

The rise of middle voice systems

A study in diachronic typology

Guglielmo Inglese

Università di Torino

Middle markers are characterized by a distribution halfway between grammar and the lexicon: with some verbs, middle marking encodes valency change, while with others it obligatorily occurs with no obvious synchronic motivation. Despite the existing cross-linguistic work on middle markers, their history is still largely unknown. In the typological literature, the standard view is that middle markers predominantly have their origin in reflexive markers, and that, in their development, it is invariably the grammatical component that expands to the lexical component. In this paper, I challenge these assumptions based on the analysis of a sample of 129 middle marking languages. As I show, the sources and pathways whereby middle markers come about are much more numerous and varied than what has been reported in the literature. By taking a source-oriented approach, I also discuss how recurrent cross-linguistic trends in the distribution of middle markers can in part be explained by looking at their history.

Keywords: middle voice, middle marker, diachronic typology, reflexive

1. Introduction

Over the past decades, typological studies have progressively brought to light the synchronic formal and functional variation that exists in the middle voice domain across languages (Geniušienė 1987; Klaiman 1991; Kemmer 1993; Zúñiga & Kittilä 2019). In this paper, I follow the definition of middle marker (henceforth, MM) proposed in Inglese (2021). MMs typically occur in two contexts: when applied to bivalent (or more) verbs, they encode a range of valency changing operations such as reflexive, passive, and anticausative, while with other verbs the same



marker shows an obligatory lexically specific distribution.¹ Generalizing over the distribution of MMs across languages, Kemmer (1993) famously proposed that MMs prototypically apply to situations featuring a low degree of elaboration of events (see §2), and that a close connection exists, both synchronically as well as diachronically, between middle and reflexive markers.

In spite of the typological work dedicated to the topic, a comprehensive diachronic typology of MMs remains a desideratum. In fact, existing studies focus almost exclusively on the diachrony of valency changing markers and fail to address MMs as such (e.g., Bahrt 2021: Chapter 7). Moreover, even these studies are problematic, since there is evidence for alternative scenarios to the ones discussed in the literature (see §3).

This paper aims to fill this gap. The first goal is to offer a survey of the possible sources and processes that may give rise to MMs. Such systematic documentation will cast new light on whether specific sources and/or processes are more recurrently involved in the rise of MMs, and why. The second goal is to evaluate the role of the historical evidence in explaining the nature of MMs. As I argue, not only can a historical perspective better explain several cross-linguistic tendencies in the occurrence of MMs, but, more importantly, once the diachronic evidence is taken seriously into consideration, it challenges current explanations of the nature of the middle voice.

The paper is structured as follows. Section 2 presents the definition of MMs that I adopt in this paper. Section 3 addresses the issue of directionality in the development of valency changing markers. Section 4 explores the diachrony of MMs in a sample of 129 middle-marking languages, with a focus on the sources of MMs (§4.1) and the different types of historical processes that give rise to middle voice systems (§4.2). Evidence discussed in these sections calls into question the mainstream view that cross-linguistically reflexives are the preferred source of MMs. Section 5 touches upon the role of language contact in the development of MMs. In §6, I elaborate on the more general significance of the historical data presented in §4 and §5 for the typology of MMs. Section 7 presents the conclusions of this work.

1. The term “marker” is used as a general cover term for all types of constructions that may instantiate MMs. This is meant to capture the fact that while most MMs are in fact affixes, in other cases the middle voice can be encoded by constructions that can hardly be described as a single marker, e.g., by cumulative exponence or non-concatenative processes (see Inglese 2021: fn. 12 for discussion).

2. Towards a comparative concept of middle marker

In the typological literature, voice is defined as a grammatical category of the verb whose values correspond to specific mapping of the verb's semantic roles onto grammatical relations (Klaiman 1991: 1; Zúñiga & Kittilä 2019: 4; Bahrt 2021).²

The existence of the middle as a distinct type of voice has been advocated since antiquity and studies on the middle have long been confined to the tradition of Indo-European studies (Inglese 2020: 9–14; for a history of research on the middle, see Zúñiga and Kittilä 2019: 171–175 and Inglese 2021). It is thanks to the groundbreaking work by Geniušienė (1987), Klaiman (1991), and especially Kemmer (1993), that the middle voice has become a topic of interest for linguistic typology. Yet, existing studies do not offer a rigorous enough definition of what counts as an MM cross-linguistically, so that the middle remains a somewhat elusive notion in terms of typology (Zúñiga & Kittilä 2019: 168–177).

