The growth of the transitivising Reaction Object Construction

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This paper explores the growth of the Reaction Object Construction (ROC) as in *Pauline smiled her thanks*, offering new insights into its characterisation and historical development from the perspective of Construction Grammar (Goldberg 1995, 2006, 2019) and its application to patterns of language change (Hilpert 2013; Traugott & Trousdale 2013). It is argued that the modern ROC qualifies as a traditional form-meaning pairing and, at a deeper level, as a polysemous construction that follows the path of development of other transitivising constructions such as the *way*-construction (Israel 1996), and of processes of constructionalisation in general. Once the ROC imposes a coreferential constraint on its object argument, acquiring in this way its status as a form-meaning pairing over the Early Modern English period (1500-1700), the construction increases its productivity and schematicity; at the same time it decreases its compositionality since the link between the form/syntax and the overall meaning of the construction becomes less transparent, as in *The door jingled a welcome*. The ROC can thus be argued to be part and result of a broader development in the grammar of English, namely the historical trend towards transitivisation.

Keywords: Reaction Object Construction, transitivising construction, polysemous construction, constructionalisation, history of English

1. Introduction

The label *Reaction Object Construction* (henceforth ROC) was coined by Levin (1993) in her influential monograph *English verb classes and alternations* and is applied to structures such as those in (1) and (2). They involve an (originally) intransitive verb of nonverbal expression or manner of speaking followed by a non-prototypical object that expresses a reaction or an emotion of some kind (e.g. *thanks* and *adoration*) such that the whole syntactic unit acquires the overall extended meaning 'express X by V-ing', that is 'Pauline expressed her thanks by smiling', 'She expressed her adoration by mumbling', etc. [1]

(1) Pauline **smiled** her thanks.[2] (Levin 1993: 98)
(2) She **mumbled** her adoration. (Levin 1993: 98)

The two meanings of the object just mentioned (i.e. reaction or emotion) cannot always be easily distinguished from each other. In fact, not all authors agree on a pure reactive interpretation of the reaction object (henceforth RO), and consider this label a misnomer (Martínez-Vázquez 2014; Mirto 2017). For instance, the RO *adoration* in (2) can be interpreted as more than a reaction, as "an emotional attitude with a possible longer extension over time" (Martínez-Vázquez 2014: 172), as in the closely related paraphrase 'She mumbled that she adores her (and has always adored her)'. As for the overall extended meaning of the construction ('express X by V-ing'), this can cover the two main possible interpretations of the ROC, namely means and manner, as will be discussed in section 2.4; it will be argued that the manner interpretation, where the verb indicates the manner in which a reaction or an emotion is expressed as in the examples of ROCs just given, is the primary or basic sense.

[1] For a detailed analysis of the non-prototypical features of ROs, and other related object types, see Bouso (2014).

[2] Examples are my own unless otherwise stated. In all examples, the verb is in bold type and the RO is underlined. Additional constituents and other elements (e.g. SENTIENT AGENT, RECIPIENT, GOAL, STIMULUS, etc.) are underlined only when needed for explanatory reasons.

As can be inferred from the definition just given and the examples of the ROC in (1) and (2), the ROC inherently involves a process of *transitivisation* whereby an original monovalent argument structure (with *smile* and *mumble* in the two examples above) is expanded through the addition of a non-prototypical object that has an emotional meaning attached to it, namely the coreferential objects *thanks* and *adoration*. Although transitivisation processes are certainly not exclusive to English — van Gelderen (2011: 113) mentions a common transitivising trend in Mongolian and Indonesian —, transitivising structures like the ROC or the by now well-known *way*-construction are not possible in all languages (Aldezabal, Aranzabe, Atutxa, & Lersundi 2002; Horrocks & Stavrou 2010; Khan 1994; Levin & Rapoport 1988; Mateu 2012, among others). As a matter of fact, one important feature of the English language that sets it apart from other languages and, in particular, from those belonging to the Germanic branch is that it has undergone a considerable process of transitivisation over the course of its history. In broad terms, the core defining feature of the phenomenon of transitivisation is that the number of *amphibious* verbs, also known as *labile* verbs, that is, verbs that can be used transitively and intransitively with no morphological marking (McMillion 2006) is nowadays much larger than it was in Old English (henceforth OE). Visser (1963-73: I, §132), more concretely, mentions that the number of amphibious verbs increased from 55 in OE to 506 in Modern English (henceforth ModE), whereas the numerous intransitives in OE (Visser mentions 223), or verbs that never occur with a direct, an indirect, a prepositional or a causative object dwindled to little more than 20 (van Gelderen 2018). Visser in this regard explains that this large process of transitivisation mainly affected originally intransitive verbs of motion such as *climb* and *run*, and verbs of gestures and sound emission such as *laugh*, *weep*, *bellow*, *crow*, *groan*, *grunt*, *lisp*, *neigh*, *stammer*, *whisper* and *whistle*. Jespersen, on his part, though he does not provide any figures, agrees with Visser in also recognising the large process of transitivisation undergone by the English language (Jespersen 1909-49, III, §16.1$_7$: 324).

For the sake of clarification, and before proceeding any further, the terms *transitive* and *intransitive*, and the concept of *transitivity* itself are understood in this paper basically as in Visser (1963-73) and Liu (2008). For OE and Present Day English (henceforth PDE) respectively, these two scholars distinguish four types of intransitive verbs in order of decreasing intransitivity, with Type [I] being the most prototypically intransitive and Type [IV] the least prototypically intransitive. Type [I], referred to as "self-sufficient intransitive verbs" by Visser and "pure intransitive verbs" by Liu, concerns verbs such as *vanish* (Bosworth & Toller; henceforth B&T, s.v. *for-dwīnan*) and *sleep* (B&T, s.v. *slǣpan*), which are verbs that are never construed with either "a direct, an indirect, a prepositional or a causative object" (Visser 1963-73, I, §129: 97). Visser's Type [II] alludes to those amphibious (labile) verbs mentioned earlier, that is, verbs that can be used transitively and intransitively with no morphological marking. These roughly correspond to those Liu calls "ergative intransitive verbs", such as PDE *break* in the monovalent structure *The window* ***broke*** and the bivalent structure *They* ***broke*** *the window*. Visser's Type [III] involves intransitive verbs construed with an indirect object (in the dative as in OE *hit me-DAT ne deraþ* > PDE "it shall not *hurt me*") or with a causative object (in the genitive as in OE *he giornade friðes-GEN* > PDE "he *yearned for peace*").[3] Finally, Visser's Type [IV] corresponds to Liu's "object deleting transitive verbs" which are transitive verbs used without the direct object they normally require mainly because this is easily retrievable from the discourse or situational context. An example would be the verb *ask* in *Zam, what have you been up to? - Don't ask* where the omitted object (i.e. *what have you been up to*) is easily inferable from the discourse.

Despite being such a large-scale and well-known phenomenon in English (Jespersen 1909-49; van Gelderen 2011, 2018; Visser 1963-73), the number of studies touching upon the transitivisation process is nevertheless far from extensive (García García 2012; Kulikov 2010; Kulikov & Lavidas 2014; McMillion 2006). To the best of my knowledge, the most

[3] Translation and example provided by B&T's *An Anglo-Saxon Dictionary* (s.v. *derian*).

comprehensive approaches to this area of research are van Gelderen 2011 and 2018 (chapters 3-4), where she analyses Visser's lists of OE self-sufficient intransitive and amphibious verbs to confirm his claim that in OE the former were far more common than the latter.

As already mentioned, ROCs inherently involve a process of transitivisation, a feature that makes them part of this phenomenon. Yet the construction has received very little attention to date, whether synchronically or diachronically. From a synchronic perspective the studies by Martínez-Vázquez (1998, 2010), Omuro (1997), Ross (1970), Kogusuri (2009, 2011) and Bouso (2012, 2014) are some that can be mentioned here; they primarily focus on the frequency and the morphosyntactic and semantic properties of the ROC in PDE. More scanty is the research carried out on the ROC from a diachronic perspective, since only Jespersen (1909-49), Poutsma (1926) and Visser (1963-73) mention ROCs at all in their monumental historical grammars, and this just in passing. To them can be added Bouso (2017), which is a preliminary study on the history of the ROC based on *The Corpus of Late Modern English Texts, version 3.0* (CLMET3.0; De Smet, Diller, & Tyrkkö 2013), where the ROC is shown to increase its type and token frequency over the course of the Late Modern English period (henceforth LModE). Finally, Bouso (2018) also looks at the diachrony of the ROC, but the new insights offered in the present paper go well beyond those expounded in the two earlier analyses in that here I delve further into (i) the characterisation of the ROC as a polysemous construction, (ii) its overall diachronic distribution across RO subtypes, and (iii) the major implications of such constructional change for a comprehensive account of the history of the ROC.

In view of the above observations, the aim of this article is to build on previous work and provide new light on the characterisation and historical development of the ROC from the perspective of Construction Grammar (Goldberg 1995, 2006, 2019) and its application to patterns of language change (Hilpert 2013; Traugott & Trousdale 2013). More precisely, this article seeks to address the following research questions:

(i) What changes in distribution *across verbs* and *ROs* can we identify in the historical development of the ROC? What do these "constructional changes", to use Hilpert's label (2013), reveal about its history?

