring in the main clause (see section 2.2.5). Both finite and non-finite uses are possible, though non-finite verb forms have always been negligibly rare, as illustrated by figure 7.

(38) So that She **brought** the Old man to allow her fourty Shillings per week to keep the House; [...]. (EEPF: Head, Richard & Francis Kirkman. *The English Rogue*, 1671) FINITE

(39) [...] if hee loued so much as hee said, hee should expresse it by **bring*ing*** Dorileus to speake with her, [...] (EEPF: Wroth, Lady Mary. *The Countesse of Montgomeries Urania* 1621) NON-FINITE

The downward-sloping curve for finite forms of BRING$_{caus}$ is in line with its general decline over the centuries. At first glance, the decline in the use of non-finite forms

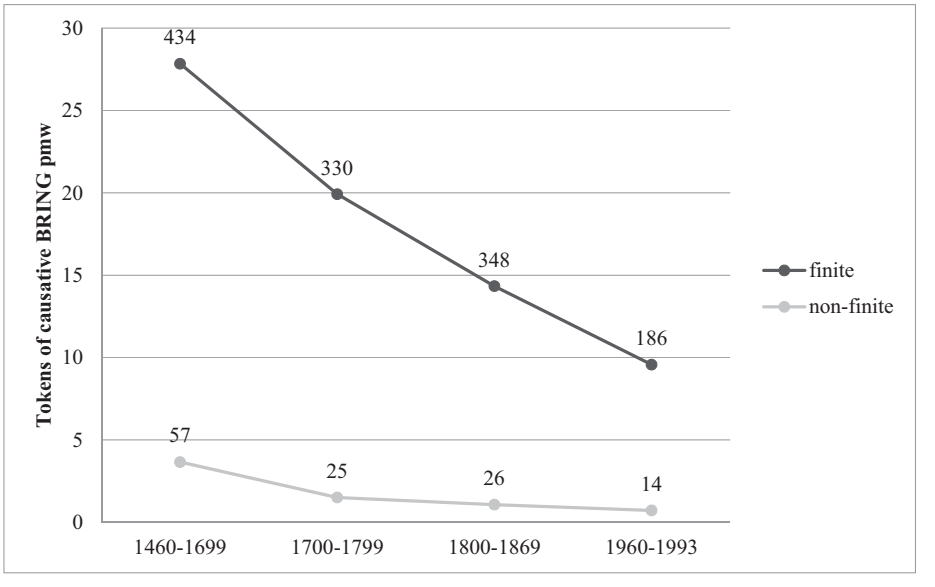


Figure 7. Influence of finiteness on the use of BRING$_{caus}$ + *to*-infinitive (n = 1,420)
Note: The curve displays the use of BRING$_{caus}$ pmw. Each data point is additionally labelled with the absolute number of data points.

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appears slower, but the opposite is the case: non-finite forms decrease by 80 per cent while finite forms decrease by only 66 per cent ($\chi^2 = 8.7$, df = 3, $p<0.05$). However, a closer look at the data reveals that the effect is extremely small (Phi = 0.08), possibly because only 8.6 per cent of data points are non-finite and thus there is too little variation in the data for the model to determine whether the effect is non-coincidental. Furthermore, the composition of the overall chi-squared result shows that none of the values in the eight-cell table reached significance. Thus we conclude that the use of BRING$_{caus}$ in non-finite contexts has always been rare and that these contexts do not constitute a niche supporting the use of BRING$_{caus}$.

4.2.6 Passivisation

Mair (1990a, b) provides three crucial observations concerning a preference of BRING$_{caus}$ for passive over active uses:

1. Native speakers rate the passive versions of sentence pairs with BRING$_{caus}$ as more natural than the active versions (Mair 1990b: 169–70).
2. The examples provided in dictionary entries for BRING$_{caus}$ feature either passive or reflexive uses (Mair 1990a: 88fn.).
3. In the *OED* '**all** […] nonreflexive examples have *bring* in the passive' (Mair 1990b: 169, emphasis in the original).

