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Simulative derivations in crosslinguistic perspective and their diachronic sources

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Abstract: This article deals with simulative derivations, meaning ‘pretend (to be) X ’, where X stands for a verb or a noun. It shows that these derivations have three main origins: incorporation, denominal derivation and combination of reflexive and causative. It also systematically discusses the corresponding analytic constructions.

Keywords: simulative, pretence, causative, reflexive, incorporation, denominal verbalization

1 Introduction

The terms ‘simulative’ (van der Voort 2004: 545-546), ‘factice’ (Voisin to appear) and ‘pretendative’ (Heath 2014) have been used to refer to derivations meaning ‘pretend to’. Few languages have dedicated derivations for this meaning, which is most commonly expressed by means of a verb (like English ‘pretend’), an adverb (‘pretending’), or complex predicates.

This paper is the first crosslinguistic survey of simulative constructions in the world’s languages. It focuses on grammaticalized verbal derivations, but also describes related analytical constructions. After providing basic definitions (§2), I present an overview of attested predicative simulative derivations in the world’s languages (§3.1), and review the morphosyntactic parameters that are relevant to describe predicative simulative constructions (§3), in particular the part of speech of the base form (§3.2), and discusses the non-simulative meanings found in non-dedicated simulative derivations (§3.4). The paper then investigates three diachronic sources of simulative derivations: incorporation/verb compounding (§4), verbalization of nominal compounds (§5) and reflexive (§6). Finally, I briefly de-

scribe how simulatives can be combined with other constructions or derivations (§7).

2 Basic definitions

By the term ‘simulative’, I refer to constructions meaning ‘pretend to X ’, where X can be an action predicate, a state or an entity (verbs, nouns or adjectives depending on the language). I call this X the SIMULEE, and refer to the participant that pretends to do (or be) the SIMULEE as the SIMULATOR.

Example (1) illustrates a typical example of simulative derivation. The SIMULEE here is the verb *mawi* ‘cry’, the SIMULATOR the 1PL.EXCL intransitive subject, and the derivational affix *-kaazo* is the SIMULATIVE MARKER.

- (1) OJIBWE (ojib1241, [Nichols and Nyholm 1995](#))

ni-mawii-kaazo-min
1-cry-SIMUL-1PL:(VAI):INDEP

‘We (EXCL) pretend to cry.’

In some languages, the same construction is used with both verbal and nominal SIMULEES. For instance, the suffix *-kaazo* in Ojibwe also occurs with a few nouns (*ikwe-kaazo* ‘pretend to be a woman’). We also find simulative constructions which are only compatible with verbs or nouns.

In addition to *predicative* simulative derivations like *-kaazo*, we observe in many languages nominal derivations meaning ‘pretending to be X ’, ‘fake X ’, like the English prefix of Greek origin *pseudo-*, or the suffix *-gaalu* ‘make-believe’ in Yuwaalaraay-Gamilaraay (2).

- (2) YUWAALARAAY-GAMILARAAY (gami1243, [Giacon 2014](#): 120)

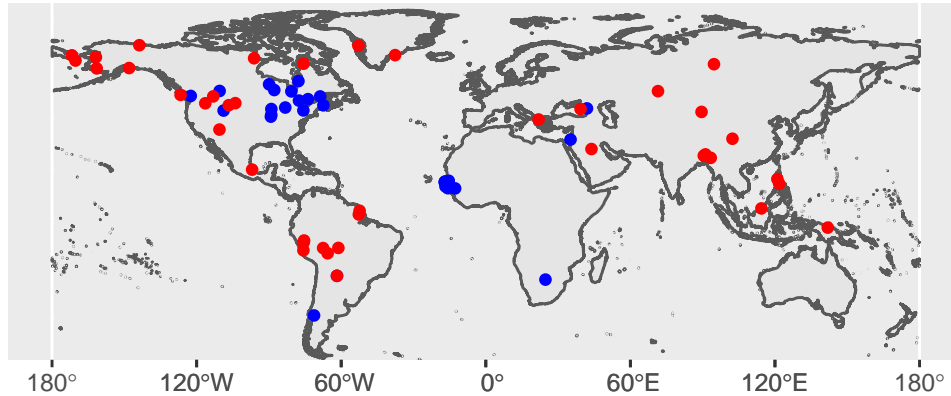
doctor-gaalu-dhul-u-dhu
doctor-SIMUL-DIM-ERG-1SG-ERG

‘(I spoke) as a little make-believe doctor’.

These derivations are called in this work *non-predicative simulatives*. They derive a noun which refers to the SIMULATOR of the construction. In some languages, the same marker can be used to derive both predicative and non-predicative simulatives. For instance, in Yupik (cent2127), the same suffix *-(ng)uaq/r* appears on nouns (*keggut-nguaq* ‘tooth-SIMUL ‘false tooth’) and on verbs (3a). To express predicative simulative from nouns bases, the verbalizing suffix *-(ng)u* ‘be X ’ must be added before the simulative (3b, 28).

- (3) YUPIK (cent2127, [Miyaoka 2012](#): 660;1178)

Figure 1: Geographic distribution of languages with predicative simulative derivations (simulatives from reflexive + causative combinations are coloured in blue, the rest in red)



- a. *qavar-uar-tuq*
sleep-SIMUL-IND:3SG
'S/he pretends to sleep.'
- b. *angya-u-nguar-tuq*
boat-be-SIMUL-IND:3SG
'It depicts/pretends to be a boat.'

Non-predicative simulative derivations are considerably more common than predicative ones, especially in the literary languages of Europe and Asia, originally by calquing the Greek prefix $\psi\epsilon\upsilon\delta\omicron$ - *pseudo*-.¹ This work exclusively focuses on *predicative* simulatives.

3 Predicative simulative derivations

3.1 Overview

While it remains unclear whether any language completely lacks simulative constructions, *predicative simulative derivations* are rare in the world's languages. In particular, no example has been found in Australia, and in Indo-European only highly isolated cases exist (§5.2).

Predicative simulative derivations are mainly attested in languages of Northern and Southern America, and frequent in Atlantic languages of West Africa (Figure 1).

¹For instance, in Mandarin, 伪 *wěi*, originally a verb meaning 'pretend to', is used to translate compounds in *pseudo*-, and has become quite productive.

The 47 languages with simulations of this type are listed in Table 1.² Two languages, Classical Nahuatl and Nez Percé, have more than one simulative derivations, with differences between them in terms of the base selected (§3.2, §3.3).

In this table, the simulative suffixes in Ojibwe (-*kaazo*) and Yupik (-*nguaq*) are not isolated, as cognates are found in Central and Eastern Algonquian (§6.5) and Eskaleut languages (from proto-Eskimo *-*ηuðar* ‘little’, ‘pretend to’, Fortescue et al. 2010: 463-464), respectively. The cognate affixes in these two families are not included in this table. The simulative suffixes in Atlantic languages are counted separately as they are mainly built from non-cognate material (see Table 5, §6.1): even closely related languages such as Jóola Fóoñi and Jóola Karon only share partially cognate simulative suffixes. Other Atlantic languages which have simulative suffixes cognate to one of those listed in the Table are not included.³

Since this survey excludes non-predicative simulatives, the resulting form of the derivation is almost always a verb, except in a handful of cases when it is an action noun, used to build a complex predicate with an auxiliary (§5).

Table 1 indicates for each derivation whether it applies to nominal (N) or verbal (V) bases, the part of speech of the resulting form, and the type of derivation. The constructions labelled ‘nominal’ are predicative simulatives from nominal compounds (§5). The sections in the table correspond to the diachronic origins of the simulative derivations.

No specification is included in the ‘type’ column in the case of dedicated derivations whose etymology is not recoverable (or at least, not synchronically obvious).

²The abbreviations for the language families are the following: AA Afro-Asiatic, AN Austronesian, IE Indo-European, NC Niger-Congo, NWC North-West Caucasian, TH Trans-Himalayan/Sino-Tibetan, UT Uto-Aztecan.