(ii) Based on the historical data collected, does the ROC follow the path of development of other transitivising constructions such as the *way*-construction (Israel 1996), the dummy *it* object construction (*Snake legs it to freedom*; Mondorf 2016), or the aspectual cognate object construction (*To die a death*; Lavidas 2014, 2018), and, more generally, the pathway that is characteristic of processes of constructionalisation (Traugott & Trousdale 2013: 112-127)?

The remainder of the article is organised as follows. Section 2 begins with a detailed characterisation of the ROC; I first provide a working definition of the construction as a traditional form-meaning pairing. Then I describe the subtypes of ROs as well as the two subtypes of ROCs identified in the literature and in my own LModE and PDE data, and finally, argue for the consideration of the ROC as a polysemous construction in PDE, which is associated with a means, a manner and a possible, but quite infrequent co-occurrence interpretation. In section 3, I describe the historical data sources and methodology employed in the diachronic study. Section 4 discusses the growth of the ROC paying special attention to changes in its diachronic distribution and path of development. The concluding section summarises the main results.

2. Characterisation of the ROC

2.1. Definition: the ROC as a form-meaning pairing

The ROC is a *transitivising* construction in that the originally intransitive verbs involved in the pattern (e.g. *smile* and *mumble* in (1) and (2)) undergo a process of transitivisation or argument

augmentation, taking a Noun Phrase (NP) object.[4] Through this process, the verbs take on the extended sense 'express/communicate/signal a reaction or an attitude by V-ing', as in 'Pauline expressed her thanks by smiling' (1), 'She communicated her adoration by mumbling' (2), and 'The door signaled a welcome by jingling' or 'The lights of the house signaled their welcome by shining' in the more recent and metaphorical examples in (3) and (4):

(3) The door **jingled** a welcome. (COCA 2017)
(4) The lights of the house **shone** their welcome. (COCA 2011, cited in Martínez-Vázquez 2015: 168).

Modern ROCs have therefore an unusual syntax ($SUBJ_i$ [V_{INTR} OBJ_i]) and lack compositionality as their overall meaning ('express/communicate/signal a reaction or an attitude by V-ing') is not strictly predictable from their component parts. The verbs involved in the construction are originally intransitive and they do not have an expressive/communicative meaning as their core sense. The two features of the ROC just described allow us to characterise this pattern as a form-meaning pairing, that is, as a *construction* in the Goldbergian sense:

> C is a CONSTRUCTION iff_{def} C is a form-meaning pair $<F_i, S_i>$ such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions.[5] (Goldberg 1995: 4)

[4] As we shall see throughout this article, even the earliest verbs attested in the construction in my historical data (*moan*, *clap*, *weep*, *laugh*, *wave* and *nod*) can be treated as historically intransitive verbs (cf. Visser's classification of OE intransitives in section 1; and Visser 1963-73, I, §§132-144).

[5] In Goldberg's text, F stands for 'form' and S for 'semantics'. In addition to the classical definition of construction, in later versions of the theory regularities between form and meaning are also considered constructions, even if they are fully compositional, "as long as they occur with sufficient frequency" (Goldberg 2006: 5). Besides frequency, Goldberg (2019) emphasizes the role of context in the emergence of constructions: "constructions are understood to be emergent clusters of lossy memory traces that are aligned within our high- (hyper!) dimensional conceptual space on the basis of shared form, function, and

The modern ROC thus qualifies as an *idiom*, and more specifically, as a linguistic expression that is halfway between the more flexible "Idiomatically Combining Expressions" (ICEs) and the more fixed "Idiomatic Phrases" (IPs) identified by Nunberg, Sag, and Wasow (1994) in their widely cited paper on English idioms. This is evinced by the fact that some ROCs are flexible enough to allow adjectival modification, such as *almost involuntary* in example (5); on the other hand, similarly to more fixed IPs, ROCs do not generally allow quantification (6), topicalisation (7), or pronominalisation (8).

(5) Lewis had **nodded** an almost involuntary agreement. (Mirto 2017; slightly modified)
(6) *George **nodded** agreements.
(7) *Agreement, John **nodded** (Omuro 1997: 822)
(8) *George **nodded** agreement, so I nodded *it*, too (Kogusuri 2009: 36)

2.2. Subtypes of ROs: delocutive, deverbal illocutionary and predicative expressive nouns

As for the RO itself, ROs have been defined as "expressive speech acts resulting from a gesture or a sound performed by the subject of the construction, who expresses a mental state towards an antecedent event" (Martínez-Vázquez 2015: 152). Martínez-Vázquez (2010, 2014, 2015) distinguishes three subtypes of ROs based on their own unique morphosyntactic and semantic properties: *delocutive nouns*, *deverbal illocutionary nouns* and *predicative expressive nouns (attitudinal nouns)*. These are described and exemplified in the following sections.

2.2.1. Delocutive nouns

Delocutive nouns derive from locutions or "independent utterances associated with specific conventional situations" (Martínez-Vázquez 2015: 153). They include interjections such as *ahoy!* and *hurrah!*, and routines or formulae such as *thanks* (see example (1)), *welcome* (see

contextual dimensions" (Goldberg 2019: 7). Regarding the role of context, it should be noted that Bouso (2017) on the basis of historical data from the CLMET3.0 provides some evidence for the role played by the novel in the development of the ROC.

examples (3) and (4)) and *farewell*.[6] As explained by Ameka (1992: 109-110), the main difference between these two types of locutions is that interjections are spontaneous responses to situations not necessarily addressed to specific people, whereas routines or formulae are intentional reactions and are always addressee-oriented.

2.2.2. Deverbal illocutionary nouns

The second subtype of RO derives from speech act verbs such as *agree* (*agreement*), *approve* (*approval*) and *disapprove* (*disapproval*) in examples (9), (10) and (11). Deverbal illocutionary nouns describe individual acts performed by the subject of the construction; for instance, in example (9), Linda winked and *agreed*. These individual acts are "interpreted as a decision or declaration made by the speaker, or expresser, in response to a previous situation" (Martínez-Vázquez 2015: 154) and most naturally require a manner rather than a means or co-occurrence interpretation (see section 2.4). Like other routines or formulae they are addressee-oriented.

(9) Linda **winked** her agreement. (Levin 1993: 220)
(OED, s.v. *agree*, v.)

(10) The audience **roared** their approval. (Martínez-Vázquez 2014: 176)
(OED, s.v. *approve*, v.[1])

(11) Pigs **squeal** emphatic disapproval. (OED, s.v. *squeal*, v. 4)
(OED, s.v. *disapprove*, v.)

2.2.3. Predicative expressive nouns (or attitudinal nouns)

The third (and last) subtype of RO identified by Martínez-Vázquez (2015) is that of predicative expressive nouns, also referred to as attitudinal nouns by the same author (Martínez-Vázquez 2014). ROs of this third type can be either positive (e.g. *delight*) or negative (e.g. *confusion*,

[6] The RO *hurrah* in such structures may well be part of an indirect speech passage. Following Martínez-Vázquez (2015) and Bouso (2018), the ROC can be treated as a complex indirect speech construction, that is, a subtype of indirect speech construction characterised by the presence of a simple NP rather than the usual *that*-clause of indirect speech constructions (Huddleston & Pullum 2002: 1023).

disappointment, *anger*, *discontent* and *disdain*) and are never introduced by an indefinite article (see (12)). Since they mostly "denote solitary situations" (Martínez-Vázquez 2015: 161), they do not usually allow the presence of overt RECIPIENTS (see (13)). The insertion of a GOAL (see (14)), a STIMULUS (see (15)), or a LOCATION (see (16)) in the form of a Prepositional Phrase (PP) is nevertheless sometimes possible.

(12) *Beth was **frowning** a confusion. [no indefinite article]
(13) *Beth was **frowning** me-RECIPIENT her confusion. [no overt RECIPIENTS]
(14) Mistress Grofe sat at her end of the table and **glared** her anger at all of us-GOAL. (Martínez-Vázquez 2015: 160)
(15) Max **chuckled** his delight at her ingenuity-STIMULUS. (Martínez-Vázquez 2010: 559)
(16) Dumouriez, conquering Holland, **growls** ominous discontent, at the head of Armies-LOCATION. (CLMET3.0 1837, Carlyle; *The French Revolution*)

The boundary between these three types of ROs is not so clear-cut as it may appear. For instance, *welcome* may also be treated as a deverbal illocutionary noun (OED, s.v. *welcome*, v.[1]), but here it is classified as a delocutive noun mainly because deverbal illocutionary nouns cannot occur on their own. Finally, as we shall see later on in Table 2 (section 4.1.2), the third subtype of RO (i.e. that of predicative expressive nouns) is quite broad and heterogeneous and it is precisely for this reason that the exact identification of its morphosyntactic properties may pose problems.

2.3. Subtypes of ROCs: a monotransitive and a ditransitive ROC

In my historical data, I was able to identify two subtypes of ROCs, a monotransitive ROC subtype and a ditransitive ROC subtype. The monotransitive ROC subtype exalts the release of "a strong or repressed feeling" (Martínez-Vázquez 2015: 161-162) and involves two participants. One is the EXPERIENCER or SENTIENT AGENT, and the other one is the CAUSE/SOURCE (i.e. the RO), which is an emotion or mental state that leads the EXPERIENCER to assume a particular facial expression (*glare* in (14)), or emit a particular sound (*chuckle*, *growl*, and *whistle*) in examples (15) and (16) above, and (17).

(17) The first train-SENTIENT AGENT had crawled over the new bridge, and stood **whistling** its triumph-SOURCE [no overt RECIPIENT] in the station.