In this paper, I follow the comparative concept of MM proposed in Inglese (2021). The defining characteristic of MMs is that they occur in at least two main contexts: (i) they are used with bivalent (or more) non-middle verbs to express valency-changing operations including passive, anticausative, reflexive, reciprocal, antipassive; (ii) they also obligatory occur with some (at least monovalent) verbs. MMs that occur in opposition to non-middle verbs to signal valency change are termed “oppositional”, while those obligatorily middle marked verbs that lack a non-middle counterpart are “non-oppositional” middles (these correspond to Klaiman's 1991: 106 terms “alternating” and “nonalternating”).³ Non-oppositional middles are equivalent to *media tantum* in the Indo-European linguistics tradition (e.g., Allan 2003, 2014).⁴ Together, oppositional and non-oppositional middles constitute a middle voice system (henceforth, MVS). It follows that the

2. This approach to grammatical voice is historically rooted in the work of the Leningrad-St Petersburg Typology Group (see Kulikov 2010).

3. This is a general definition that captures the minimal properties of MM. In actual fact, MMs show a much wider range of usages (see Kemmer 1993 and Inglese 2021). Other valency-related functions of oppositional middles include facilitative (e.g., Italian *la carne si taglia facilmente* ‘the meat cuts easily’), impersonal (e.g., *si balla* ‘one dances’), and self-benefactive (e.g., *Mario si compra un libro* ‘Mario bought himself a book’; on the valency effect of this pattern see Kulikov 2010: 391). Besides monovalent verbs (e.g., ‘die’, ‘stand’), non-oppositional middles may also include bivalent verbs, e.g., experiencer verbs ‘love’, ‘think’, ‘see’.

4. I follow Grestenberger (2016) *contra* Kemmer (1993) and reserve the term “deponent” for syntactically transitive non-oppositional middles, e.g., Latin *hortor* ‘incite (someone)’.

middle is technically not a specific type of voice, but rather a cluster of functions (Kulikov 2010: 393; Zúñiga & Kittilä 2019: 176).⁵

The advantage of this comparative concept is that it is grounded in two well-defined criteria, that is, the association with valency changing operations, whose identification can be based on their respective comparative concepts (in this paper, I follow the definitions in Zúñiga and Kittilä 2019; see also Bahrt 2021), and with a straightforward distributional criterion, i.e., existence of verbs that only occur with the marker at hand. This definition avoids the need to ground the identification of MMs on vaguely defined semantic criteria such as elaboration of events or the subject's involvement, and is better suited to achieve a meaningful cross-linguistic comparison. In particular, the inclusion of both oppositional and non-oppositional middles allows us to narrow down the identification of MMs to a homogenous set of elements and to keep them distinct from non-middle voice markers such as syncretic intransitivizers (with only oppositional verbs) and verb classification systems (with only non-oppositional verbs); see Inglese (2021) for further details.

A textbook example of an MVS is the Ancient Greek Middle inflection (Allan 2003; Zúñiga & Kittilä 2019: 169–171), as in (1):⁶

- (1) Ancient Greek (Indo-European, Greek) (Romagno 2010: 431–432; Allan 2014)
- | | |
|---|--|
| a. <i>phtheírō</i> 'destroy.ACT' | → <i>phtheíromai</i> 'perish.MM' (ANTC) |
| <i>pléssō</i> 'beat.ACT' | → <i>pléssomai</i> 'hit oneself.MM' (REFL) |
| <i>leípō</i> 'leave.ACT' | → <i>leípomai</i> 'be left.MM' (PASS) |
| b. <i>keímαι</i> 'lie', <i>éramαι</i> 'love', <i>pétomαι</i> 'fly', <i>agōnízomαι</i> 'contend', <i>gígnomαι</i> 'happen' | |

With the verbs in (1a), the Middle inflection can be described as oppositional, as it alternates with Active verbs to express anticausative, reflexive, or passive meanings. By contrast, the non-oppositional verbs in (1b) can only occur in the Middle inflection, and a non-middle counterpart is lacking.

5. For convenience, I collectively refer to oppositional middle functions as valency reducing, even though their actual effect on valency is varied (see Kulikov 2010; Zúñiga and Kittilä 2019 and Bahrt 2021 for discussion). Passives and antipassives typically reduce syntactic valency but leave the semantic valency of verbs unaltered (for this reason, they are viewed by some authors as the only voices *sensu stricto*, e.g., Kulikov 2010: 374–384). By contrast, anticausatives reduce both semantic and syntactic valency. Reflexive and reciprocal constructions manipulate semantic valency by establishing coreference between participants, and may have various effects on syntactic valency.