³This includes Saafi-saafi -*dúk* (Pouye 2015: 286-289) and Paloor -*doh* (Thornell et al. 2016: 160).

Table 1: Known examples of predicative simulative derivations

Family	Language	Form	base	result	Type	Reference
NWC	Abaza	<i>f-rə-</i>	V	V	CAUS + REFL	Tabulova (1976: 186-187)
NC (Bantu)	Tswana	<i>í-V-ís-</i>	V	V	CAUS + REFL	Creissels (2002: 420)
Iroquoian	Oneida	<i>an-...-st</i>	V	V	CAUS + REFL	Michelson and Doxtator (2002: 105)
Mandé	Mandinka	<i>faŋ + V-ndí</i>	V	V	CAUS + REFL	Creissels and Sambou (2013: 395)
Salish	Musqueam	<i>-stə-námat</i>	V	V	CAUS + REFL	Suttles (2004: 246)
Matacoan	Nivaclé	<i>-vat-...-jatsen</i>	V	V	CAUS + REFL	Fabre (2016: 332)
isolate	Mapudungun	<i>-faluw, -w-faluw</i>	N/V	V	CAUS + REFL	Smeets (2008: 264-266).
AA (Semitic)	Hebrew	<i>hit?CaCCēC</i>	V	V	CAUS + REFL	Joñon and Muraoka (2006: 159)
Algic	Ojibwe	<i>-kaazo</i>	N/V	V	make + REFL	Valentine (2001: 413-414)
NC (Atlantic)	Wolof	REDP- <i>lu</i>	V	V	CAUS + REFL	Diouf (2009: 32, 56)
NC (Atlantic)	Laala	REDP- <i>đuk</i>	V	V	CAUS + REFL	Dieye (2011: 224)
NC (Atlantic)	Guñamolo	<i>-undina</i>	V	V	CAUS + REFL	Bao Diop (2013: 202)
NC (Atlantic)	Jóola Karon	<i>an-oolo</i>	V	V	CAUS + REFL	Sambou (2014: 470-471)
NC (Atlantic)	Jóola Fóoñi	<i>-lancenoor</i>	V	V	do again + REFL	Creissels and Bassène (In preparation)
NC (Atlantic)	Pular	<i>-inkin</i>	V	V	CAUS + ?	Diallo (2015: 140)
NC (Atlantic)	Sereer	<i>-atoox</i>	V	V	? + REFL	Faye (1979: 104)
AA (Semitic)	Arabic	<i>ta-CāCaCa</i>	V	V	APPL + REFL?	Ryding (2005: 543)
Sahaptian	Nez percé	<i>?in/?ün/?ipn-we-</i>	V	V	REFL + 'with mouth'	Aoki (1994)
AN	Kiput	<i>sep-</i>	V	V	REFL	Blust (2003: 31)
UA	Nahuatl	<i>mo-...-ihtoa</i>	N/V	V	incorporation say + REFL	
Athabaskan	Navajo	<i>'áhodi-</i>	V	V	? + REFL	Young and Morgan (1987: 71)
TH	Meithei	<i>-sin-nə</i>	V	V	inwards + RECIP	Chelliah (1997: 136)
UA	Nahuatl	<i>-nehnequi</i>	V	V	incorporation of simulee	
UA	Hopi	<i>atsa-</i>	V	V	incorporation of simulative	Hopi Dictionary Project (1998: 38)
TH	Rabha	<i>-khithak</i>	V	V	verbal compound	Joseph (2007: 183)
Siouan	Lakhota	<i>-kúŋza</i>	V	V	verbal compound	Ullrich (2008: 315)
Sepik	Awtuw	<i>-panya</i>	V	V	verbal compound	Feldman (1986: 77)
TH	Japhug	<i>k^hramba-</i>	V	N	NOMINAL + AUX	Jacques (2021: 796;1341)
Tungusic	Evenki	REDP + <i>-gsē</i>	V	N	NOMINAL + AUX	Vasilevich (1958: 752;763)
IE	Greek	<i>ψευδο-</i>	N	N/V	DENOMINAL	
isolate	Kwaza	<i>-nāi'xwa</i>	N/V	V	simulative	van der Voort (2004: 545-546)
Tupi-Guarani	Wayampi	<i>-la'āga</i>	V	V	errative	Copin (2012: 67)
TH	Garó	<i>-bru</i>	V	V	errative	Burling (2004)
Panoan	Kakataibo	<i>-kats-i-</i>	V	V	desiderative	Zariquiey (2018: 450)
AN	Tagalog	<i>mag-REDP-an</i>	N/V	V		Schachter and Otones (1972: 357)
NWC	Adyghe	<i>-š^wa</i>	V	V		Rogava and Z.I. (1966: 304-305)
Turkic	Old Turkic	<i>-(X)msIn</i>	V	V		Erdal (2004: 228)
NC (Atlantic)	Pepel	REDP	V	V		Ndao (2010: 236-247)
Eskaleut	Yupik	<i>-nguaq</i>	N/V	N/V		Miyaoka (2012: 660;1178)
Sahaptian	Nez percé	<i>-tay</i>	V	V		Aoki (1994)
isolate	Movima	<i>-na:na'</i>	N/V	N/V		Haude (2006: 442-443)
Quechuan	Yauyos	<i>-tuku</i>	N/V	V		Shimelman (2017: 205)
Tacanan	Ese Eja	<i>-niso</i>	N/V	N/V		Vuillermet (2012: 493-494)
AN	Ilocano	<i>agin-REDP</i>	V	V		Rubino (2000: lxxi)
Wakashan	Nuuchahnulth	<i>-qaath</i>	V	V		Wojdak (2008: 51-52)
Algic	Arapaho	<i>nénes-</i>	V	V		Cowell and Moss (2006: 209;332)
		<i>new-</i>	V	V		Cowell and Moss (2006: 219)
Algic	Cheyenne	<i>-ma'ov, -máne</i>	N/V	V		Fisher et al. (2017)
Algic	Blackfoot	<i>kippa'-</i>	V	V		Frantz and Russell (2017: 48)
Sahaptian	Nez Percé	<i>-ne-wi</i>	N	V		Aoki (1994: 479-480)
Siouan	Crow	<i>-deelee</i>	V	V		Graczyk (2007: 304)

3.2 Verbal vs. nominal base forms

Among the examples in Table 1, nearly all predicative simulative derivations can take verbs as input, except in Indo-European (§5.2), in one of the constructions in Nahuatl (§6.2) and in the *-ne-wi* denominal derivation in

Nez Percé (Aoki 1994: 479) which only apply to nouns. Some languages can take both nouns and verbs as base forms, and these have to be divided into two distinct types.

The first type is exemplified by Yupik above (3a) and Movima (movi1243, Haude 2006: 442-443): when the simulative affix is applied to a verb base, the result is a predicative simulative, whereas on a noun it yields a *non-predicative* simulative.

The second type involves languages which derive *predicative simulatives* from both nouns and verbs; with nouns, this type of derivation has a verbalizing denominal function. Among these languages, some appear to be equally compatible with verbal or nominal bases.⁴ In Quechua however, the simulative suffix *-tuku* takes nouns as basic input, and to be suffixed to verb stems it requires them to be nominalized by the agentive participle *-q* suffix, as in (4).

- (4) YAUYOS QUECHUA (yauy1235, Shimelman 2017: 205)

asnu-qa wañu-q-tuku-ru-n
 donkey-TOP die-AG.NMLZ-SIMUL-PERSONAL.INTEREST-3

‘The donkey had pretended to be dead.’