(CLMET3.0 1920, Bagnold; *The Happy Foreigner*)

The ditransitive ROC subtype, on the other hand, rather than highlighting the release of a strong or repressed feeling foregrounds the transfer of an expressive message from an EXPERIENCER to a RECIPIENT, and involves three participants: an EXPERIENCER or SENTIENT AGENT, a THEME or emotional response (i.e. the RO), and an intended RECIPIENT, which is sometimes covert, but easily retrievable from the context. This second subtype is mainly associated with routines and formulae (e.g. *thanks*, *welcome*, *farewell*, and *goodbye* in (18)) and deverbal illocutionary nouns (e.g. *agreement*, *approval*, *disapproval* and *acquiescence*) which, as previously mentioned, are always addressee-oriented.

(18) Paul-SENTIENT AGENT **kissed** her-RECIPIENT goodbye-THEME. (Martínez-Vázquez 2010: 559; slightly modified)

2.4 The ROC as a polysemous construction with a means and a manner interpretation

In (19) I propose a schematic representation for the ROC. This is partly based on Traugott & Trousdale (2013)'s formalism for the *way*-construction (see (20)), which involves a *way*-object preceded by a possessive (POSS) coreferential with the subject and followed by a directional complement (DIR).[7]

(19) *Syntax*: $SUBJ_i$ [$V_{INTRmanner/means}$ (OBJ1) $OBJ2_i$]. Where OBJ2 = $(POSS)_i$ NP

Semantics: 'Sentient $agent_i$ cause Y_i become expressed **while/by**$_{manner/means}$ doing V'

(20) [[$SUBJ_i$ [V $POSS_i$ *way*] DIR] ↔ ['SEM_i traverse the path PP **while/by** doing V']]

The proposed schema for the ROC in (19) aims to accommodate the subtypes of ROs or expressive speech acts described in section 2.2 as well as the two subtypes of ROCs described in section 2.3; it shows that the higher subject is a SENTIENT AGENT, OBJ2 is the RO proper ─an

[7] Since the DIR(ECTIONAL) is obligatory in the construction I have omitted the parentheses present in the original.

emotional object of result which is coreferential with the subject─, and OBJ1 represents the RECIPIENT, which, as previously seen, is not always explicit. Finally, V is an intransitive verb that codes either means or manner.

As can be seen in (20), apart from the formal features of the *way*-construction already mentioned, Traugott and Trousdale's schematic representation of the *way*-construction shows that despite the fact that the core semantics of the construction entails the movement of the subject referent along a path towards a specific goal, the *way*-construction certainly qualifies as a polysemous construction in that it holds a number of semantic extensions, interpretations, 'threads', subschemas or senses which were gradually acquired by the source construction. Jackendoff (1990) and Goldberg (1995) already noticed the polysemy of the construction when they distinguished between (i) the *means* interpretation, represented in (20) via the preposition *by*, and (ii) the *manner* interpretation, represented via the preposition *while*. More recently, Traugott and Trousdale (2013) and Perek (2016, 2018), on the basis of additional diachronic data from an array of supplementary historical sources, delve once again into the polysemous nature of the modern *way*-construction and propose a three-fold classification of the construction distinguishing: (i) a means subschema (also referred to by these linguists as causative path-creation subschema or path-creation sense), (ii) a manner subschema (also referred to as intransitive motion subschema), and (iii) a co-occurrence subschema (also referred as non-causative accompanying activity subschema or simply incidental-action sense). As will be shown later on, this three-fold classification of the polysemous character of the *way*-construction proposed by Traugott and Trousdale (2013) and Perek (2018) can, quite crucially, be also applied to other transitivising constructions, and in particular to my overall historical data on the ROC. For illustrative purposes, these subschemas or senses of the *way*-construction, with corresponding prototypical examples, will be described in detail and compared with those identified for the ROC.

In the means subschema of the *way*-construction, "the verb refers to the means whereby the 'path' is created" (Perek 2018: 69). This is the case for the verbs *hack*, *talk* and *bribe* in the *way*-constructions illustrated in (21) – (22) from Perek (2018: 68).

(21) [F]armers […] were beginning to **hack** their way through primeval forests. (literal)

(22) [W]e **talked** our way into the VIP area. (abstract)

(23) They […] **bribed** their way into city government. (metaphorical)

As specified in parentheses, in these examples the creation of the path may be: literal with the actual removal of physical obstacles (21), more abstract (22), or even metaphorical, as in (23), "where an institution (*city government*) is construed as a container, and becoming a member of this institution as motion into this container" (Perek 2018: 69). The means subschema of the *way*-construction is considered by many as the primary or basic sense of this construction. For instance, Goldberg notes that "the most common interpretation of this construction involves motion through a crowd, mass, obstacle, or other difficulty ─that is, there is some reason why a path needs to be created" (1995: 204). Traugott and Trousdale (2013) also provide support for the primary role of the means interpretation of the *way*-construction by dating its constructionalisation back to Early Modern English (henceforth EModE) (1500-1700) when it expands to verbs of obstruction such as *fight*, *battle*, *force*, *push*, *drag* and *dig* which are verbs that naturally require a means interpretation, i.e. "motion through a crowd, mass, obstacle, or other difficulty" (Goldberg 1995: 204). Finally, Perek (2018: 73) demonstrates that this is by far the most frequent subschema of the *way*-construction at all times in his American English data covering the 19th to 21st centuries.

Similarly to the *way*-construction, in the ROC in the means subschema the verb describes the means whereby a reaction or an emotion is expressed. This is clearly the case of the low frequency verb of gesture *glare*, the modern verbs of sound emission *squeal* (*around* 1300) and *jingle* (*circa* 1405) and the verb of light emission *shine* in examples (3), (4), (11) and (14), repeated here in (24) – (27) for convenience. While in examples (24) and (25) the

manifestation of the emotion is literal with the actual expression of a reaction or an emotion (i.e. *anger* and *disapproval*) by means of the action denoted by the verbs (i.e. *glare* and *squeal*, respectively), in (26) and (27) the expression of the reaction is more abstract, even metaphorical with two inanimates (i.e. *the door* and *the lights of the house*) being used as conveyors of an emotion of welcoming (i.e. *welcome*). Despite all these similarities with the *way*-construction, as already noted in the introduction (section 1), the ROC differs from the *way* construction in that its primary or basic sense is clearly not the means subschema but rather the manner subschema as in *Pauline smiled her thanks*, quoted as (1) at the beginning of this paper.

(24) Mistress Grofe sat at her end of the table and **glared** her anger at all of us. (COCA 1990; cited in Martínez-Vázquez 2015: 160)

(25) Pigs **squeal** emphatic disapproval. (1871, OED, s.v. *squeal*, v. 4)

(26) The door **jingled** a welcome. (COCA 2017)

(27) The lights of the house **shone** their welcome. (COCA 2011; cited in Martínez-Vázquez 2015: 168).

The manner subschema of the *way*-construction is exemplified by manner of motion verbs such as *stumble* in (28) where the verb indicates "the manner in which motion is performed" (Perek 2018: 69; cf. also Irsael 1996: 222).

(28) He **stumbled** his way to the back of the room. (Perek 2018: 68)

According to Traugott and Trousdale (2013) manner of motion verbs such as *worm* only start to enter the *way*-construction in the 18th century via analogisation with verbs of obstruction (i.e. *fight*, *force* and *dig*) whose semantics "involves some implied accompanying manner of action" (Traugott & Trousdale 2013: 86). Fanego (2019) justifies the subsidiary role of the manner subschema in the *way*-construction by demonstrating how this construction type is interconnected with the Intransitive Motion Construction (henceforth IMC). While the IMC specialised in the expression of manner of motion (e.g. *He **walked** into the room*), the *way*-

construction "specialised in the expression of those relations which could not be readily coded in the IMC, such as means of motion and incidental activity" (Fanego 2019: 671).

Moving on now to the ROC, as already hinted at in section 1, this transitivising construction is also endowed with a manner subschema where the verb this time indicates the manner in which a reaction or an emotion is expressed, as in examples of the ROC, such as (1) and (2) above, that involve the manner of action verbs *smile* and *mumble*. Contrary to the *way*-construction, the manner subschema seems to be the most important for the historical development of the ROC, as suggested by the data in Bouso (2017), where I showed that the most strongly attracted verbs to the LModE ROC are the manner of action verbs *mutter*, *murmur*, *smile*, *nod*, *whisper*, *shout* and *wave*. Instances like those in (24) – (27), which require a means interpretation, are by contrast a more recent feature, associated with 20th and 21st century English (Bouso 2017; Martínez-Vázquez 2015).

Finally, the third subschema of both the *way*-construction and the ROC is the co-occurrence subschema which despite being the most productive sense of the *way*-construction is the least frequent of the three, in terms of tokens, types and hapax legomena (one occurrences) (Perek 2018; Traugott & Trousdale 2013). The co-occurrence subschema or incidental action sense of the *way*-construction is exemplified in (28) and (29) where "the action described by the verb [i.e. *whistling* and *shooting*] merely occurs concomitantly with motion, but is not directly related to it, let alone causes or enables it as in the path-creation interpretation" (Perek 2018: 69).