6. Language names and genetic affiliations are taken from Inglese (2021) and are reported in the online supplementary materials <https://doi.org/10.5281/zenodo.7019872>. Following a widespread convention, I use capitalized names for language-specific categories.

The main comprehensive typological account of MVs is offered by Kemmer (1993). Based on the analysis of a sample of 32 languages, Kemmer (1993) argues that MMs recurrently express a well-defined set of “situation types”, i.e., “semantic/pragmatic contexts” (Kemmer 1993: 7). As shown in (1), these include reflexives, passives, verbs of (non-)translational motion and body posture, spontaneous events, inherently reciprocal events, and various experiencer situations (the list is not exhaustive; on the semantics of non-oppositional middles see Inglese 2021). Based on this evidence, Kemmer argues that middle marking prototypically occurs with situations that feature a low degree of elaboration of events. In her view, these are situations featuring two participants, the Initiator and the End-point, which are not fully physically and conceptually distinguishable, thus differing from typically transitive verbs, which feature two fully distinguished participants (see Næss 2007: 22–29). Prototypical middle situations as defined by Kemmer include verbs of grooming and non-translational motion.

3. The diachrony of valency reducing markers

Before turning to the sources of MMs (§4), I briefly review the historical connections that exist among the valency operations that potentially fall within the oppositional middle domain as defined in §2.

The diachrony of valency reducing markers constitutes a well-researched topic in grammaticalization studies. Typological diachronic studies dedicated to individual functions have appeared on passives (Haspelmath 1990; Wiemer 2011), reflexives (König & Siemund 2000; Schladt 2000; Evseeva & Salaberri 2018), reciprocals (Heine & Miyashita 2008) and antipassives (Sansò 2017). As shown by these studies, valency reducing markers come about following well-defined grammaticalization paths from a selected number of sources (cf. Zúñiga & Kittilä 2019: Chapter 8; Kuteva et al. 2019).

In the case of polyfunctional valency reducing markers, cross-linguistic data robustly points towards reflexives as the most likely source of the other functions (Lehmann 2015: 50; see Bahrt 2021: Chapter 7 for an exhaustive discussion). Reflexives constitute a common source of reciprocals (Heine & Miyashita 2008), which in turn may develop into antipassives (Sansò 2017).⁷ Reflexives may also develop into anticausatives and eventually into passives, in some languages through the intermediate stages of facilitatives (Haspelmath 2003: 225; cf. Holvoet 2020: 150–156). These developments essentially underlie, for example, the poly-

7. Sansò (2017: 195–197) argues for reciprocals as a direct source of antipassives, but a direct link between reflexives and antipassives has been advocated by e.g., Holvoet (2020: 65–67).

functionality of the Reflexive morpheme as an intransitivizer in several modern Indo-European languages of Europe, including Germanic, Romance, Slavic and Baltic languages (§4.1.1, §4.2.1). The two often-cited secondary grammaticalization pathways (that is, from a grammatical to another grammatical function; Breban 2014) that account for the REFLEXIVE > INTRANSITIVIZER development are summarized in Figure 1.

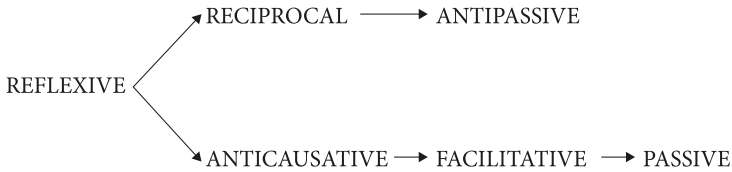


Figure 1. The grammaticalization of reflexives

Scholars have often maintained that the clines in Figure 1 are essentially unidirectional (Haspelmath 1990, 2003; Kemmer 1993; König & Siemund 2000; Kuteva et al. 2019). However, there is an increasing body of evidence showing contrasting developments (see recently Bahrt 2021: Chapter 7).

To begin with, facilitatives need not be an intermediate step between anticausatives and passives. Several languages co-express anticausatives and passives but not facilitatives (e.g., Iraqw *t-*; Mous & Qorro 2000: 160–162; see further the data in Inglese 2021), and there is historical evidence that anticausative markers may develop passive and facilitative functions independently and at different times (e.g., Ahn & Yap 2017: 457–458 on Korean *-eci*).