3.3 Transitivity

Some languages (most clearly Lakhota, Yupik, Mapudungun, Kwaza and Ese Ejja) have productive simulative derivations that are applicable to both transitive and intransitive verbs (5).⁵

- (5) LAKOTA (lako1247, Ullrich 2008: 315)

a. *sču-kúŋze-la s’a*
 be.shy-SIMUL-DIM often
 ‘He often pretends to be shy (of girls).’

b. *w-í < ma > yuŋh-kúŋze*
 ANTIP- < 1SG:S/O > ask-SIMUL
 ‘He pretended to ask me questions.’

However, many simulative derivations have restrictions related to the transitivity of the verb base. This is clearest in Nez Percé, one of the few languages to have more than one simulative derivation: the reflexive simulative (§6.3) only occurs with intransitive bases (Table 8), whereas the *-tay* suffix occurs on both intransitive and transitive dynamic verbs (Table 2).

⁴For instance, in Kwaza, according to van der Voort (2004: 545): ‘There is no way to determine whether (the simulative suffix) *-nāixwa-* is a verbalising morpheme, or whether it is a verbal morpheme that is attached to nouns only after zero-verbalisation.’

⁵In these languages, except Lakhota, the derivation is also compatible with nouns.

In Ojibwe and other Central or Eastern Algonquian languages (§6.5), the simulative *-kaazo* and its cognates can only take *intransitive animate* verbs as input (ie. intransitive verbs requiring an *animate* subject), and the resulting verb is also intransitive (for instance, *mawiikaazo* ‘pretend to cry’ from *mawi* ‘cry’ in 1 above). It is not compatible with transitive bases or with intransitive verbs selecting inanimate subjects. The initial stems must be combined with animate intransitive final stem to be accessible to simulative derivation.⁶ For instance *ojaanim(i)-* ‘busy’ and *zeg-* ‘scare(d)’ have to be first derived by the intransitive adjectival final stem *-izi* (*ojaanim-izi* ‘be busy’, *zeg-izi* ‘be afraid’) in order to take the simulative stem (*ojaanim-izii-kaazo* ‘pretend to be scared’, *zeg-izii-kaazo* ‘pretend to be scared’)

In the sample, sources are rarely explicit about whether the simulative derivation is productive, and whether it is only limited to intransitive verbs. The simulative derivations in Oneida, Musqueam, Nivaclé, Kiput are only attested on a handful of intransitive verbs. In some languages where the simulative is potentially productive, including Wolof, Sereer, Ese Ejja, Wayampi and Ilocano, only intransitive examples are provided in the sources, and nearly always the same verbs (‘pretend to die’, ‘pretend to sleep’ and ‘pretend to cry’). This question cannot be settled without additional data collection.

3.4 Non-simulative meanings

Among the simulative constructions transparently involving a reflexive affix (§6), the literal meaning (‘cause oneself to *X*’, ‘call oneself a *X*’, ‘consider oneself to be *X*’) competes with the simulative function, which in some languages is even rare and restricted to a few lexicalized examples.

In addition, several types of non-simulative meanings are also attested: SIMULATIVE (‘look like’), ERRATIVE (‘do wrongly’), NEGLECTIVE (‘do carelessly’), DESIDERATIVE (‘want to’) and also possibly focused NEGATIVE.

3.4.1 Simulative

The meaning of simulative derivations ‘pretend to (be) *X*’ can be paraphrased as ‘act like/as if one (is) *X* to make others believe that one indeed (is) *X*’. Thus, semantically, simulative entails simulative meaning ‘be/do like’ with volition. It is thus not surprising that the same construction can

⁶Nearly all verbs in Algonquian languages are bi- or tripartite. The last element of these polymorphemic verbs is called the *final stem*, and determines the transitivity and the gender (animate or inanimate) of the intransitive subject or object. The first element, the *initial stem*, is categorically neutral, and can have verb-like (‘be afraid’) or adverbial-like (for instance, orientation) meanings. For an introduction to the stem structure of Algonquian verbs and nouns, see [Goddard \(1990\)](#).

have both simulative and similitive meaning in many languages, or that historical pathways relate these two categories.

In Eskaleut languages (Fortescue et al. 2010: 463-464), Kwaza (6), Wayampi (Copin 2012: 11), Movima (Haude 2006: 442-443) and Nahuatl, the same construction is used with a SIMULATIVE function when used with verbal bases, and SIMILATIVE with nominal bases.

(6) KWAZA (kwaz1243, van der Voort 2004: 545)

- a. *kui-nāi'xwa-ki*
drink-SIMUL-DECL
'He pretends to be drinking.'
- b. *jere'xwa-nāixwa-ki*
jaguar-SIMUL-DECL
'He resembles a jaguar.'

In Nahuatl, there is evidence that similitive meaning derives from the simulative, as the incorporating construction with the verb *nehnequi* 'desire, pretend' (Table 3, §4.2) displays a similitive meaning with nominal bases (*xihuitl* 'grass, turquoise' → *xih-nehnequi* 'resemble turquoise', *cihuâtl* 'woman' → *cihuâ-nehnequi* 'resemble a woman') in some cases. Since the primary meaning of this verb is 'pretend' not 'resemble', it is clear that the latter derives from the former.

Crosslinguistically, analytic similitive constructions are attested with simulative meaning, as in Pumi (7), and noun-verb collocations with nouns like 'semblance, appearance' are also found, as in French *faire semblant* or Russian *делать вид* 'pretend'.

(7) PUMI (pumi1242, Daudey 2014: 488)

káw = gâ *ɬùtɕʰí jǎw* <šéj = sî> *ɬâ nâ*
uncle(MB) = GEN front again go:PFV:N.EGOPHORIC = INF it.seems
nð-pù *kʰà-tì = séŋ*
DOWN-do OUT-put = PFV.EGOPHORIC

'(...) but in front of uncle (I) pretended that he had gone (...)'

3.4.2 Errative

The meaning of simulative construction entails that the simulator is not really performing the action, or is doing it in a wrong way. For this reason, there is a semantic link between simulative and meanings I propose to refer to as ERRATIVE ('do incorrectly, wrongly') or NEGLECTIVE ('do carelessly, do half-heartedly').

In constructions with an incorporated simulative marker (§4.3) or an action nominal (§5.1), the simulative marker originates from an adverb

‘wrongly’, an adjective ‘wrong, untrue’, or a noun ‘lie’, though the etymological meaning is bleached.

Errative interpretations are attested in a few lexicalized non-compositional examples of simulative derivations, in particular with the verb ‘speak’, whose simulative means ‘tell lies, talk nonsense’ rather than ‘pretend to speak’ in Ese Ejja (8) and Wayampi (9).⁷

- (8) ESE EJJA (esee1248, [Vuillermet 2012](#): 493-494)

Mimi-nisho-naje.
speak-SIMUL-PST

‘He lied.’

- (9) WAYAMPI (waya1270, [Copin 2012](#): 67)

e'i-la'ãga te
3:SAY-SIMUL FOC

‘He talks nonsense.’

In Nez Percé, some verbs with the simulative *-tay* are given the gloss ‘half-heartedly, carelessly’ rather than ‘pretend to’ (Table 2).⁸ However, it may be a contextual rendering of the simulative meaning, rather than a genuine distinct function.

Table 2: Examples of the simulative *-tay* suffix in Nez percé (data from [Aoki 1994](#))

Base verb		Simulative verb	
<i>hipí-se</i>	I eat	<i>hip-táy-ca</i>	I am pretending to eat
<i>hité-me-ce</i>	I am reading	<i>hitama-táy-ca</i>	I am reading half-heartedly
<i>kú-se</i>	I am going	<i>ko-táy-ca</i>	I am pretending to go
<i>xe-lé-wi-se</i>	I am playing	<i>çalawi-táy-ca</i>	I pretend to be playing
<i>?o-pciyaw-ca</i>	I beat him	<i>?o-pciyaw-táy-ca</i>	I am pretending to beat him up
<i>welé-mu?tk-se</i>	I am tying my hair in a bunch	<i>wálamu?tk-táy-ca</i>	I am tying my hair carelessly
<i>tĩnkí-ce</i>	I am dying	<i>tĩnk-táy-ca</i>	I am play-acting to be dead

3.4.3 Desiderative

The simulative entails, as mentioned in §3.4.1, an increased volition, reflecting the intention to pass as being someone or doing something one is not, or is not doing.