(28) He **whistled** his way across the room. (= *he went across the room whistling*) (Perek 2016)

(29) and **shot** my way home the next day; having… equally divided the game between the three (1820-2 Hunt, *Memoirs of Henry Hunt* [CL 2]; cited in Traugott & Trousdale 2013: 87)

According to Traugott and Trousdale (2013), in the *way*-construction, the accompanying or simultaneous action may be volitional or accidental (2013: 87). This is shown in (28) - (29) and (30) respectively, where the actions of *whistling* and *shooting* are volitional, while the action of *plashing* is clearly accidental. In Traugott and Trousdale's words, "*plash* (…) is not volitional and therefore intended, light splashing is an inevitable accompaniment of a steamer in motion" (2013: 87).

(30) The steamer … **plashed** its way forward. (1842 Borrow, *Bible in Spain* [CL 2]; cited in Traugott & Trousdale 2013: 87)

In the case of the ROC, the co-occurrence subschema is exemplified in (31) where, as in the *way*-construction, the action described by the verb (i.e. *pant*) simply occurs concomitantly with the expression of a reaction or an emotion (i.e. 'half breathless the reeking post expressed his salutations panting'). As with the verbs involved in the incidental-action sense of the *way*-construction, the very few verbs involved in the co-occurrence subschema of the ROC are not directly related to the expression of the reaction itself, let alone cause or enable it as in the means or the manner subschemas of the ROC. Finally, similarly to the *way*-construction, this subschema of the ROC is the least frequent of the three described here. In fact, to date the clearest example in my historical data of this interpretation of the ROC is example (31) from Shakespeare's *King Lear*, which involves the bodily process verb *pant*; the scarcity of clear examples suggests that this sense of the ROC is mostly unproductive.

(31) **1608** W. SHAKESPEARE *King Lear* vii. 210 Came there a reeking Post,..halfe breathles, **panting [1623 painting]** forth From Gonorill his mistris, salutations. (OED, s.v. *pant*, v. 4 trans.).

3. Data sources and methodology

In order to answer the research questions put forward in section 1 regarding the historical development of the ROC, I first compiled a list of 645 verbs which have been affected by

changes in transitivisation throughout the history of English. These 645 verbs come from Jespersen (1909-49), Visser (1963-73) and Levin (1993) and belong to different time periods of the history of the English language. As will be seen in section 4.1.1 (Table 1 and Figure 2), some of these 645 verbs go back to the OE period, others to Middle English (henceforth ME) and some to the EModE and LModE periods. This means that the starting point of the analysis is not a fixed or pre-established historical timespan (OE, for instance) but varies depending on the date of attestation of each individual verb in the English language.

The second step in my investigation consisted in making use of the OED to check the date of attestation of each of the 645 verbs in my list (e.g. *a*1325 in the case of *moan*), as well as the sense(s) assigned to that date (e.g. in the case of *moan* '1. transitive. a. To complain of, lament; to bemoan, bewail. Now rare.'). In subsequent steps, I went through the many different senses and quotations of these verbs with the aim of identifying their earliest attestation with a RO. Only those objects that complied with the features of ROs as described in section 2.2 were considered for further analysis.

From previous research (Bouso 2017), we know that two of the most prototypical verbs of the LModE ROC (1710-1920) are *wave* and *nod* (collostructional strength = $p > 0.001$). Yet, since no instances of ROCs for these verbs were attested prior to the 18th century in the historical materials initially selected, i.e., Jespersen (1909-49), Visser (1963-73) and the OED (for details, see Figures 1 and 2 in section 4.1.2), additional searches were conducted in the *Early English Books Online Corpus 1.0* (1474-1700; EEBOCorp 1.0; around 525 million words) (Petré 2013, 2016) using the following search strings: '\bway?ve?s?([ei']d)?([iy]ng(e)?)?\b' and '\bnodd?s?([ei']d)?([iy]ng(e)?)?\b'. These searches yielded a total of 8,812 tokens and 1,837 tokens for the verbs *wave* and *nod*, respectively, which were then manually filtered.

As we shall see in section 4.2, the role of these two verbs of gestures in the historical development of the ROC turns out to be particularly relevant not only because they are among

the seven most highly attracted collexemes of the ROC over LModE (Bouso 2017) ─ which turns them into the prototypes of the ROC─ but also because, quite crucially, they seem to have been responsible for the imposition of the coreferential constraint (*Pauline$_i$ nodded her$_i$ approval*) on the construction over the EModE period. Such a constraint, as already noted in Bouso (2014, 2017), is also an intrinsic feature of the *way*-construction and seems to be ultimately responsible for the shared properties of these and other transitivising constructions.

4. The growth of the ROC

The searches conducted in the OED, as described in the preceding section, revealed that only 62 out of the initial list of 645 verbs investigated occur in fact in the ROC, that is, with one of the RO subtypes described in section 2.2. To these 62 ROC verbs seven more should be added since despite not being attested in the ROC in the OED they are certainly found in ROCs in Jespersen's data (1909-49), namely the verbs *beam*, *bow*, *dance*, *gesticulate*, *kiss*, *pat*, and *stare*. The total number of verbs attested in the ROC in my historical material is therefore 69. Their distribution across centuries is shown in Table 1.

4.1. Distribution

4.1.1. Distribution across verbs: From less to more intransitive-like verbs

As shown in Table 1, the vast majority of the verbs identified in the ROC (whether in modern times or earlier) are classified by the OED editors as originally intransitive, that is, as self-sufficient intransitives or pure intransitives, in terms of Visser and Liu's taxonomies of intransitives outlined in section 1. There is also, however, a small group of ROC verbs which are quite old and marked as originally transitive by the OED editors. Among the verbs within this small group of transitives are the OE and ME manner of action verbs *clap* (*c*1300), *weep* (*c*897) and *laugh* (*e*OE) which fit into Visser's Type III of OE intransitives, i.e. OE intransitives governing indirect objects in the dative or causative objects in the genitive case. These verbs are therefore not originally transitive as the OED editors claim them to be, but should be treated as

intransitive under Visser's taxonomy of OE intransitive verbs (1963-73: I, §§134 and 144). The transitivisation process of these 'less intransitive-like verbs' in Visser's taxonomy of OE intransitives is explained, following once again Visser (1963-73), via the loss of case marking in the late OE period.

[INSERT TABLE 1 HERE]

Table 1. Periods of attestation of the 69 verbs found in the ROC in the historical material

Periods of first attestation of the verbs occurring in the ROC	**Original usage according to the OED**	
Old English (up to 1100) **Total: 20** *bark, bellow, bleat, bow, grin, groan, grunt, kiss, laugh, look, low, neigh, roar, stare, thunder, wave, weep, whisper, wink* and *yelp*	**TRANS.**	**INTRANS.**
	4 *moan, weep, laugh, kiss*	16
Middle English (1100-1500) **Total: 35** *beam, blush, bray, breathe, buzz, cackle, chat, clap, cough, dance, frown, grown, hiss, hoot, jabber, lour/lower, moan, mumble, murmur, mutter, nod, pant, rave, shout, sigh, smile, sneeze, sniff, snort, sob, squeal, twitter, warble, whine* and *whoop*	**TRANS.**	**INTRANS.**
	4 *clap, warble, beam, hoot*	31
Early Modern English (1500-1700) **Total: 13** *coo, drone, gabble, gesticulate, giggle, grumble, pat, purr, shriek, snap, snuffle, trumpet* and *whimper*	**TRANS.**	**INTRANS.**
	1 *pat*	12
Late Modern English (1700-1925) **Total: 1** *guffaw*	**TRANS.**	**INTRANS.**
	0	1
PDE (1925-onwards)	**-**	
TOTAL	**9**	**60**

Striking similarities could be noted here in the history of the ROC with the development of other (de)transitivising constructions such as the *way*-construction, the aspectual cognate object construction (where the object is morphologically and semantically related to the verb as in *The hart **leapt** a great leap*) (Lavidas 2014, 2018), and the dummy *it* object construction (where the object is a non-referential type of object as in *Snake **legs** it to freedom*) (Mondorf 2016; see also Mondorf & Schneider 2016). As previously mentioned and further discussed

later on, like the three valency-increasing constructions just mentioned, the ROC occurred first mostly with 'less intransitive-like verbs' (e.g. *clap*, *weep*, and *laugh*) and then expanded to 'more intransitive-like ones' (e.g. *purr*, *coo*, and *guffaw*). In addition to this, the RO, which is essentially a non-prototypical object, lends support to Mondorf's hypothesis that "pseudo-objects are the incipient stages of (de)transitivization processes" (Mondorf 2016: 99). According to Mondorf and Schneider, such pseudo-objects would occur in 'Moderate Transitivity Contexts' (henceforth MTCs), i.e. niches serving "as a refuge for waning verbs and as a breeding ground for waxing verbs" (Mondorf & Schneider 2016: 439). In the specific case of the ROC, evidence of the transitivising power of pseudo-objects is found in the ROCs involving the originally intransitive verbs *moan*, *bray*, *yelp* and *roar*, whose first attestation in my historical data as transitive is precisely with a RO (examples (32) – (35)). The mere presence of the object with these essentially intransitive verbs (Table 1) renders the originally monovalent verb more transitive-like in view of Hopper and Thompson's (1980) eight parameters of transitivity (i.e. participants, kinesis, aspect, punctuality, volitionality, affirmation, mode, agency, affectedness of the object, and individuation of the object), the first of which refers to the mere presence of an object, or lack thereof.