This is in line with our expectations as passives score low on agentivity since the patient undergoing the action specified by the verb is put centre stage, i.e. subject position, while the instigator of that action is backgrounded by being demoted from subject position and often being omitted altogether. Hence there is a lower effectiveness with which the verbal action is transferred to a patient. Yet, in our case, the analysis of passives reveals the opposite: Both passive and active versions occurred quite naturally in former times (see (40) and (41)). Initially, as shown in figure 8, we observe a parallel decline of both forms, but in the twentieth century, the decline of actives slows, while that of passives accelerates, making BRING$_{caus}$ and the passive all but incompatible.

(40) The Prince was soon **brought** to consent to it, […] (EEPF: Blackbourn, Richard. *Clitie* 1688) PASSIVE

(41) […] so soon as we had **brought** my Parents to consent. (EEPF: Bellon, Peter. *The Court Secret* 1689) ACTIVE

In fact, the chi-squared test shows that passives are vanishing significantly faster than active uses of BRING$_{caus}$ ($\chi^2 = 80.24$, df = 3, $p<0.001$). The effect is only small, though (Phi = 0.24). Unsurprisingly, this is – once again – due to a correlation with the reflexive: Over the 500-year period observed here, passive reflexives have never been possible. This means that the surge in reflexives has shrunk the passive's potential territory and thus led to its (imminent) extinction. Furthermore, contrary to our expectations, the passive had never fully conquered this territory: in all four periods around 50 per cent of non-reflexives are active (274 tokens = 61%, 124 tokens = 52%, 64 tokens = 37% and 5 tokens = 45% respectively). Thus we show that active non-

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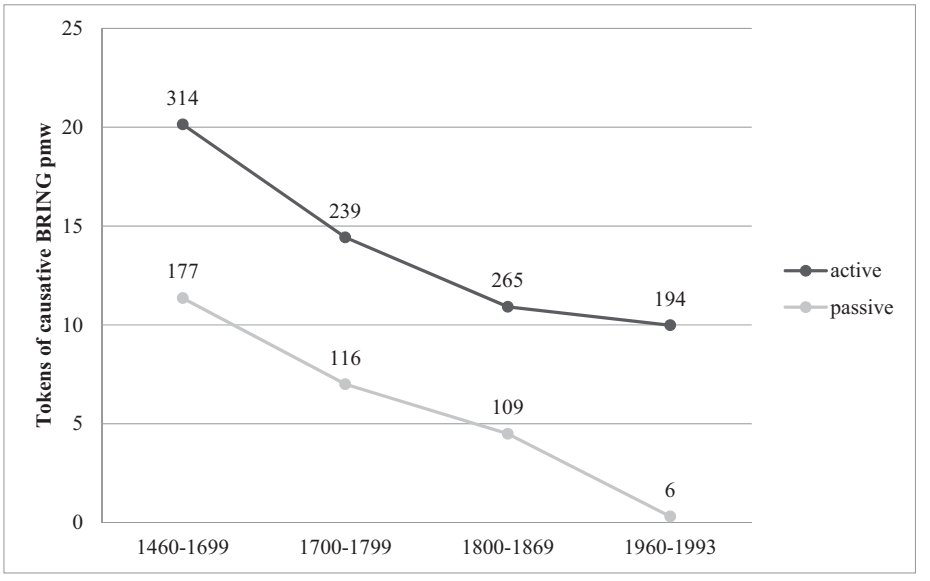


Figure 8. Influence of voice on the use of BRING$_{caus}$ + *to*-infinitive (n = 1,420)
Note: The curve displays the use of BRING$_{caus}$ pmw. Each data point is additionally labelled with the absolute number of data points.

reflexives were possible – they even constituted the majority form up to the eighteenth century – and further that the 'territory' of BRING$_{caus}$ has never been a space distributed between the reflexive and the passive.