Passives may, under certain conditions, also serve as the basis for anticausatives and reflexives. According to Kulikov (2011), to which I refer readers for a full illustration of the argument, in Vedic some (experiencer) passive verbs with generic agents came to be reinterpreted as anticausatives: an example is the verb *śru-* ‘hear’, whose passive ‘be heard’ is reinterpreted as anticausative ‘be audible, be famous’. In addition, passive markers have been mentioned as a possible source of reflexives in Uto-Aztecan languages, as is the case of Tarahumara *-ru* (Langacker & Munro 1975: 803; Dik 1983).

Reciprocals of non-reflexive origin may also develop other valency-reducing functions. A good example is offered by Oceanic languages, where the reflexes of the Proto-Oceanic prefix *paRi-, in origin connected to plurality of participants, developed a reciprocal function, but in some cases also an antipassive, anticausative, and in a few New Caledonian languages, even a reflexive meaning (Moysse-Faurie 2008: 124–125; Brill 2005: 33; see §4.1.4.2). The development of non-reflexive reciprocals into passives and antipassives has also been discussed for Bantu languages (Bostoen & Nzang-Bie 2010; Dom et al. 2015: 377–378).

Finally, anticausatives have also been claimed to be a possible source of reflexives and reciprocals in Hittite (Inglese 2020: 234–240).

This cursory overview shows that the historical links that connect reflexives to other valency reducing operations are by no means as unidirectional as often reported in the literature. These are important caveats to keep in mind when discussing the origin and development of MMs.

4. The diachrony of MVSs in a cross-linguistic perspective

Diachronic studies have variously addressed issues connected with the origin and development of MMs, but no exhaustive diachronic typology of MVSs has yet been worked out.

As discussed in §2, MMs occur across two macro-classes of verbs: oppositional and non-oppositional middles. The chief question is thus how such complex clusters may historically come about, with special attention to the possible sources of MMs and the historical relationship between oppositional and non-oppositional middles. Previous scholarship has put forward two main hypotheses (see e.g., Kemmer 1993: Chapter 5; Kaufmann 2007): (i) reflexives are the main source of MMs; (ii) MVSs arise because markers with oppositional functions expand to non-oppositional verbs and not the reverse.

In the following sections, I will put these predictions to the test by investigating the origin of MMs in a sample of 129 middle-marking languages, featuring a total of 149 MMs (this is the sample collected in Inglese 2021; see fn. 6). Unfortunately, the necessary historical documentation on the origin of MMs is only available for a restricted set of well-investigated languages, as is the case of the Reflexive middle of modern Indo-European languages (§4.1.1). This means that, as is generally the case for diachronic typological studies based on large samples (e.g., Sansò 2017), for most languages discussed in this paper, one must heavily rely on comparative evidence and/or internal reconstruction.⁸

I first discuss possible sources of MMs in §4.1, and then move on to the processes whereby individual sources actually evolve into MVSs in §4.2. Section 4.1 and §4.2 present essentially the same data, but under two different and complementary perspectives. I return in §6 to the more general implications of the evidence discussed in the remainder of this section.

8. For reasons of space, I cannot always offer an in-depth discussion of the evidence supporting each historical scenario discussed in this paper; instead, I refer the reader to the relevant sources.

4.1 Sources of MMs

The diachronic study of MMs is particularly fraught with difficulties, because “many verbal middle markers [...] are so grammaticalized [...] that no diachronically prior function can be stated with confidence” (Kemmer 1993:197). In discussing the history of MMs, Kemmer points out that “in most cases where comparative or historical evidence for an earlier function of the MM exists, that function is reflexive” (Kemmer 1993:197). Non-reflexive sources are also acknowledged as rather exceptional (Kemmer 1993:197–200). In the next sections, I undertake a systematic survey of the sources of MMs in the language sample of middle marking languages. Based on their original function, sources can be distinguished into a few macro-groups.

4.1.1 *MMs from reflexives*

Reflexives have repeatedly been pointed out as a possible source of MMs. For this reason, I will not discuss this type of source in much detail here. An in-depth description of the REFLEXIVE > MM shift is offered by Kemmer, who discusses the rise of MVs in several Indo-European and Nilo-Saharan languages (Kemmer 1993: 151–197; §4.2.1). Evidence for MMs of reflexive origin has been amassing ever since.

In several languages, reflexive MMs developed out of earlier pronominal/anaphoric elements. This is hardly surprising, given that coreferential pronouns are a known source of reflexive markers (Zúñiga & Kittilä 2019: 230–231). Within the Indo-European family, Romance, Germanic, Baltic and Slavic languages feature MMs that are continuants of the Proto-Indo-European reflexive form *se/swe- (see §4.2.1), which in origin might have been an anaphoric element (Puddu 2007: 255–257; Dunkel 2014: 751–762). Similarly, in North Lovari Romani, the Reflexive pronoun *pe-* in fact functions as an MM (Wagner 2012: 68–70).