(32) *moan*, v. (*a*1325)

> ***a*1325** (*c*1250) *Gen. & Exod.* (1968) l. 180 He pine man wid sorwe and dred, And don h[i]m [*MS* hem]**monen** his sinfulhed. (OED, s.v. *moan*, v. [1]. a.)
> "He afflicts man with sorrow and death, and makes him **moan** his sinfulness"
> (*sinfulness* = The state or character of being sinful; wickedness, iniquity.; OED, s.v. *sinfulness*, n.)

(33) *bray*, v.[1] (*a*1300)

> ***c*1400** (*?c*1380) *Pearl* l. 346 Braundysch & **bray** þy braþez breme. (OED, s.v. *bray*, v.[1] 4. a.)
> "struggle and **cry out** your terrible agony**"**

"writhe and **moan** in agony"[8]
(*braþez* = 'anger, rage'; MED, s.v. *bratthe* (n.))

(34) *yelp*, v. (*c*888)

***c*1400** *Laud Troy Bk.* 13520 And he myȝt not him selff helpe; His sorwe coude he to no man **ȝelpe**. (OED, s.v. *yelp*, v. II. †2. †b.)
"He could not **yelp** his sorrow to any man"

(35) *roar*, v.[1] (OE)

***c*1450** C. D'ORLEANS *Poems* (1941) 219 (*MED*) Mi bollid hert doth so his sikis **rore** That mawgre me hit doth my wele biwray. (OED, s.v. *roar*, v.[1] 5. a.)
"My bold heart **roars** its suffering so, that in spite of myself, it betrays my happiness"

Figure 1 shows the distribution across centuries of the 69 verbs attested in the ROC. The *x*-axis represents the century of the earliest attestation of each verb in the ROC and the *y*-axis the date of the first attestation of this very same verb in the English language. The figure reveals that the ROC became more productive and schematic over time, expanding to an increasing number of verb classes over the years. The origins of the ROC seem to go back to the 14th century and its development reaches a significant peak in the transition from the 18th to the 19th century.[9] Particularly noticeable is the fact that verbs of sound emission (e.g. *moan*, *bray*, *yelp* and *roar*), verbs of bodily processes (e.g. *breathe*) and verbs of gestures or manner of action verbs such as *clap*, *weep* and *laugh* (for examples, see (36) – (38)), were part of the construction since the start of the ROC around the ME and EModE periods.

[INSERT FIGURE 1 HERE]

[8] Modern translation provided by Stanton (1995).

[9] If normalised frequencies per million words are taken into account, the resulting figure would preserve roughly the same camel shape though the peak now is in the 18th rather than in the 19th century.

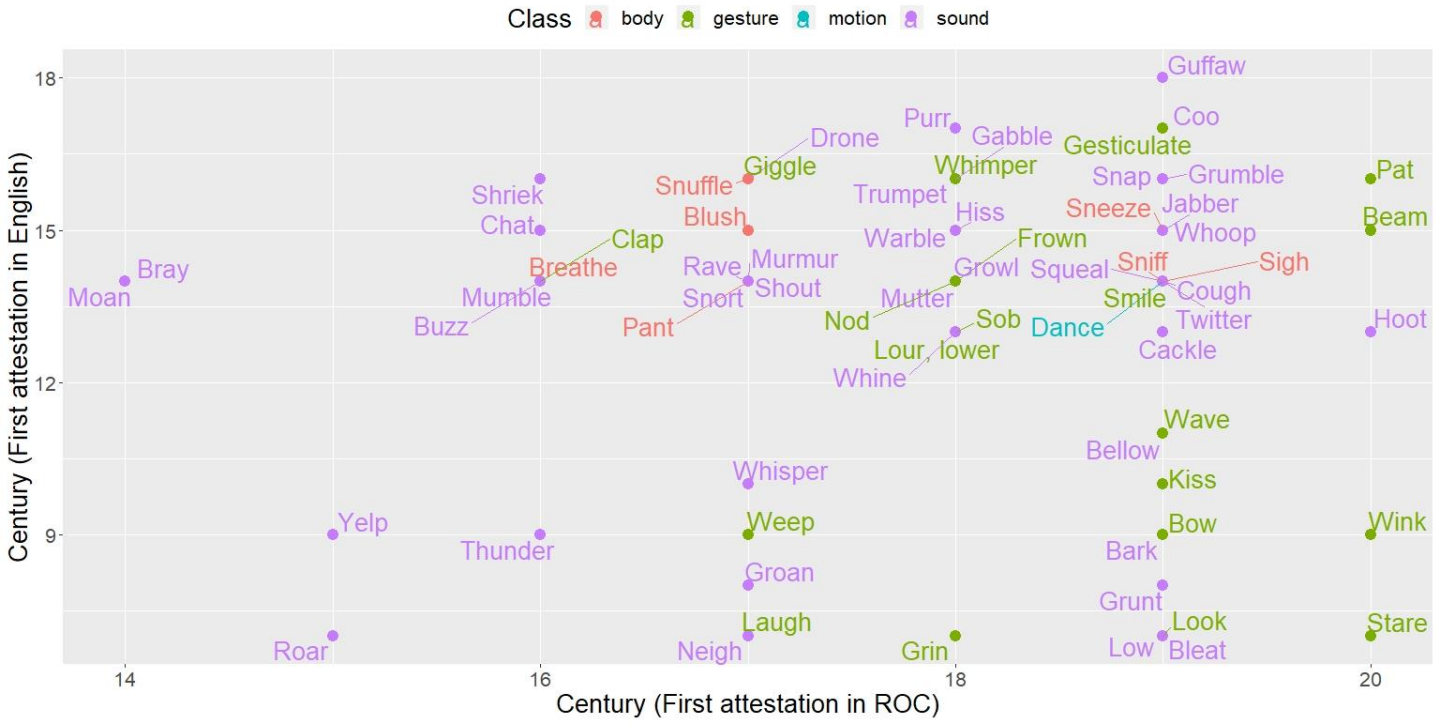

Figure 1. The growth of verbclasses in the ROC. Based on the OED, Jespersen (1909-49), Visser (1963-73) and Levin (1993)

(36) *clap*, *v.*[1] (*c*1300)

1591 R. GREENE *Second Pt. Conny-catching* sig. A3 He..bargained, & bought him..and that the horse-stealer **clap** him <u>good lucke</u>. (OED, s.v. *clap*, v.[1] II. 5. †d.)

(37) *weep*, v. (*c*897)

1602 J. MARSTON *Hist. Antonio & Mellida* V. sig. H3 Ile **weepe** <u>my passion</u> to the senselesse trees. (OED, s.v. *weep*, v. II. 7. d.)

(38) *laugh*, v. (*e*OE)

1609 SHAKESPEARE *Troilus & Cressida* I. iii. 163 The large Achilles..**laughes out** <u>a lowd applause</u>. (OED, s.v. *laugh*, v. 4. a.)

As shown in Figure 1 (*y*-axis), and even more clearly in Figure 2, the two main novelties of the LModE period (1700-1925) involve the sudden incorporation in the construction of other verbs

of sound emission newly added to the English lexicon, such as *purr*, *coo*, and *guffaw* (see examples (39) – (41)) and in the attestation of a new verb class, that of verbs of motion such as *dance* in example (42) (from Jespersen 1909-49).

(39) *purr*, v.[2] (1620)

> **1748** T. GRAY *Ode Death Favourite Cat* ii, in R. Dodsley *Coll. Poems* II. 268 She [*sc.* the cat] saw; and **purr'd** applause. (OED, s.v. *purr*, v. [2] 3.)

(40) *coo*, v. (1672)

> **1798** B. JOHNSON *Orig. Poems* 73 No longer now he..**cooes** the praise of ev'ry fair. (OED, s.v. *coo*, v. 4. a.)

(41) *guffaw*, v. (1721)

> **1865** J. HATTON *Bitter Sweets* viii Mat shrugged his shoulders and **guffawed** his satisfaction. (OED, s.v. *guffaw*, v. b.)

(42) *dance*, v. (*c*1300)

> **1881** Tylor A 296 Savages and barbarians **dance** their joy and sorrow, their love and rage, even their magic and religion. (Jespersen, 1909-49, III: §12.2$_4$, p. 234)

These findings should not come as a surprise as they match current historical research conducted on the English IMC, as in *The trolley* ***rumbled*** *through the tunnel* (Fanego 2017), and the *way*-construction (McColm 2015, 2019; Perek 2016, 2018). In both of these constructions, too, the use of sound emission verbs increased over time. Such results ultimately lend support to Jespersen's hypothesis that "over the Modern English period there seems to have been an upsurge of productivity not only as regards the creation of new echoic verbs but also, crucially, regarding their frequency of use" (Jespersen 1922: 409-411; cited in Fanego 2017: 66).