⁷In Wayampi at least, the simulative meaning is primary, since the suffix *-la'ãga* originates from the verbal noun of the verb *-la'ã* ‘imitate’ ([Copin 2012](#): 9).

⁸The suffixes *-se/a* and *-ce/a* mark singular subject present tense; it is the citation form in [Aoki \(1994\)](#), and can be used for 1SG and 2SG (the 3SG requires an additional prefix *hi-*).

A semantic pathway from DESIDERATIVE ‘want’ to SIMULATIVE ‘pretend’ is attested in several languages. In Classical Nahuatl, the verb *nehnequi* ‘pretend’ also means ‘need (someone), desire (something)’, and this reflects its original meaning (*nehnequi* is the intensive reduplicated form of *nequi* ‘want’). In Kakataibo, a complex construction with the verb *ki-* ‘say’ preceded by a verb with the compound suffix *-kats-i* (desiderative same subject) has three meanings, including weak desire, frustrative and simulative (10).

(10) KAKATAIBO (cash1251, [Zariquiey 2018](#): 450)

chankat-kats-i
 cut.in.pieces-DESID-S/A > S:SIMULTANEOUS
ki-xun *‘a-akë-x-ín*
 say:INTR-S/A > A:SIMULTANEOUS do-REMOTE.PST-3-PROX

‘She pretended to cut the meat into pieces.’

The opposite case, of a simulative marker developing desiderative meaning when used in collocation with an auxiliary, is found in Ese Ejja, where the combination of the simulative *-nisho* with the verb *a-* ‘do’ yields the meaning ‘want to’ (11).

(11) ESE EJJA (esee1248, [Vuillermét 2012](#): 492)

E-ixya-xi-nisho *a-ka-ani* *Meemee biya*.
 NMLZ-eat-NMLZ-SIMUL do-3A-PST bee_sp bee

‘He wants to eat the (honey)bee.’

3.4.4 Negation

In the Tupi-Guarani language Eméřillon, [Rose \(2003: 403\)](#) reports that the focalised negation *-nuwã*, when it occurs on verbs, can have either a contrastive negative (12a) or a simulative interpretation (12b).

(12) EMÉŘILLON (emer1243, [Rose 2003](#): 403)

a. *ele-ikidz-a-nuwã*, *de-mōda-te*.
 2SG:S/A-buy-LNK-FOC:NEG 2SG:S/O-steal-FOC

‘You did not buy it, you stole it.’

b. *ele-talawadz-e-nuwã*
 2SG:S/A-work-LNK-FOC:NEG

‘You pretend to work.’ (‘It is not working, what you do.’)

It remains unclear whether this is a genuine simulative construction, as opposed to a contextual interpretation in a particular pragmatic context, and therefore it was not included in Table 1 above. No other example of simulative use of negative markers has been found in the sample.

3.5 Reduplication

Reduplication serves as the sole exponent of simulative meaning in the Atlantic language Pepel (manj1250), in examples such as *ɲɔy* ‘sleep’ → *ɲɔy-ɲɔy* ‘pretend to be sleeping’ (Ndao 2010: 236-247).⁹

Reduplication also occurs as a partial exponent of simulative meaning in several unrelated languages in the sample (Table 1). It obligatorily accompanies a dedicated simulative affix in several Atlantic languages (Wolof and Laala, Diouf 2009: 32, 56 and Dieye 2011: 224), Austronesian (Ilocano, Rubino 2000: lxxi) and Tungusic (Evenki, Vasilevich 1958: 752;763).

In Tagalog, the simulative is expressed by combining reduplication with *mag-* and *-an* voice derivations (Schachter and Otones 1972: 357).

- (13) TAGALOG (taga1270, Kaufman to appear)

mag-tulug~tulug-an
ACTOR.VOICE-SIMUL~sleep-LOCATIVE.VOICE

‘He pretends to sleep.’

The Alor-Pantar language Makalero does not have a simulative derivation, but reduplicates the SIMULEE in the complement clause with the reflexive form of the verb *mei* ‘take’ to express simulative meaning (14).¹⁰

- (14) MAKALERO (maka1316, Huber 2011: 140)

Kiloo ni mei isi~isit-ini
3SG REFL take SIMUL~ill-do:BOUND.FORM
uai = ni = ni urau sirvisu = na’a.
CLAUSE = LNK1 = LNK1 not.allowed work = INTENTIONAL

‘He pretended to be ill so he wouldn’t have to work.’

The reduplication of the simulee here reflects the simulative function (§3.4.1) of reduplication in this language,¹¹ and does not specifically express simulative meaning.

3.6 Data collection

This study is based either on first hand data or on examples collected from grammars, dictionaries and glossed texts. I systematically looked in translations for meanings such as ‘pretend’, ‘imitate’ or ‘fake’ in English or their

⁹This source however may not be entirely reliable (p.c. from several colleagues).

¹⁰This analytical construction is thus a subtype of reflexive simulative (§6).

¹¹As pointed out by Huber (2011: 140): “Verbal reduplication has three basic readings: either as a continuing or repeated action, something resembling the state of affairs as expressed by the verb, or a high degree of the quality expressed by the verb.”

equivalents in other languages to identify potential examples of simulative derivations. Since simulative constructions are not always specifically described in grammars, help from language experts was often necessary.¹²

4 Verbal compounds and incorporation

Predicative simulative constructions involving verb compounds are of three distinct types: verbal compounds (combining two verbal roots), SIMULEE incorporation and SIMULATIVE MARKER incorporation, the SIMULATOR being in all cases the (transitive or intransitive) subject of the incorporating verb.

4.1 Verb compounding

The verb compounding simulative construction involves a verb meaning ‘pretend’ fused with another verbal root serving as SIMULEE.

The clearest case in the sample is from the Bodo-Garo (Trans-Himalayan) language Rabha, where the verb *khithak* ‘pretend’, which can take a participial complement in *-e* (15a), has also been grammaticalized as a simulative suffix (15b) (Joseph 2007: 183).

(15) RABHA (rabh1238 Joseph 2007: 183;685)

- a. *aŋ si-e khithak-ŋa*
1SG die-PCP pretend-INF
‘I shall pretend to be dead.’
- b. *nasi-khithak-a*
love-SIMUL-PRS
‘pretend to love’

Another case of simulative verb compounding is found in Lakhota. The verb *kúŋze/a*, which means either ‘pretend’ or ‘put a curse on, decree/determine’, can be compounded with other verbs, which occur in bound forms with loss of the final stem vowel. For instance, the verb *khúžA* ‘be sick’ (16a) occurs as *khuš-* in the simulative construction (16b).

(16) LAKOTA (lako1247, Ullrich 2008: 315)

¹²I wish to thank Anton Antonov, Peter Arkadiev, Marie-Laure Coppolani, Denis Creissels, Marcel Erdal, Alain Fabre, Ives Goddard, Katharina Haude, Martin Haspelmath, Lameen Souag, Sylvie Voisin, and two anonymous reviewers for useful feedback on previous versions of this work. The data used in this article is from published sources and personal knowledge.

- a. *ma-khúže*
1SG:S/O-be.sick
'I am sick.'
- b. *khuš-wá-kunze*
be.sick-1SG:S/A-pretend
'I pretend to be sick.'

The Ram (Sepik) language Awtuw also has a simulative derivation *-panya* (17a) which is homophonous with, and obviously grammaticalized from the free verb *panya* 'pretend' (17b). It remains unclear if another construction with *panya* 'pretend' and a complement clause exists in this language, and if this verb can be employed with nouns.