4.3 Analysis of interactions and configurations

We are now interested in further interactions between these factors in order to find out whether there is a particular cluster of attributes which supports the use of BRING$_{caus}$. We have seen that not all transitivity factors have the same effect: while BRING$_{caus}$ thrives in some detransitive contexts, it is dying out fast in others. Therefore, if factors interact and BRING$_{caus}$'s modern niche is indeed characterised by a cluster of attributes, it is highly relevant to our research question whether these are *de*transitivising attributes.

Configural Frequency Analysis (CFA; Krauth & Lienert 1973; von Eye *et al.* 2010; Bortz & Schuster 2010: 148–50) is particularly well suited for this purpose. It tests whether the factors included in the analysis are independent of each other. However, instead of focusing on so-called 'global' effects, e.g. associations which hold across all four time spans, it searches for local effects, e.g. clusters of attributes which are significantly more common than expected in only one or two periods (called 'types') or which seem to be avoided ('antitypes'; von Eye *et al.* 2010: 1–3; Krauth & Lienert 1973: 25–7). This is accomplished with the help of an expanded chi-squared test based

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on the interactions between all factors. Contrary to regular chi-squared tests, we are not interested in the overall result, but in each configuration's contribution to chi square, which is separately tested for significance.

However, the data for a CFA have to fulfil the same criteria as data analysed with a chi-squared test. Therefore, the cautionary measure that at least 80 per cent of the frequencies in a contingency table have to be five or larger also applies (see Krauth & Lienert 1973: 53; Bortz & Schuster 2010: 150; Field *et al.* 2012: 818). The fully specified contingency table, including the factors animacy, modality, negation, finiteness, voice, reflexive and time period, has 256 cells. Yet 169 of these configurations never occur and a further 45 occur less than five times. These empty or near-empty cells can be split into two groups, empirical zeros and structural zeros (see von Eye *et al.* 2010: 42), and thus can be eliminated in different ways.

Empirical zeros are configurations which were never (or rarely) observed but are theoretically possible (see von Eye *et al.* 2010: 42). In our data, they result mostly from the scarcity of inanimate subjects (11.2 per cent) and non-finite verb phrases (8.6 per cent). Thus these two factors have low explanatory power and very small effects. Furthermore, they are partly epiphenomenal (as the decline in inanimates is mostly due to the take-over of the reflexive) and lead to empirical zeros. Therefore, animacy and finiteness will not be included in the CFA.

Structural zeros are configurations which were never observed because they are impossible. They may not only lead to too many empty cells in the configuration, but also skew the results in a more fundamental way: in a standard chi-squared test or CFA, we would calculate expected values for these cells knowing full well that we do not expect them to occur. Thus we would create an undesirable discrepancy between the statistical expectations and our linguistic expectations. This can be avoided by 'blanking out' those cells, i.e. excluding them from the model (see von Eye & Mair 2007: 5; von Eye *et al.* 2010: 42–3). Among the factors considered for the analysis of $\textsc{bring}_{\textsc{caus}}$, the configurations [PASSIVE, REFLEXIVE] and [NON-FINITE, PASSIVE] cannot occur and thus cause structural zeros. The latter is no longer an issue as we have already excluded finiteness from the analysis (as explained above) and the former will be blanked out.

Thus our analysis will be based on all 1,420 data points and include the following five factors: modality, negation, voice, reflexive and period. The resulting contingency table has 64 cells, of which 16 will be blanked out (i.e. all which have [PASSIVE, REFLEXIVE] as part of their specification). We will calculate CFA with the help of von Eye's script (von Eye 2000) and will report significant types after adjustment according to Holm's procedure (see von Eye & Mun 2008: 316; Gries 2009: 249).[13]

Table 4 shows all significant types as determined by the CFA specified above. These types should not be confused with the most frequent observations, though. Only configurations which occur significantly more often than expected are labelled types.

[13] The script unfortunately does not adjust the degrees of freedom and uses Bonferroni adjustment. As blanking out in this case corresponds to merging voice and reflexive to a ternary factor, the analysis was reproduced with the help of Gries' script for R (HCFA 3.2; Gries 2004, 2009: 248–52) to obtain Holm-adjusted *p*-values.