As shown in Figure 2, of the three early verb classes attested in the ROC (i.e. verbs of sound emission, verbs of bodily processes and verbs of gestures or manner of action verbs) the one class that shows a significant lag in its incorporation into the ROC is that of manner of action verbs (e.g. *clap, weep, laugh*, among many others) (p=0.0238). This may be due to the fact that, contrary to ME verbs of sound emission such as *moan* (*a*1325) and *bray* (*a*1300), which seem to have undergone a rather quick process of transitivisation taking highly redundant

ROs (e.g. *sinfulhed* 'sinfulness' and *braþez* 'agony') almost immediately (see comments related to examples (32) – (34) and Figure 2), OE and ME verbs of gestures had to go through a longer process of transitivisation via the loss of inflected and prepositional objects in the OE, ME and EModE periods. This idea is also supported by Rohdenburg's (2014, 2018) research showing that the ME verb of gesture *stamp* (*c*1200), which is in many ways similar to the manner of action verbs attested here in the ROC, moved from governing only prepositional objects in the 17th century to being followed exclusively by NP objects in the transition from the 19th to the 20th century (e.g. *stamp* *with one's foot* > *stamp* *one's foot*). Still, it is worthy of note here the relatively rapid process of transitivisation of the ROC verbs *clap* (*c*1300), *weep* (*c*897) and *laugh* (*e*OE); this took place in the transition from the 16th to the 17th century, a relatively early date by comparison with other verbs of the same class like *wink* (*c*987) and *stare* (OE), which entered the construction according to the OED roughly about the 20th century. This difference in development may be due to the dissimilarities in their frequency of use; as is well known, high-frequency items are more prone to linguistic change, as has been shown, for instance, for the conventionalised contractions *gotta* and *wanna* as compared with the corresponding contracted form of the semi-modal *have to* (*havda*) (Tizón-Couto & Lorenz 2018).

[INSERT FIGURE 2 HERE]

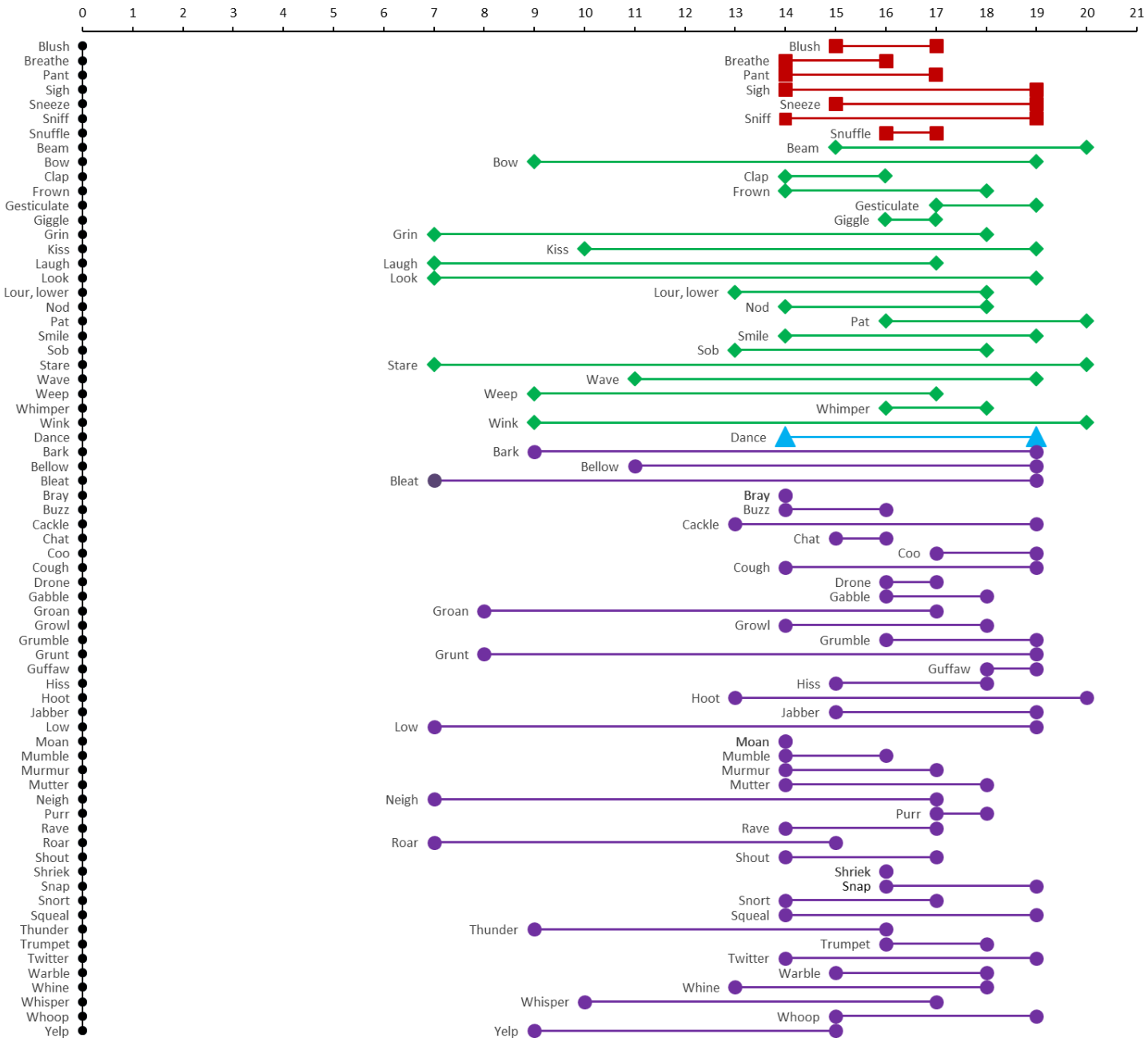

Figure 2. Lag between the century of emergence of the verbs in the English language and their attestation in the ROC (symbols used: ■ verbs of bodily processes, ♦ verbs of gestures or manner of action verbs, ▲verbs of motion, ● verbs of sound emission)

4.1.2 Distribution across RO types: From more to less compositional ROCs

As shown in Figure 3 and Table 2, the ROs attested in my historical data mostly belong to the category of predicative expressive nouns. Predicative expressive nouns are the most diverse type of RO by comparison with the other two RO types, the first RO type to occur in the construction (e.g. *sinfulhed* 'sinfulness', *braþez* 'agony', *sorwe* 'sorrow' and *sikis* 'lamentation'), and the RO type closest in meaning to the overall semantics of the ROC, i.e. 'express X by V-ing'.

The findings just described concur with previous research which shows that speech act verbs in general and delocutive verbs converted from interjections (e.g. *pshaw* in *and he awoke in the morning pshawing at his ill luck*) only become relatively frequent during the LModE period (Brinton 2014; Taavitsainen & Jucker 2007; Traugott 1991). The example with the delocutive verb *pshaw* just mentioned is precisely from this period, and is taken from Brinton (2014) who points out that "what characterizes the LModE period is a flourishing of interjection-based delocutive verbs … [w]hile the delocutive types in ME are very limited, the expansion of types in EModE and especially LModE is substantial" (Brinton 2014: 150 and 160- 61).

[INSERT FIGURE 3 HERE]

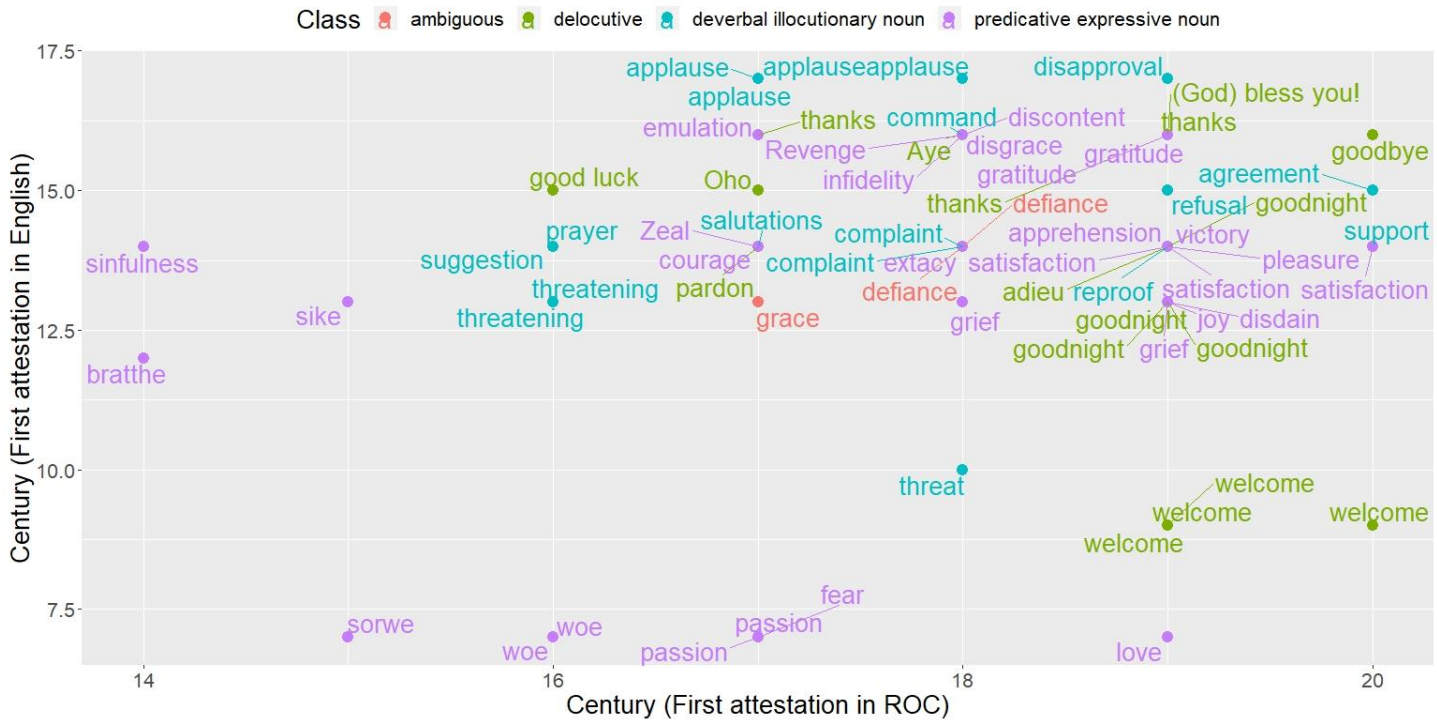

Figure 3. The growth of the RO (based on the OED)