(17) AWTUW (awtu1239, [Feldman 1986](#): 205;77)

- a. *Lamut d-ey'-e-re raew*
younger FACTIVE-come-PST-ACC 3DU
t-ewra-te-nak-panya-klak-e
DU-again-DU-hold-SIMUL-here.and.there-PST
'When the younger sister came, they pretended to grab fish again.'
- b. *awtuw, rey dā-k-pany'-ey-e*
no 3SG.MASC FACTIVE-IPFV-pretend-IPFV-PST
'No, he was just pretending.'

4.2 Incorporation of simulee

In languages with noun incorporation, when a verb meaning 'pretend' incorporates a verb, a noun or an adjective corresponding to its object, we obtain a simulative derivation. This subtype also includes languages where verbal SIMULEES have to be nominalized to be incorporated, as opposed to cases seen in the previous section where the bare root, or a bound form, is directly compounded with the verb 'pretend'.

In the sample, the only clear case of simulee incorporation is Classical Nahuatl, where the verbs *nehnequi* 'pretend, desire' (§3.4.3) and *pîqui* 'invent, feign' ([Andrews 2003](#): 275) incorporate either verbs in preterit-agentive nominalized form with the *-câ* suffix ([Andrews 2003](#): 325) or nouns to express a simulative meaning (Table 3; the sections in the table corresponds to simulative verbs from nouns and verbs, respectively). With nominal bases, this construction sometimes has a simulative, rather than simulative meaning (§3.4.1).

Table 3: Examples of simulative verbs in Classical Nahuatl (data from [Wimmer 2006](#))

Base noun/verb	Simulative verb
<i>xihuitl</i> ‘grass, turquoise’	<i>xiuh-nehnequi</i> ‘resemble turquoise’
<i>cihuâtl</i> ‘woman’	<i>cihuâ-nehnequi</i> ‘resemble a woman’
<i>têuctli</i> ‘lord’	<i>têuc-nehnequi</i> ‘pretend to be a lord’
<i>pâqui</i> ‘rejoice’	<i>pâc-câ-tla-pîqui</i> ‘pretend to be a happy person’
<i>miqui</i> ‘die’	<i>mic-câ-nehnequi</i> ‘pretend to be dead’
<i>cochi</i> ‘sleep’	<i>coch-câ-nehnequi</i> ‘pretend to sleep’
<i>cocoya</i> ‘be sick’	<i>cocox-câ-nehnequi</i> ‘pretend to be sick’

The analytic constructions corresponding to simulee incorporation are those with verb ‘pretend’ whose SIMULEE is a non-subject argument noun phrase, as in Russian where the verb *прикидываться* selects a simulee in the instrumental case (§18).

(18) RUSSIAN (russ1263, personal knowledge)

Он прикидывается героем.

On *prikidyvajetsja* *geroj-em*
3SG.MASC.NOM.SG pretend:PRS:3SG hero-SG:INSTR

‘He pretends to be a hero.’

Among the etymologically opaque simulative markers in the corpus, Nez Percé *-newi* ([Aoki 1994](#): 479-480), which derives simulative verbs from nouns, is likely to originate from a simulative incorporating construction, following the loss of the independent verb.¹³

4.3 Incorporation of simulative marker

Another type of incorporating simulative construction involves the SIMULEE as the incorporating verb and the SIMULATIVE MARKER as the incorporated element. The clearest example of this type in the sample is found in Hopi, where simulative verbs are formed by incorporating *atsa*, both an adjective ‘wrong, untrue’ and a noun ‘lie, falsehood’ (Table 4), a case of ERRATIVE → SIMULATIVE pathway (§3.4.2). This incorporated element does not saturate the object function in the argument structure of transitive verbs, and is rather an incorporated adjunct. The negation *-qa-* can be incorporated together with the simulative (§7.3).

¹³The verb root from which *-newi* was grammaticalized may be present in the verb *hînewi-se* ‘I am trying’ ([Aoki 1994](#): 150).

Table 4: Examples of simulative verbs in Hopi (hopi1249, [Hopi Dictionary Project 1998](#): 38)

Base verb	Simulative verb
<i>hepnuma</i> ‘be looking around for’	<i>atsa-hepnuma</i> ‘be pretending to search for’
<i>hiiko</i> ‘drink’	<i>atsa-hiko</i> ‘pretend to drink’
<i>tokva</i> ‘fall asleep’	<i>atsa-tokva</i> ‘pretend to fall asleep’
<i>tuwa</i> ‘find’	<i>atsa-qa-tuwa</i> ‘pretend not to see, find’

Nuuchahnulth displays another type of simulative marker incorporation. In this language, the simulative *-qaath/-qath* is not specifically incorporated on the verb. Rather, it is a bound morpheme which can anchor on different loci, including adverbial (19a) or verbal (19b) stems.

(19) NUUCHAHNULTH (nuuc1236, [Wojdak 2008](#): 51-52)

- a. *q^waʔuuḥ-qath-iš* *taʔiʔ Ken*
 purposely-claim-3.IND sick Ken
 ‘Ken is pretending to be sick on purpose.’
- b. *taʔiʔ-qath-iš* *Ken q^waʔuuḥ*
 sick-claim-3.IND Ken purposely
 ‘Ken is pretending to be sick on purpose.’

The simulative marker incorporation constructions have two analytic counterparts: an adverb ‘falsely, pretendingly’ as in Wardaman (20), and a serial verb construction with a denominal predicate ‘act falsely’ as in Warrongo, where the noun/adjective *magan* ‘false, lie’ is verbalized by the suffix *-bi* (21).

(20) WARDAMAN (ward1246, [Merlan 1994](#): 277)

wurr-yo-yi-rri-ya *gewernima*
 3N.SG-spear-RECIP-PST-NAR pretending

‘They pretended to spear each other.’

(21) WARRONGO (waru1264, [Tsunoda 2011](#): 367)

nyola *magan-bi-n* *wola-n.*
 3SG.NOM false-VERBALIZER-N.FUT die-N.FUT

‘He did falsely, died’ (lit.), i.e. ‘He pretended to be dead.’

5 Predicative simulatives from nominal compounds

This section documents simulative markers appearing in noun compounds, but used in predicative function, either with an auxiliary verb, or a denominal verbalizing derivation.

5.1 Simulative action nominals

Simulative action nominals involve noun compounds, but differs from non-predicative simulative derivations (§2) in that the resulting noun does not refer to the SIMULATOR, but rather to the simulative action itself. This noun can serve as a predicate when employed with an auxiliary.

The clearest example in the corpus is the simulative construction in Japhug involving noun-verb compounds with *k^hramba* ‘lie’ as first element (a borrowing from Tibetan *k^hram.ba* ‘lie’), which occur with the auxiliary *βzu* ‘make’ (22). The argument structure of the base verb is not neutralized, since both its subject and object can be indexed on the auxiliary.

(22) Japhug (japh1234, Jacques 2021: 796;1341)

[*k^hramba-qur*] *ma-tɣ-ku-βzu-a*
lie-help PROHIB-IMP-2→1-make-1SG

‘Do not pretend to help me!’

The only similar case in the sample is the *-gsV* suffix in Evenki (Vasilevich 1958: 752;763), which requires the presence of the auxiliary verb *ō* ‘do’.

5.2 Verbalization of non-predicative simulative compounds

A non-predicative simulative marker can become a predicative simulative if the nominal form is subsequently verbalized.

Classical Greek illustrates one example of this phenomenon: *ψευδο-μάρτυς* *pseudo-mártus* ‘false witness’, the non-predicative simulative of *μάρτυς* *mártus* ‘witness’, can be verbalized to *ψευδο-μαρτυρέω* *pseudo-marturéō* ‘bear false witness’. This verb however, can also synchronically be considered to be the simulative of *μαρτυρέω* *marturéō* ‘bear witness, give evidence’, the verbalizing denominal derivation from the base noun *μάρτυς* *mártus* ‘witness’. This is the only known pair of this type in Greek, but if this process had been generalized to a greater extent, it could have given rise to a productive predicative simulative marker.