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Table 4. *Types based on a Configural Frequency Analysis ordered by period*

Modality	Negation	Voice	Reflexive	Period	Obs.	Exp.	Contrib. to χ^2	P (Holm-adj.)
NON-MODAL	AFFIRMATION	ACTIVE	NON-REFLEXIVE	1	195	42.6	546.1	<0.001
NON-MODAL	AFFIRMATION	PASSIVE	NON-REFLEXIVE	1	68	37.2	25.6	<0.001
NON-MODAL	AFFIRMATION	ACTIVE	NON-REFLEXIVE	2	83	30.8	88.7	<0.001
MODAL	NEGATION	ACTIVE	REFLEXIVE	2	56	27.2	30.6	<0.001
MODAL	AFFIRMATION	PASSIVE	NON-REFLEXIVE	2	62	41.6	9.9	<0.05
MODAL	NEGATION	ACTIVE	REFLEXIVE	3	112	28.6	242.8	<0.001
MODAL	NEGATION	ACTIVE	REFLEXIVE	4	133	15.3	904.7	<0.001

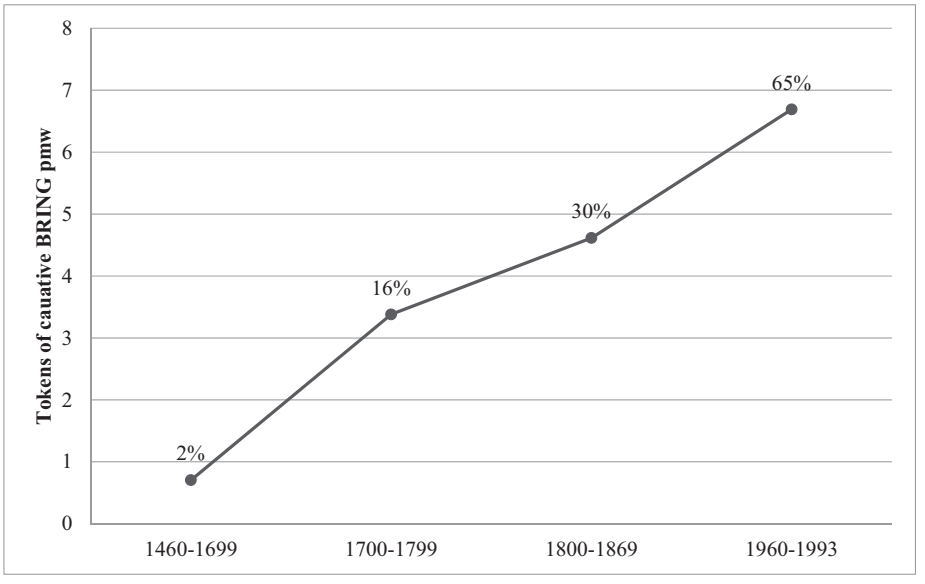


Figure 9. Use of [ANIMATE, MODAL, NEGATION, FINITE, ACTIVE, REFLEXIVE] $\text{BRING}_{\text{caus}}$ + *to*-infinitive (n = 1,420)
Note: The curve displays the use of $\text{BRING}_{\text{caus}}$ pmw. Each data point is additionally labelled with the absolute number of data points.

In line with section 4.2.1, non-reflexives turn out to be characteristic of the usage of $\text{BRING}_{\text{caus}}$ from the fifteenth to the eighteenth century, while reflexives take over from the nineteenth century onwards. For negation and modality, the same picture emerges: all but one of the types of the earlier centuries are [NON-MODAL, AFFIRMATION] constructions, while [MODAL, NEGATION] is characteristic of the last 200 years.