[INSERT TABLE 2 HERE]

Table 2. RO types attested in the ROC (based on the OED)

Delocutive nouns **Total: 11**	**Interjections:** *Ay*, *ay* (= aye, but…Indicating provisional assent to a statement for the sake of rebutting it.; OED, s.v. *aye* | *ay*, int. (and adv.) and n. 2. b.) *O ho* (Expressing surprise, mockery, exultation, etc. Also formerly used to attract attention. Cf. *ho* int.[1]; OED, s.v. *oho*, int.) **Routines or formulae:** *adieu*, *God-bless-you*, *good lucke*, *good night*, *good-bye*, *good-night*, *pardons*, *thanks*, *welcome*
Deverbal illocutionary nouns **Total: 14**	*agreement* (*agree*), *applause* (*applaud*), *command* (*command*), *complaints* (*complain*), *disapproval*, *prayer* (*pray*), *refusal* (*refuse*), *reproof* (*reprove*) *salutations* (*salute*), *suggestions* (*suggest*), *support* (*support*), *threat* (*threaten*), *threatenings* (*threaten*), *threatnynges* (*threaten*)
Predicative expressive nouns (attitudinal nouns) **Total: 26**	**Positive:** *courage*, *emulation*, *extacy*, *gratitude*, *joy*, *love*, *passion*, *pleasure*, *satisfaction*, *victory*, *zeal* **Negative:** *apprehension*, *braþez* (= ‘anger, rage’; MED, s.v. *bratthe*, n.), *discontent*, *disdain*, *disgrace*, *fears*, *grief*, *infidelity*, *revenge*, *sikis* (= ‘sorrowing, lamentation’; MED, s.v. *sīk(e)*, n.), *sinfulhed* (= ‘sinfulness’; MED, s.v. *sinfulhed*, n.), *sorwe* (= ‘sorrow’) *woe*, *sorrow*, *rag*

4.2 Development: Reanalysis, fixation and host-class expansion via analogisation and coercion

The verbs that seem to have taken the lead in the development of the ROC are the intransitive verbs of sound emission *moan, bray, yelp* and *roar* (see (32) – (35) in section 4.1.1) followed by the 'less intransitive-like' manner of action verbs *clap, weep* and *laugh* (see (36) – (38); section 4.1.1), which were *reanalysed* as transitive governing a NP object already in the early stages of the history of the English language, that is, in the 16th and 17th centuries (see Figure 2 in section 4.1.1). The rest of the verbs attested during EModE (e.g. *shriek, groan, shout, murmur* and *giggle*) seem to have entered the construction via *analogisation* with the leading verbs of sound emission and manner of action verbs mentioned above (i.e. *moan, bray, yelp, roar, clap, weep* and *laugh*) and also via *ad hoc* translations of Latin works by Erasmus, Virgil and Coverdale (see examples (43) – (46)). Particularly interesting in this regard are the ROC examples (43) and (46) which involve the ROs *threatenings* and *fears* and the intransitive manner of speaking verbs *thunder* (*c*888) and *whisper* (*c*950). Neither *thunder* nor *whisper* are present in the Latin originals, i.e. *non* ***intono*** *saeuas minas* and ***serpitque*** *per agmina murmur*, where the verbs chosen to convey these emotional messages are *intonare* (translated as *thunder*) and *serpere* (freely translated as *whisper*). This lends support to the assumption that the argument structure change under discussion was non-contact induced. On a broader level, it backs up the observation in section 1 that English stands out in terms of the extensive process of transitivisation it has undergone over the course of its history, by comparison with other Germanic languages.

(43) *thunder,* v. (*c*888)

> **1548** N. UDALL et al. tr. Erasmus *Paraphr. Newe Test.* I. Matt. xii. 74 Do not **thunder** sore threatenings. (OED, s.v. *thunder,* v. 3. b.)
>
> Latin: *non* ***intono*** *saeuas minas*; Literal translation: "I do not **intone/thunder** cruel threats" Cf. Erasmus (1544 [1467-1536]): 187)

(44) *mumble*, v. (*c*1325)

1534 tr. Erasmus *Enchiridion Militis Christiani* (new ed.) vii. sig. Hvi Thou in the meane space **momblest vp** thy prayer vnto god. (OED, s.v. *mumble*, v. 3. b.)

Latin: *tu interim preculis tuis Deo* ***obmurmuras***; Literal translation: "You, meanwhile, **murmur** to God with your little prayers"

(45) *breathe*, v. (*a*1300)

1535 *Bible (*Coverdale*)* Acts ix. A Saul was yet **breathinge out** threatnynges and slaughter agaynst the disciples of the Lorde. (OED, s.v. *breathe*, II. 12. b.)

(46) *whisper*, v. (*c*950)

1697 DRYDEN tr. Virgil *Æneis* XII, in tr. Virgil *Wks.* 587 Rising Fears are **whisper'd** thro' the Crowd. (OED, s.v. *whisper*, v. 2. a.)

Latin: *serpitque per agmina murmur* Virgil *Æneis* xii, 239; Literal translation: "and a murmur snakes through the crowd"

As reflected in Figure 2, the OED data indicates that the earliest attestations of ROCs for the verbs of gestures *nod* and *wave* only go back to the 18th and the 19th centuries, respectively. However, as shown in examples (47) and (49), I was able to identify earlier instances in EEBOCorp 1.0 (1474-1700; Petré 2013, 2016) for both of these verbs dating back to the middle of the 17th century. This finding is quite significant as it confirms the long time association between these two verbs and the ROC, an association already suggested by the data in Bouso (2017) and hinted at in section 3 above. Moreover, my results for *nod* and *wave* suggest that the ROC becomes a form-meaning pairing during EModE, as verbs of gestures must have played a role in the fixation of the *coreferentiality constraint* for the ROC (*he$_i$ nodded his$_i$ approval*; see also (19) in section 2.4). It has to be borne in mind that contrary to other ROC verbs, the manner of action verbs *wave* and *nod*, as well as analogous manner verbs such as *smile* and *giggle* (see (48) and (49)), can only occur with objects that are coreferential with their subjects.

(47) *wave*, v. (*c*1000)

To penitent Magdalen.

Mary, but late the cage of Hell,
Thy heavenly change what Muse can tell?
Those twinkling eyes that did allure
To sordid lust, now droppe the pure
Pearle of Contrition; and that haire }
That wandering Cupids did ensnare, }
And **wav'd** its pride in every streete, }
Now humbly licks her Saviours feete, }
And from those blessed roots derives
Vertue, more worth than thousand lives.
To cleanse thy stain'd affections then,
Still weepe and wipe, kind Magdalen.

EEBO 1639, Thomas Bancroft (fl. 1633–58); *Tvvo bookes of epigrammes, and epitaphs dedicated to two top-branches of gentry: Sir Charles Shirley, Baronet, and William Davenport, Esquire*

(48) *giggle*, v.[1] (1509)

***a*1657** G. DANIEL *Trinarchodia* in *Poems* (1878) III. To Rdr. 128 These pass the glass about; the Conclave set, **Giggle** applause. (OED, s.v. *giggle*, v.[1] b.)

(49) *smile, v.* (*a*1300) and *nod*, v. (1390)

It is all one if a man lies, whether it be by word or by deed. A man may look a lie, and **nod** a lie, and **smile** a lie.

EEBO 1660, Jeremy Taylor (1613–67); *Ductor dubitantium, or, The rule of conscience in all her generall measures serving as a great instrument for the determination of cases of conscience: in four books*

Finally, as previously seen in Table 1 and, more clearly in Figure 1 (The growth of verb classes in the ROC), the LModE development of the ROC was marked, on the one hand, by a sudden increase in verbs of sound emission (e.g. *purr*, *coo* and *guffaw*) and, on the other, by the *host-class expansion* of the ROC to semantically unrelated lexical items such as verbs of motion (e.g. *dance* in (42)) or verbs of light emission (e.g. *shine* in (4)) via *coercion*, an inferential procedure or type-shifting whereby semantically incompatible lexical items (like the two verb classes just mentioned) conform "to the meaning of the structure in which [they are] embedded"

(Michaelis 2004: 25), in this particular case, to the overall meaning of the ROC. From these results one can infer that two important (intralinguistic and extralinguistic) factors that affected the LModE development of the ROC are, first, the widespread creation of new echoic verbs noted by Fanego (2017: 66), and also, possibly, the development of the novel as a literary genre where metaphorical and idiosyncratic ROCs, such as *jingle* and *shine* in (3) and (4) above, seem to be especially at home.