Other languages under the influence from the Greek New Testament, have calqued this verb and created a similar derivation, for instance Russian *лжесвидетельствовать* *lzhe-svidetel'stvovat'* ‘bear false witness’, where the prefix *lzhe-* translates Greek *pseudo-*.

6 Reflexive and reciprocal

The reflexive is used in various ways to build simulative constructions. In the Austronesian language Kiput (kipu1237), the reflexive prefix *sep-* is used with a simulative meaning in the intransitive verb *sep-akét* ‘pretend to be ill’ (Blust 2003: 31), but this is exceptional: all other examples involve additional derivations, in particular causative (§6.1), incorporation (§6.2), or instrumental (§6.3) derivations.

6.1 Reflexive and causative

The combination of reflexive and causative ‘cause oneself to be/do’ has a simulative interpretation (alongside the literal meaning) in various languages, including Abaza, Oneida, Mapudungun, Nivaclé, Musqueam, Classical Hebrew (the *hitpael* verbal pattern), Mandinka, Atlantic languages, and Tswana (23),¹⁴

(23) TSWANA (tswa1253, Creissels 2002: 420)

- a. *lil-à*
cry-FINAL
‘To cry’
- b. *lid-ís-à*
cry-CAUS-FINAL
‘To cause to cry’
- c. *í-tíd-ís-à*
REFL-cry-CAUS-FINAL
‘To pretend to cry’

In some cases, a polyfunctional causative/applicative affix is combined with a reflexive/middle affix, as in Atlantic languages (Table 5, Voisin to appear).¹⁵ Clear examples of simulative deriving from dedicated applicative + reflexive are not found in the sample.

There are formal differences between the causative-reflexive and the simulative meanings in some languages. In Jóola Karon for instance (Sam-bou 2014: 486-489), the simulative requires partial reduplication of the

¹⁴The alternations in (23), including the fortition of *l* to *d* and to *t*, are regular morphophonological processes in Tswana (Creissels 2002).

¹⁵This is all the more remarkable in that the affixes themselves are only partially cognate with each other (Table 5). Laala *-duk* is highly similar to Saafi-saafi *-duk* (Pouye 2015: 286-289) and Paloor *-doh* (Thornell et al. 2016: 160), and it is possible that these suffixes are genuine cognates, grammaticalized in their common ancestor. In Pulaar and Sereer, the etymology of the simulative is partially opaque. In Jóola Fóoñi, Hopkins (1995: 42) cites a form *-alen-oor* combining causative and reflexive, but Creissels and Bassène (In preparation) document a suffix *-lancen-oor* instead (*ri* ‘eat’ → *ri-lancenoor* ‘pretend to eat’), whose first element *-lancen* means ‘do something again’.

base (*nap* ‘be nice’ → *na~nap-anoolo* ‘pretend to be nice’) while the literal causative-reflexive meaning occurs when the entire verb form is repeated (*wállli* ‘be beautiful’ → *wállli-anoola-i wállli-anoola* ‘make oneself beautiful’).¹⁶

Table 5: Simulative suffixes in Atlantic languages and their etymology (based on [Voisin to appear](#))

Language	Simulative	Causative/ Applicative	Reflexive/ Middle	Reference
Laala	<i>-d-uk</i>	<i>-id</i>	<i>-uk</i>	Dieye (2011: 224)
Wolof	<i>-l-u</i>	<i>-al</i>	<i>-u</i>	Diouf (2009: 32, 56)
Guñaamolo	<i>-undiin-a</i>	<i>-undiin</i>	<i>-a</i>	Bao Diop (2013: 202)
Jóola Fóoñi	<i>-lancen-oor</i>	–	<i>-oor</i>	Creissels and Bassène (In preparation)
Jóola Karon	<i>-an-oolo</i>	<i>-an</i>	<i>-oolo</i>	Sambou (2014: 470-471)
Pulaar	<i>-in-kin</i>	<i>-in</i>	–	Diallo (2015: 140)
Sereer	<i>-at-oox</i>	–	<i>-oox</i>	Heath (2014)

This type of construction is productive and compatible with both transitive and intransitive verbs in some languages (Mapudungun, Tswana), while it appears limited to a few intransitive verbs in the other languages, though sources rarely give explicit information concerning the productivity of these constructions.

The reason why this combination of derivations expresses simulative meaning is due to the fact that they convey an idea of increased volition (‘do *X* on purpose’), one of the semantic components of the simulative (§3.4.1): the pretence meaning is only contextual, and for this reason this type of construction tends to be non-dedicated, except when the morphology becomes synchronically opaque (§6.5).

The analytic counterpart of the double reflexive/causative derivation, involving the reflexive form of a verb meaning ‘make, do’ serving as causative auxiliary, is very frequent crosslinguistically. In the Trans-Himalayan family alone, for instance, this combination was independently innovated at least five times to express simulative meaning, even though some forms share cognate material (Table 6).

¹⁶I wish to thank an anonymous for pointing out this important difference.

Table 6: Verbs meaning ‘pretend’ originating from the reflexive of the verb ‘do, make’ in the Trans-Himalayan family

Subgroup	Language	Form	Base verb	Reference
Rgyalrongic	Japhug	ꞑꞑꞑ- <i>pa</i> REFL-do	<i>pa</i> ‘do’	Jacques (2021: 896)
	Khroskyabs	ꞑꞑꞑ- <i>vi</i> REFL-do	<i>vi</i> ‘do’	Lai (2017: 557)
Kiranti	Khaling	<i>mu-t-si</i> do-APPL-REFL	<i>mu</i> ‘do’	Jacques et al. (2015)
Sinitic	Old Chinese	偽 <i>ɲjweH</i> < * <i>ɲ-waj-s</i> INTR-do-INTR	為 <i>hjwe</i> ‘do’ < * <i>waj</i>	?
Kham-Magar	Kham	<i>jəi-si</i> - make-REFL	<i>jəi</i> ‘make’	Watters (2002: 267)

Simulative interpretation of a causative construction, without overt reflexive, is also attested: for instance, in the Siouan language Omaha the causative auxiliary *gáxe* ‘make’ has simulative uses (Marsault 2021: 320).

6.1.1 Simulative and auto-estimative

In Abaza, the combination of reflexive and causative can have either a simulative (24a) or an *auto-estimative* meaning (24b) ‘consider oneself to be *X*’.

(24) ABAZA (abaz1241, Tabulova 1976: 186-187)

- a. *tʃ-rə-čʰmazaɸ^w-ra*
REFL-CAUS-ill-MASDAR
‘Pretend to be sick.’
- b. *tʃ-rə-g^wəbzəɸa-ra*
REFL-CAUS-intelligent-MASDAR
‘Consider oneself to be intelligent.’

The auto-estimative meaning of the combination of causative and reflexive derivations is not unexpected, since estimative ‘consider to be *X*’ function is attested as a semantic extension of the causative crosslinguistically (Jacques ahead of print).

6.2 Reflexive and incorporation

Reflexive morphology can also be combined with incorporation to express simulative meaning.

In Nahuatl, in addition to the plain incorporating construction (Table 3, §4.2), simulative predicates can be built from the verb *-ihtoa* ‘speak’

incorporating a nominal object together with reflexive indexation (Table 7).¹⁷

Table 7: Reflexive simulative verbs in Classical Nahuatl (data from Wimmer 2006)

Base noun	Simulative verb
<i>oquichtli</i> ‘man’	<i>m(o)-oquich-ihtoa</i> ‘pretend to be a man’
<i>cuâhtli</i> ‘eagle’	<i>mo-cuâhu-ihtoa</i> ‘pretend to be an eagle’

This construction literally means ‘call oneself a *X*’.