In other cases, originally pronominal elements have lost their pronominal properties, and have turned into uninflected MMs. Some examples are Pima Bajo *-a*, derived from a nonsubject 3rd person pronoun *-a* (Estrada Fernández 2005: 300), and the Urarina MM *ne-*, which may be cognate with a 3rd person object proclitic (Olawsky 2011: 601). In these cases, it is reasonable to assume that the original pronominal elements first acquired a reflexive function and only later developed into full-fledged MMs.

Additional MMs for which a reflexive origin has been proposed include Halkomelem *-m* (Gerdtts & Hukari 2006), the Reflexive conjugation of Nenets (Körtvély 2005: 83–84), the Mi'kmaq MM *-asi* (from Proto-Algonquian *-eswi-, Inglis 1986: 98), the Huron-Wyandot MM *-at* (Lukaniec 2018: 225–226), the Southern Ohlone Reflexive suffix *-pu* (from Proto-Utian reflexive *po/pu,

Callaghan 2013:185, 356–358), and Parecís *-oa* (from Proto-Arawak **-wa*, Wise 1990:199–200).⁹

4.1.2 *MMs from valency changing markers*

Considering that valency reduction lies at the core of middle marking, it is unsurprising that valency reducing markers are frequent sources of MMs. Besides reflexives (§4.1.1), there is evidence that MMs may also develop out of markers originally dedicated to the encoding of other valency reducing operations.¹⁰

Mayan languages offer two such interesting cases. South Eastern Huastec features an MM *-(V)n* (Kondic 2011), which occurs with non-oppositional motion, body posture, and experiencer verbs, and it also used in reflexive, anticausative and passive function, as in (2). Kondic (2011:138–140) explicitly excludes a reflexive source for Huastec *-(V)n-* and instead connects it with the Proto-Mayan antipassive suffix **-n-* (Kaufman 1990:104), pinpointing the existence of an ANTIPASSIVE > MM shift.

- (2) South Eastern Huastec (Mayan, Huastecan)¹¹ (Kondic 2011:127, 129, 134)
- a. *in cha'-un*
1SG.A hit-MM.COM
'I hit myself.' (REFL)
 - b. *jal-k'-un-eenek*
change-DM-MM-PRF
'He has changed.' (ANTC)
 - c. *an b'akan a t'aj-n-al k'aalan k'oyej*
DEF tortilla 3.ABS do-MM-INC with DEF nixtamal
'Tortillas are made from nixtamal.' (PASS)

Tzeltal instead points towards a PASSIVE > MM shift. Tzeltal features a rich inventory of valency changing morphology, including an infix <*j*> that behaves as an MM. The infix occurs in passive and anticausative contexts, as in (3a)–(b), as well as with non-oppositional verbs, as in (3c) (Polian 2013:289–301). Historically,

9. Note that in some of these cases, the ultimate etymology of individual MMs remains unknown, and reflexivity is reconstructed as the original function based on the purported unidirectionality of the REFLEXIVE > VALENCY REDUCTION shift. However, considering the discussion in §3 on the lack of directionality in the grammaticalization of reflexives, more caution is needed when postulating a reflexive origin in the absence of compelling comparative evidence.

10. Clearly, the valency reducing markers mentioned in this section must have developed in turn from other (lexical) sources. The main reason why I treat them as a distinct source type is that for these specific markers no prior etymology can be established.

11. Glosses in the examples replicate those of the sources, with a few adjustments. In all examples, the middle marker is glossed as MM.

Polian suggests that Tzeltal <*j*> derives from the Proto-Mayan passive infix *<*h*> (Polian 2013: 292).

- (3) Tzeltal (Mayan, Core Mayan) (Polian 2013: 291, 293, 295)
- a. *tʃa<j>k* ‘be taken’ (PASS)
 - b. *pu<j>k* ‘melt (intr.)’ (ANTC)
 - c. *jujb* ‘get fat’, *jujch* ‘get worse’, *sojk* ‘break down’

Further evidence for the PASSIVE > MM shift comes from the Modern Eastern Armenian MM *-v-*. The suffix *-v-* synchronically covers a range of functions typical of MMs, including passive, anticausative, reflexive, and reciprocal (Dum-Tragut 2009: 334–363). Historically, *-v-* reflects a new present passive formation *-vi-* that developed in Middle Armenian as the outcome of the reanalysis of the combination of the characteristic vowel of *u*-stem verbs plus the formant *-i-* of the Classical Armenian (passive) *i*-conjugation (Karst 1901: 292–298).