4.3 Directionality of change: Increase in productivity and schematicity and decrease in compositionality

The evidence presented in the previous section seems to suggest that although the seeds of the ROC are to be found at the end of the ME period (around the 14th century), it is not until EModE that the ROC undergoes constructionalisation, i.e. it becomes a new form-meaning pairing as represented in (19) in section 2.4. As explained by Traugott and Trousdale,

> Constructional changes that (…) precede and enable or 'feed' constructionalization typically involve (…) mismatch between form and meaning [i.e. reanalysis and fixation of morphosyntactic properties], and some small distributional changes [i.e. host-class expansion]. (Traugott & Trousdale 2013: 112-23)

During the EModE period (1500-1700), we witness the reanalysis of originally intransitive verbs as transitives (e.g. *bray*, *yelp* and *roar*), fixation of the coreferentiality constraint due to the incorporation of the verbs of manner of action *wave* and *nod* into the construction, and *host-class expansion* to other verbs semantically related to the leading verbs of the construction (e.g. verbs of sounds). As shown by earlier research (Bouso 2017), a collostructional analysis (Hilpert 2014; Stefanowitsch & Gries 2003) based on data retrieved from the CLMET3.0 (De Smet, Diller, & Tyrkkö 2013) reveals that some of these verbs already attested in the EModE period (i.e. *murmur*, *smile*, *whisper*, *nod*, *shout* and *wave*) were part of the set of verbs that

functioned as prototypes for the consolidation of the two interpretations of the ROC (see section 2.4) over the course of the LModE period.

Quoting Bybee and McClelland (2005), Traugott and Trousdale (2013: 113-114) mention that "new constructions come into being [i.e. they undergo constructionalisation] and spread by gradually increasing their frequency of use over time". The ROC is no exception to this principle. Once the ROC becomes a construction (i.e. a new form-meaning pairing) during EModE, though still a relatively low frequency pattern, it increases its type frequency of use over time (Figures 1, 2 and 3).[10] The ROC also embodies three fundamental features of directionality of change, as this notion is conceived by some constructional approaches (Traugott & Trousdale 2003: 112-122). The three features in question are: increase in productivity, increase in schematicity, and decrease in compositionality (including analysability) or "the extent to which the link between form and meaning is transparent" (Traugott & Trousdale 2013: 19). The first two are observable in that the ROC expanded over time to new verbs and object types and classes (Figures 1, 2 and 3), whereas the last feature (i.e. decrease in compositionality) is evinced by the fact that the new verb classes (e.g. *dance*, *jingle* and *shine*) are far removed from the overall semantics of the construction. For instance, the prototypical verbs of the ROC *wave* and *nod*, as opposed to the more marginal *dance*, *jingle* and *shine* were and still are usual conveyors of emotions when accompanied by delocutives or deverbal illocutionary nouns in the form of PPs (e.g. *wave/nod in goodbye*, *wave/nod in approval*). Just in the same way that the verb of transfer *give* is the central verb of the ditransitive construction (e.g. *He gave her a fish taco*) and a good predictor of its semantics [X

[10] An anonymous reviewer poses the question of what could such infrequency mean for a construction that is quite recent. In my view, this is probably indicative of the construction being highly marked, restricted to specific text types (i.e. the novel) and with a very specific function by comparison with other neighbouring constructions such as the Direct Discourse Construction (e.g. *She smiled, 'I don't believe you'*).

CAUSES Y to RECEIVE Z] (Stefanowitsch & Gries 2003: 229), the earliest and strongest collocates of the LModE ROC (i.e. *murmur, mutter, smile, whisper, nod, shout* and *wave*) are also good indicators of its constructional meaning [X_i CAUSES Y_i BECOME EXPRESSED by V-ing]. Regarding the verb *give* in the ditransitive construction, Traugott and Trousdale (2013) mention the following,

> Prototypical instances of the construction (e.g. *I gave John a bike*) involve a perfect match between the lexical semantics of the verb, and the constructional semantics; in other words, in the prototype ditransitive there is semantic coherence and correspondence (…). Given the polysemous nature of the constructional semantics, additional clusters of constructions, or subschemas exist, linked in a network to the central sense. (Traugott & Trousdale 2013: 15)

In a similar vein, Bouso (2017) argues for the semantic coherence and correspondence between the ROC and its strongest collocates on the basis of the OED definitions of these verbs. As shown in (50) – (53), the prototypical verbs *mutter*, *murmur*, *smile* and *nod* are linked, at least in PDE, to an emotional or attitudinal meaning somewhat lexicalised in their semantics (e.g. 'dissatisfaction' for *mutter*, 'discontent' form *murmur*, 'pleasure' or 'amusement' for *smile*, etc.). On the other hand, the OED definitions provided for the late-comers *dance*, *jingle* and *shine* in (54) – (56) clearly lack the emotional component present in (50) – (53). This, of course, does not imply that these less central verbs of the ROC cannot be conveyors of emotions, otherwise they would not be attested in the ROC itself or in other similar emotional constructions (see Rosca 2012); this just indicates that such association is not as transparent or conventionalised as happens to be the case with the ROC prototypes.

(50) *Mutter*, v. To **express dissatisfaction** covertly in low tones; to murmur, complain, grumble in an undertone. (OED, s.v. *mutter*, v. **2. b.** intransitive)

(51) *Murmur*, v. To **complain** in low muttered tones; to give voice to an inarticulate **discontent**; to grumble. (s.v. *murmur*, v. **1. a.** intransitive)

(52) *Smile*, v. To give to the features or face a look **expressive of pleasure or amusement**, or of amused **disdain**, **scorn**, etc. (s.v. *smile*, v. I. intransitive **1. a.**)

(53) *Nod*, v. To make a brief inclination of the head, esp. in **salutation**, **assent**, or **command**, or to draw attention to something. (s.v. *nod*, v. **1. a.** intransitive)

(54) *Dance*, v. To leap, skip, hop, or glide with measured steps and rhythmical movements of the body, usually to the accompaniment of music, either by oneself, or with a partner or in a set. (OED, s.v. *dance*, v. **1. a.** intransitive)

(55) *Jingle*, v. To give forth a mingling of ringing sounds, as by the striking together of coins, keys, or other small metallic objects; (…). (OED, s.v. *jingle*, v. **1. a.** intransitive)

(56) *Shine*, v. Of a heavenly body or an object that is alight: To shed beams of bright light; to give out light so as to illuminate; to be radiant. (OED, s.v. *shine*, v. **1. a.** intransitive)

5. Concluding remarks

After considering the ROC in the context of idioms (Nunberg, Sag, and Wasow 1994) and as a traditional form-meaning pairing (Goldberg 1995), it was found that it qualifies as a polysemous construction with striking similarities to the *way*-construction. As discussed in section 2.4, both allow for at least two interpretations, a means and a manner interpretation, and a much less frequent co-occurrence interpretation. In the *way*-construction, the primary sense or interpretation is the means subschema whereas the most productive in terms of hapax-token ratio is the co-occurrence subschema (Perek 2016). On the other hand, for the ROC, the most productive choice is the manner subschema instantiated most prototypically by the manner of action verbs *wave* and *nod*. The existence of a co-occurrence subschema for the ROC is debatable, with only one clear unambiguous example of such sense in my historical data, namely, the one from Shakespeare's *King Lear* with the bodily process verb *pant* (e.g. *Came there a reeking Post,..halfe breathles,* ***panting [1623 painting]*** *forth From Gonorill his mistris,* <u>*salutations*</u>.)

As for its diachronic development, it has been shown that the origins of the ROC as a form-meaning pairing only seem to go back to the 17th century. This is the period at which ROC

instances were attested with two of its most prototypical verbs (i.e. the verbs *nod* and *wave*). Such verbs only allow for coreferential object types (*Pauline$_i$ nodded her$_i$ approval*) leading the analyst to think that they are somewhat responsible for the imposition of the constructional constraint of coreferentiality. The ROC thus seems to have followed the same path of development as other transitivising constructions such as the *way*-construction, the aspectual cognate object construction and the dummy *it* object construction. All of them occurred first with more transitive-like verbs and expanded later on to more intransitive-like ones. For the ROC, in particular, as shown along these pages, the more transitive-like verbs *weep*, *clap*, *laugh*, *wave* and *nod* (Visser's Type III of intransitives) preceded the purely intransitive verbs *purr*, *coo*, *guffaw*, *dance* and *jingle* (Visser's Type I of intransitives).

Another important finding reported here is that the originally intransitive verbs *bray*, *yelp* and *roar* were directly transitivised through the addition of a predicative expressive RO (*braþez* 'agony', *sorwe* 'sorrow' and *sikis* 'lamentation'). Attitudinal nouns of this type are not only the earliest to occur in the ROC but also the most diverse RO subtype and the closest in meaning to the constructional semantics of the ROC ('express X by V-ing'). Other RO subtypes (i.e. delocutives and deverbal illocutionary nouns) are mostly a feature of the LModE period (Figure 3). Finally, it has also been argued that the growth of the ROC was marked by reanalysis and analogisation and that the 20th century ROC reveals long-term coercion effects as a result of having expanded to lexical items that, in principle, would have been semantically incompatible with the ROC (e.g. *dance* and *shine*).

To conclude, the historical data reported here indicates that the modern ROC as a form-meaning pairing has become more productive and more schematic over time as it now involves verb classes that had not been previously attested in its original schema. The ROC has also become less compositional as the link between the form and the meaning of the construction is now less transparent. In light of all the evidence adduced here, there is little doubt that the ROC, from its very beginnings in the 17th century, was part and result of a broader development in the

grammar of English, namely the historical trend towards transitivisation which Visser (1963-73) originally hinted at in his monumental *An historical syntax of the English language.* An additional issue that could not be examined here because of space limitations is Visser's brief suggestion of a possible connection between the growth of the ROC and the increased use of Direct Discourse Constructions in the English 18th and 19th century novel (Visser 1963-73, I, §142: 133). Future research could therefore explore in more detail than has been possible here the characterisation, emergence and subsequent development of the ROC by means of historical corpora that enable an exhaustive analysis of fictional discourse.

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