In terms of recurring types, we see that [NON-MODAL, AFFIRMATION, ACTIVE, NON-REFLEXIVE] constitutes a type in both the first and the second period. The (almost) completely opposite configuration, namely [MODAL, NEGATION, ACTIVE, REFLEXIVE],

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first emerges as a type in the eighteenth century and from the nineteenth century onwards constitutes the only significant type.

These findings suggest that BRING$_{caus}$ is specialising to [MODAL, NEGATION, REFLEXIVE]. Except for four tokens, all of these are additionally characterised by the attributes [ANIMATE, FINITE]; thus the construction is actually specialising to [ANIMATE, MODAL, NEGATION, FINITE, ACTIVE, REFLEXIVE]. Figure 9 provides further evidence of this process. Further research will have to show whether this is a consolidation process or an intermediary stage on the way to dying out.

5 Discussion and conclusion: the role of transitivity in language change

The present article analysed the decline of BRING$_{caus}$ and investigated the question whether Moderate Transitivity Contexts (MTCs) constitute niches in which this recessive verb survives. We showed that overall BRING$_{caus}$ is on the decline, but it specialises to certain contexts, i.e. those with animate subjects, reflexive objects and modal, negated, finite, active verb phrases. Of the six parameters describing this niche, MODAL, NEGATION and REFLEXIVE are detransitivising factors, i.e. they reduce 'the effectiveness with which the verbal action takes place' (Hopper & Thompson 1980: 251). We are thus dealing with an MTC. That BRING$_{caus}$ is also retained with the other three parameters [ANIMATE, FINITE, ACTIVE] is surprising at first sight, since they are associated with high rather than moderate transitivity. However, on closer inspection it turns out that these three strategies for detransitivisation cannot be used because they are ruled out by the dominant reflexive for three reasons. Firstly, reflexives semantically gravitate towards volitional subjects, which means that inanimates are dispreferred. Therefore, detransitivisation by means of modulating animacy is not an option for BRING$_{caus}$. Secondly, reflexives are knock-out contexts for passives. And, thirdly, non-finite reflexives are rare in our data, for no obvious grammatical or semantic reason.

The restriction to reflexive contexts could at first sight be explained by a division of labour between BRING$_{caus}$ and BRING$_{non\text{-}caus}$, which avoids ambiguity as it exists in German, see (42) and (43).

(42) […], sollten sich die maßgeblichen Politiker für Frühförderung überlegen, wie **Kinder zum Spielen gebracht werden können** […]. (http://liga-kind.de/fk-309-streeck-fischer/; accessed 2 June 2016) BRINGEN$_{caus}$
'[…], politicians in charge of early learning should consider how **we can get children to play** […].'

(43) Zur Kita mussten die Kinder über eine Bundesstraße […], so dass **die Kinder zum Spielen gebracht werden mussten,** […]. (www.eltern.de/foren/2005-plauderforum-neu/848238-noch-ne-frage-zur-selbstaendigkeit-kinder-3.html; accessed 2 June 2016) BRINGEN$_{non\text{-}caus}$
'To reach the nursery, children had to cross a main road […], so that **children had to be brought to play dates** [by car], […].'

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Thus we could describe the reflexive as a support factor reducing processing complexity. This argument, however, cannot explain the [MODAL, NEGATION, REFLEXIVE] cluster, as BRING$_{\text{non-caus}}$ also occurs in negated and modal constructions. This lends support to the assumption that – at least in the case of BRING$_{\text{caus}}$ – MTCs serve as a refuge for a recessive and possibly dying verb sense. This use of MTCs with BRING$_{\text{caus}}$ can be related to a series of (de-)transitivisation processes observed for weakly established verbs or verb senses (see e.g. Hundt 2007; Rohdenburg 2009, 2014a, b; Mondorf 2010, 2011, 2016; Eitelmann & Mondorf 2015; Schneider & Mondorf 2015). Similar to BRING$_{\text{caus}}$ they make use of MTCs as a support strategy for waxing and waning constructions. This opens up promising avenues for further research measuring the modulation of transitivity in accordance with the changing entrenchment of verbs or verb senses.

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