6.3 Reflexive and instrumental

In Nez Percé, in addition to the simulative suffix *-tay* (Table 2, §3.4.2), the meaning ‘pretend’ can be expressed by combining the instrumental prefix *-we-* ‘with mouth’ with reflexive morphology, which is expressed by a special set of indexation prefixes (1SG *in-*, 2SG *im-*, 3SG *ipn-*). The instrumental *-we-* is realized in these forms as the allomorph *-u-* or *-o-* depending on vowel harmony.

The instrumental *-we-* is to be interpreted here as deriving a speech predicate, and the construction literally means ‘say that oneself is *X*’, typologically very similar to the incorporation with *-ihtoa* ‘speak’ in Nahuatl (§6.2), except from the fact that this derivation selects verbal, rather than nominal bases.¹⁸

Table 8: Examples of the simulative use of the reflexive + ‘by mouth’ instrumental in Nez Percé (Aoki 1994)

Base verb		Simulative verb	
<i>piním-se</i>	I am asleep	<i>?in-u-pinm-ik-se</i>	I pretend to be asleep
<i>qóy-</i>	be clean (bound form)	<i>?in-ó-qoy-k-sa</i>	I pretend to be clean
<i>tiñ(u)kí-ce</i>	I am dying	<i>?in-ú-tiñk-se</i>	I pretend to be dead
<i>mim(i)lu-wí-se</i>	I don’t understand	<i>?ipn-u-milu-wí-se</i>	He pretends to be ignorant
<i>kómay-ca</i>	I am sick	<i>?in-ó-komay-k-sa</i>	I pretend to be sick
<i>wepcukuywí-se</i>	I get smart	<i>?ipn-u-wepcukuywí-se</i>	He pretends to be smart

In addition, the simulative suffix *-ne-wi*, which builds simulative verbs from nouns or adjectives (Aoki 1994: 479-480), takes in some cases in the reflexive and ‘by mouth’ instrumental (25b), though some examples lack it (25a).

¹⁷In Classical Nahuatl, reflexive verbs take the prefix *mo-* in all (singular and plural) second and third persons. Only the 1SG and 1PL have specific forms (*no-* and *to-*, respectively).

¹⁸The data in Table 8 is based on data from Aoki (1994), which sometimes quotes verb forms in 1/2SG (translated as 1SG), sometimes in 3SG forms.

(25) Nez Percé (nezp1238, Aoki 1994: 479-480)

- a. *hama-nix-ná-wi-sa*
 man-INTENS-SIMUL-PRS:SG
 ‘I am pretending to be brave.’
- b. *?ipn-u-wepcux-né-wi-se*
 REFL:3SG-by.mouth-smart-SIMUL-PRS:SG
 ‘He pretends to be smart.’

Although body-part instrumental affixes are widespread in the languages of North America, no other case of simulative use of ‘with mouth’ instrumental has been found up to now.

6.4 Reciprocal

The derived form VI of the Classical Arabic verb has a variety of meanings, including reciprocal, gradual increase, conative and simulative, as illustrated in Table 9.

Table 9: Examples of Form VI in Arabic (based on Ryding 2005: 543)

Base verb (form I)	Simulative verb (form VI)
<i>qatal-a</i> ‘kill’	<i>ta-qātal-a</i> ‘fight with each other’
<i>katab-a</i> ‘write’	<i>ta-kātab-a</i> ‘correspond’
<i>jāhil-a</i> ‘be ignorant’	<i>ta-jāhal-a</i> ‘to feign ignorance’
<i>šāwal-a</i> ‘occupy sb. with’	<i>ta-fāwal-a</i> ‘to pretend to be busy’
<i>marīḡ^f-a</i> ‘be sick’	<i>ta-māriḡ^f-a</i> ‘to pretend to be sick’
<i>saqat^f-a</i> ‘be fall’	<i>ta-sāqat^f-a</i> ‘to fall continuously’

One cannot necessarily infer from this observation however, that the simulative meaning derives from the reciprocal function, in particular in the case of intransitive verbs. Form VI is built by adding the reflexive prefix *ta-* to the form III (*fāšala*), which has an applicative function (*kataba* ‘write’ → *kātaba* ‘write to’), and this could be an example of reflexive applicative simulative (§6.1).¹⁹

A clearer case of simulative derivation involving a reciprocal marker is found in Meithei, whose simulative suffix *-sin-nə* includes the reciprocal suffix *-nə* (which never has reflexive meaning), and the orientation marker *-sin* ‘inwards’ (from the verb *sin-* ‘be in’, Chelliah 1997: 205). The semantic pathways leading to a simulative meaning here remains elusive.

¹⁹A possible way to account for the reflexive applicative *ta-jāhal-a* ‘to feign ignorance’ could be ‘act as an ignorant with oneself’.

(26) MEITHEI (mani1292, Chelliah 1997: 136)

páŋ-sin-nə-si
fool-INWARDS-RECIP-HORT

‘Let us pretend to be foolish!’

6.5 Fossilized reflexive

Simulative constructions based on the combination of reflexive and causative can become bleached and synchronically non-analyzable affixes. This is possibly the case in Mapundungun (§7.2), and clearest in Algonquian.

The simulative suffixal derivations in Central and Eastern Algonquian languages (Table 10) originate from a combination of final stems. If the attested forms are projected back to proto-Algonquian, three distinct proto-forms are found: **-ehka-θ-eswi* (in Maliseet and other Eastern Algonquian languages), **-ehka-θ-wi* (in Meskwaki) and **-ehka-s-wi* (in all Central Algonquian languages, including Meskwaki).

These three variants are based on the **-ehke-* intransitive animate final stem ‘make’²⁰ turned into a transitive animate verb by the suffix **-θ-*, with regular morphophonological alternation to **-ehka*,²¹ then converted to a reflexive verb by the reflexive **-wi*. Its original meaning, synchronically completely obscure, is thus ‘make oneself *X*’. This morphology is completely fossilized in the synchrony, and only recoverable using our cumulative knowledge on Algonquian historical morphology. The final **-ehke-* ‘make’ is denominal verbalizing, and is not synchronically used to make causatives in Algonquian languages.²²

In the variant **-ehka-s-wi*, the original form of the simulative suffix, the transitive animate suffix **-θ-* alternates with *-s* by a morphological rule (Bloomfield 1957: 87).²³ The more transparent forms **-ehka-θ-wi* and **-ehka-θ-eswi* are analogical, the first one undoing the morphological rule, the second one resulting from the reanalysis of **-s-wi* (from **-θ-wi*) as a unitary reflexive suffix, redundantly added the **-θ-* final with a linking vowel.²⁴

²⁰Ojibwe *-ike*, as in *asab* ‘net’ → *asab-ike* ‘make nets’.

²¹This vowel alternation is still widespread in Ojibwe, as in *minikwe* ‘drink’ → *mikikwaazh/n* ‘use as a drink’ (Valentine 2001: 475-476), the final *-zh/-n* alternation reflecting proto-Algonquian **-θ-*.

²²This may indicate that the simulative stems **-ehka-s-wi*/**-ehka-θ-eswi*/**-ehka-θ-wi* were originally used with nominal bases exclusively, and then extended to verbal bases.

²³The historical origin of this alternation is unclear, but it is a regular morphological alternation in Algonquian: transitive animate verbs with the final stem **-θ* (Ojibwe *-n/-zh* for example) regularly form their reflexive by replacing this final by **-swi* (Ojibwe *-zo*).

²⁴I am grateful to Ives Goddard for his help clarifying this historical process. I remain responsible for any misunderstanding.