A passive/anticausative source may also account for the Palula MM *-iʃ-*, which historically goes back to the Old Indo-Aryan suffix *-ya-* (Liljegren 2016: 240–241). In Old Indo-Aryan, the suffix had a variety of functions, including passive and anticausative, and possibly originated as a marker of (unaccusative) intransitive verbs, e.g., *nás-ya-ti* ‘perish’ (see Lazzeroni 2004 and discussion in §4.1.4.1 below; cf. Kulikov 2012: 758–759 for alternative etymologies).

A passive/anticausative origin can cautiously be proposed for Bantu MMs that go back to the Proto-Bantu Neuter suffix **-ik-*. This suffix might have been originally an anticausative/passive marker (Chavula 2018; Schadeberg & Bostoen 2019: 179–181), and its reflexes gave rise to MMs in some Bantu languages, as is the case of Yeyi *-aak* (Seidel 2008: 251–252). An anticausative source has also been proposed for the Bribri MM *-r* (Pacchiarotti & Kulikov 2022).

There is no compelling evidence of MMs from reciprocals (but see §4.1.4.2). This scenario has been tentatively proposed for the Oksapmin (Trans-New Guinea) MM *t-*, possibly connected with a prefix *t-* found in dyadic kinship terms e.g., *t-amn* ‘uncle and niece/nephew’ (Loughnane 2009: 100).

Finally, even though this is not, strictly speaking, a valency changing marker, an impersonal source has been proposed by Thompson (1996) for the Athabaskan middle prefix *d-* (Rice 2000). For example, in Ahtena, the prefix *d-*, among several other functions, also occurs in passive and reflexive contexts, as in (4).

- (4) Ahtena (Athabaskan-Eyak-Tlingit, Athabaskan-Eyak) (Rice 2000: 180, 185)
- a. *de-s-t-ʔas*
REFL-ASP-MM-cut.PRF
‘He cut himself.’ (REFL)
 - b. *a-d-ghaan* ‘they were made’ (PASS)

Thompson (1996: 371–373) acknowledges the possibility that Athabaskan *d-* may be related to the reflexive prefix *də-, thus complying with the REFLEXIVE > MM shift (§4.1.1). However, comparison with Tlingit, which has an impersonal subject marker *-doo-*, as in (5), suggests that Athabaskan *d-* may have started out as a marker of impersonal, or more generally suppressed, arguments (Thompson 1996: 373–375). In support of this reconstruction, Thompson (1996: 373–375) mentions that the impersonal subject marker of Tlingit never co-occurs with the *d-* prefix, while the Athabaskan reflexive *də- and the *d-* prefix may co-occur, as in (4a).

- (5) Tlingit (Athabaskan-Eyak-Tlingit, Tlingit) (Thompson 1996: 361)
kóox woo-doo-dzi-ée
 rice PRF-IMPERS-CL-COOK
 ‘Someone cooked rice.’

4.1.3 MMs from lexical verbs (and spatial elements)

Lexical verbs may notoriously grammaticalize into valency changing morphology (Kuteva et al. 2019), and they also serve as possible sources of MMs.

First, MMs can evolve out of motion or other spatial verbs. This is unsurprising, considering that motion verbs are a known source of voice and TAM markers (Devos & van der Wal 2014). An example of the MOTION > MM shift comes from Chitimacha. In Chitimacha, the preverb *ʔapš* functions as an MM with e.g., reflexive and reciprocal function, the latter shown in (6) (Hieber 2018: 24–25). Etymologically, *ʔapš* comes from the motion verb *ʔap* ‘come’ combined with the suffix *-š* ‘again’ (Hieber 2018: 24; note that AGAIN is a possible source of reflexives; Kuteva et al. 2019: 47).

- (6) Chitimacha (Isolate, North America) (Hieber 2018: 25)
wetk kunuk’u tep ʔapš ʔary-puy-naʔa
 then QUOT fire MID lend-IPFV-NF;PL
 ‘Then they lend fire to each other.’

The motion domain also underlies the two Tsimané MMs *-ki-* and *-ti-*, which developed out of coverb constructions featuring the deictic verbs *ka-* ‘bring/go there’ and *ti-* ‘bring here’, respectively (Sakel 2007: 327–329).

A connection between MMs and spatial elements is also supported by situations in which the source cannot be reconstructed as a full lexical verb. A case in point is the Burushaski prefix *dd-*. As discussed by Piar (2013), *dd-* covers a range of functions typical of MMs, including anticausative and reflexive, as in (7).

- (7) Burushaski (Isolate, Eurasia) (Piar 2013: 44, 53)
- a. *á-skil dd-u-phátar-ila*
 1SG-face MM-U-come_off-3
 ‘My skin came off.’ (ANTC)
- b. *a=ci sent dd-é-l-am*
 1SG=onto scent MM-3SG-hit-1SG
 ‘I wore perfume (lit. I struck scent onto myself).’ (REFL)

According to Bashir (2006: 51–62), the Burushaski MM *dd-* comes from a deictic form **d-* ‘hither’. This form underwent two separate developments: on the one hand, it developed into a full lexical verb *d-* ‘come’, while on the other hand it also acquired the function of deictic preverb. The latter function paved the way for the reinterpretation of **d-* as a middle voice prefix. Finally, an original spatial semantics may be originally connected with the Proto-Bantu Separative suffix **-ók-* ‘motion away from’ (see §4.2.3).

Other lexical verbs that can be sources of MMs include the verbs ‘say’, ‘eat’ and ‘be(come)’. The verb ‘say’ is the source of the Yuracare MM *-tA* (§4.2.2). A verb meaning ‘eat’ is the most likely origin of the Yakkha MM *-ca* (Schackow 2015: 303–307) and possibly of Menya *-n* (Whitehead 2004: 99). The Indo-Aryan verb *bhav-* ‘be, become’ has been proposed by Bubeník (2013: 42–43) as the source of the North Lovari Romani middle suffix *-uv-* (chiefly with passive and anticausative functions; Wagner 2012: 136–137). Similarly, Segerer (2002: 207) suggests that the MM *-ok* of Bidyogo goes back to the verb *ok-* ‘be (there)’. That verbs meaning ‘eat’ and ‘be(come)’ may serve as the source of MMs is unsurprising, as they are among known sources of passive and anticausative markers (see Kuteva et al. 2019).

Finally, there are MMs which likely go back to verbal elements whose semantics cannot so easily be reconstructed. Muskogean languages, such as Muskogee (Hardy 1994; Martin 2000: 381–386), feature an MM *-k-* that possibly reflects the Pre-Proto-Muskogean auxiliary verb **-ka-* (Haas 1977: 528–529). A light verb construction involving a generic verb **-n-* ‘say, do, become’ has been persuasively proposed by Kouwenberg (2010: 314–317) as the origin of the Akkadian *n-* stem, which synchronically functions as an MM (see Kouwenberg 2010: 294–300).

4.1.4 MMs from other sources

MMs may develop from sources other than valency markers or lexical verbs. Sources that fall within this group are rather heterogeneous. In general, these are mostly derivational-like markers not originally connected with valency change.

4.1.4.1 *MMs from markers of uncontrolled events*

Various types of markers connected with spontaneous change-of-state events or non-controlling Agents may develop into MMs. These are distinguished from anticausative sources in §4.1.2 because in origin they are not reconstructed as performing a valency reducing function. A more detailed discussion of these cases is postponed to §4.2. An example is the Hittite Middle inflection, which has been argued to go back to a subset of intransitive verbs denoting uncontrolled events (see Luraghi 2012; Inglese 2020 on Hittite; §4.2.2). An original association with spontaneous events has also been advocated for the MM *-t* of various Cushitic (Afro-Asiatic) languages (Hayward 1984; §4.1.5). Finally, the suffix **-dharri-* possibly indicating non-controlling agents underlies the MM of several languages of Australia (§4.2.3).

4.1.4.2 *MMs from markers of plurality*

Markers connected with the notions of plurality, collective, and sociative may also be the source of MMs. The better-explored case is that of Proto-Oceanic **paRi-*. Continuants of this prefix, in origin connected with the expression of plurality of relationship, gave rise to MMs in several Oceanic languages (§3, §4.2.3). Evidence for a similar development comes from Turkic languages, where reflexes of the Proto-Turkic suffix **(I)š-* are connected with reciprocity and related semantic domains such as sociative and assistive, but also with other valency-reducing operations. For example, the Tuvinian Reciprocal suffix *-š-* synchronically functions as a reciprocal, as in (8a), and even as a reflexive marker, as in (8b) (Kuular 2007: 1201–1127). Moreover, a comparable suffix *-š-* also occurs with inherently collective/plural nouns, such as *čiš* ‘cattle for slaughtering’ (Kuular 2007: 1127).