Table 10: Reflexive of the simulative final stem in Algonquian languages

Language	Form	Proto-form	Reference
Ojibwe	<i>-kaazo</i> <i>nibê-kaazo</i> ‘pretend to sleep’	*-ehka-s-wi	Valentine (2001: 413-414)
Plains Cree	<i>-hkāso</i> <i>okimā-hkāso</i> ‘pretend to be a chief’	*-ehka-s-wi	Wolvengrey (2001)
Menominee	<i>-hkaso-</i> <i>nepē-hkaso-w</i> ‘pretend to be asleep’	*-ehka-s-wi	Macauley (2016)
Meskwaki	<i>-hkaso-</i> <i>okimāwî-hkāso-wa</i> ‘pretend to be a chief’ <i>-hkano-</i> <i>nepê-hkâno-wa</i> ‘pretend to sleep’	*-ehka-s-wi *-ehka-θ-wi	Goddard and Thomason (2005)
Maliseet	<i>-hkalsu</i> <i>ksinuhke-hkalsu</i> ‘pretend to be sick’	*-ehka-θ-eswi	LeSourd (1986)

Unlike Central and Eastern Algonquian (Table 10), Plains Algonquian languages have unrelated simulative affixes: Arapaho and Blackfoot have preverbs (*nénes-* Cowell and Moss 2006: 209;332 and *ikippa’-* Frantz and Russell 2017: 48, respectively) and Cheyenne a pair of finals (VTA *-ma’ov* and VAI *-máne*, Fisher et al. 2017), whose etymologies are unknown and are unrelated to each other. The simulative constitutes another innovation supporting the node comprising Central and Eastern Algonquian languages (Goddard 1994).

The case of Algonquian languages illustrates how formerly analyzable reflexive causative derivations may become obscured by morphological refection and sound change, and it is possible that some of the etymologically obscure simulative derivations in Table 1 could be analyzed in this way if we had a comparable knowledge of historical linguistics.²⁵

6.6 Reflexive in analytic simulative constructions

Reflexive-middle morphology can be a partial exponent of simulative meaning in analytic constructions: in Gitksan for instance, the preverbal adverb *his* ‘pretending’ requires the reflexive-passive *-s* suffix on the verb, as in (27).

(27) GITKSAN (gitx1241, Rigsby 1986: 335)

his *cuq-s*
pretending camp-REFL/PASS

²⁵For language isolates, it may be impossible to recover the etymology of these affixes.

‘Have a picnic (pretend to camp)’

7 Combination with other derivations and inflections

Not all of the attested predicative simulative derivations allow combination with other derivations, whether valency-increasing or valency-decreasing. On the one hand, simulatives that are only compatible with intransitive verbs (such as *-kaazo* in Ojibwe, §6.5) cannot take verb stems with valency increasing derivations as input (§3.3). On the other hand, derivations based on the combination of reflexive and causative (§6.1) are often incompatible with these two derivations if there are constraints against affix repetition in the same verb form.

7.1 Valency-increasing derivations

The limited amount of information devoted to simulative derivations in grammars does not usually allow to infer whether these derivations are compatible with other types of derivations.

Highly productive simulatives are presumably compatible with any type of derivations, at least those involving an animate volitional subject. In the corpus, we find three examples of simulative combined with valency-increasing morphology.

In Eskaleut languages, the simulative can be combined with a wide range of derivations, including the causative, as illustrated by (28).

(28) YUPIK (cent2127, [Miyaoka 2012](#): 1178)

angut-ngu-nguar-cet-aanga
man-be-SIMUL-CAUS-IND.3SG→1SG

‘He is letting me [female] look like a man.’

In Rabha (§4.1), whose simulative verbal root *khithak* ‘pretend’ may be etymologically a causative of the verb *tak* ‘do’ ([Joseph 2007](#): 183), we nevertheless find one example of simulative verb derived from a verb stem with itself takes another allomorph of the causative prefix (29).

(29) RABHA (rabh1238, [Joseph 2007](#): 183)

tu-nuk-khithak-a
CAUS-see-SIMUL-PRS

‘put on a show, act hypocritically’ (literally, ‘pretend to show’)

There is also an example of simulative on an applicative verb in Arapaho (30).

- (30) ARAPAHO (arap1274, Cowell and Moss 2006: 332)

heet-nenes-iinikotii-w-o'
IC.FUT-SIMUL-play-APPL-1SG→3SG

‘I will pretend to be playing with him.’

A more detailed investigation of the full range of compatibilities requires additional fieldwork in each language, and lies beyond the scope of this paper.

7.2 Double exponence of reflexive

In Mapudungun, the simulative *-faluw* historically originates from the combination of the similative *-fa* ‘become like this’, the causative *-l* and the reflexive *-uw* (literally ‘to make oneself become like this’, Smeets 2008: 267).²⁶ It etymologically belongs to the reflexive causative subtype of simulative (§6), but is not synchronically analyzable as such.

In the majority of simulative verbs the reflexive *-(u)w-* occurs before the simulative (as in 31). Such a form thus contains two instances of the reflexive suffix (*-(u)w-fal-uw*), though the second one is synchronically non-analyzable. The presence or absence of the additional reflexive is lexically determined, and it has no effect on the meaning and transitivity of the resulting verb (Smeets 2008: 266).

- (31) MAPUDUNGUN (mapu1245, Smeets 2008: 266)

loko-w-faluw-iin
crazy-REFL-SIMUL-IND:1SG

‘I pretended to be crazy.’

According to Smeets, this puzzling feature may be explained as a calque from the Spanish construction with the verb *hacerse* ‘pretend’, which involves a reflexive form. The double exponence of the reflexive could be due to the fact that the element *-uw* in *-faluw* has become bleached, and that adding a second *-uw* serves to remotivate the reflexive meaning, to fit the Spanish construction.

²⁶It is homophonous with the combination of the deontic/coerced causative *-fal* (which means either ‘have to’ or ‘force/coerce someone to do’) followed by the reflexive *-uw*, and Smeets (2008: 275) cites ambiguous sentences.

7.3 Negation

In some languages there is neutralization of the scope of negation with simulative. In Mapudungun, the negation *-la* strictly follows the simulative *-faluw*, but both interpretations ‘pretend not to’ and ‘not pretend to’ are possible (32), although the second one is most common (Smeets 2008: 266).

- (32) MAPUDUNGUN (mapu1245, Smeets 2008: 264-266)
- a. *llaq allkü-n, welu allkü-w-faluw-la-n*
half hear-IND:1SG but hear-REFL-SIMUL-NEG-IND:1SG
‘I half heard it, but I pretended not to hear it.’
- b. *pe-w-faluw-la-eyu*
see-REFL-SIMUL-NEG-IND:1SG→2SG
‘I did not pretend to see you.’; ‘I pretended not to see you.’

In other cases, the ordering of negation and simulative reflects the semantic scope. For instance, in Hopi the negation *qa* ‘not’, normally an independent word, can be incorporated together with the simulative marker (§4.3) when the simulative has scope over the negative morpheme as in (33).

- (33) HOPI (hopi1249, Hopi Dictionary Project 1998: 38)
- atsa-qa-tuwa*
SIMUL-NEG-see
‘Pretend not to see, find.’

8 Conclusion

This survey shows that predicative simulative derivations have three main origins: incorporation, verbalization of noun compounds including non-predicative simulative and combination of reflexive and other derivations (in particular causative). By far the most common source of simulative derivations crosslinguistically is the reflexive/causative combination (14 out of 30 simulative markers whose diachronic origin is known in Table 1).

This work illustrates the geographical skewing of predicative simulative derivations, which are most common in the Americas and in West Africa, while they are absent from Australia, to the extent of our present knowledge.

One typological generalization comes out of this survey: when a simulative derivation has a transitivity-related restriction (§3.3), it always involves transitive verbs. All verbal simulatives are compatible with intransitive verbs.

sitive verbs, and there are no cases of simulative derivations that require a transitive base as input.

Abbreviations

CONJ conjunct order, DECL declarative, DESID desiderative, IC initial change, IND indicative, INDEP independent order, ITER iterative, LNK linker, MRK marker, PCP participle, PROX proximative, PRS present, REDP reduplication, SIMUL simulative, TEMP temporary, VAI intransitive animate verb, VII intransitive inanimate verb, VTA transitive animate verb, VTI transitive inanimate verb

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