- (8) Tuvinian (Turkic, Common Turkic) (Kuular 2007: 1175, 1213)
- a. *bis tanə-ž-ar bis*
 1PL know-MM-NPST 1PL
 ‘We know each other.’ (RECP)
- b. *boraxirilee-ler dovurak-ka bora-ž-ər*
 sparrow-PL dust-DAT dirty(VT)-MM-NPST
 ‘The sparrows usually dirty themselves in dust.’ (REFL)

Based on comparison among Turkic languages, Gandon (2018) suggests that in origin the Proto-Turkic suffix **(I)š-* must have been a verbal/nominal collective plural suffix (see also Zaslansky forthcoming). A sociative/comitative origin is also commonly recognized for the Proto-Bantu Associative derivational suffix **-an-*, whose reflexes gave rise to MMs in languages such as Lika (de Wit 2015: 375–377) and which is etymologically connected with the comitative preposition *n(a)-* ‘with’ (Schadeberg & Bostoen 2019: 174; §4.2.3).

4.1.4.3 MMs from nominalizers and verbalizers

Nominalizations constitute a possible source of MMs. This is not surprising, as nominalizations have been shown to be sources of agent-defocusing (passive, impersonal) as well as patient-defocusing (antipassive) markers (Sansò 2016, 2017). An example of the NOMINALIZATION > MM development comes from Kryz (Authier 2012). Kryz features a Detransitive suffix *-aR-*, which occurs in passive, anticausative, and antipassive functions, as in (9a) to (9c):

- (9) Kryz (Nakh-Daghestanian, Lezgetic) (Authier 2012: 141, 149, 154, 160)
- a. *yi-n-gh-* ‘pull’ → *yi-n-gh-an-* ‘be pulled’ (PASS)
 - b. *gugv-(a-ts)-* ‘burn (tr.)’ → *ugv-ar-* ‘burn (intr.)’ (ANTC)
 - c. *ul(ats’)-* ‘eat (tr.)’ → *ugv-al-* ‘be edible, pasture’ (ANTIP)
 - d. *ke-xh-r-ic* ‘move’ → *xh-ar* ‘wind (lit. the moving)’

As Authier (2012: 155–160) discusses, suffixes cognate to Kryz *-aR-* occur in other East Caucasian languages with a comparable range of functions (in Hunzib, the cognate suffix *-la-* has even acquired reflexive function; Authier 2012: 157). In addition, the suffix *-aR-* is related to imperfective aspect markers, to the nominal collective plural markers, and also to the marker of verbal nouns, as in (9d) (Authier 2012: 159). According to Authier, comparative evidence suggests that the nominalizing use in (9d) might have been the original function of *-aR-* in East Caucasian. Deverbal *-aR-* S/P oriented nouns used as predicates ‘X (is) V-ing/ed’ were reinterpreted as intransitive verbs carrying an *-aR-* suffix ‘X V-s/is V-ed’. This new *-aR-* suffix further developed into a marker of antipassives and anticausatives, and, limited to Kryz, even into a passive marker (Authier 2012: 160).

Nominalization may also underlie middle marking in Tibeto-Burman languages. Several Tibeto-Burman languages feature a Reflexive suffix **-si*, which covers a range of functions typical of MMs, including reflexive and anticausative (see LaPolla 1996; Jacques 2021; on individual languages see LaPolla & Jiangling 2005 on Drung; Lahaussais 2016 on Thulung; Jacques et al. 2016 on Khaling; Widmer 2018: 361–382 on Bunan). Consider the Thulung data in (10), where the reflexive and anticausative use of *-si* is shown.

- (10) Thulung (Sino-Tibetan, Tibeto-Burman) (Lahaussais 2016: 57, 58, 59)
- a. *th λ -mu* ‘hide’ → *th λ -si-mu* ‘hide oneself’ (REFL)
 - b. *tsar-mu* ‘make fall’ → *tsar-si-mu* ‘fall down’ (ANTC)

In addition, outcomes of **-si* have repeatedly been connected with stativity. Compare (11) from Drung, where *a-jàŋ-cũ* ‘be visible’ is the stative passive counterpart of *jàŋ* ‘see’.

- (11) Drung (Sino-Tibetan, Tibeto-Burman) (LaPolla & Jiangling 2005:2)
càm àŋ-lě a-jàŋ-ěú
 sword 3SG-DAT INTR-see-MM
 ‘The sword is visible (to him).’

According to LaPolla (1996:3), the polyfunctionality of *-si can historically be explained as “the result of a marker originally having only a reflexive use being extended to cover middle situations, and then [...] being further extended to the use as a ‘stativizer’”. Under this reconstruction, the MM *-si of Tibeto-Burman instantiates the REFLEXIVE > MM shift (§4.1.1). However, this is not the only possible scenario. As an alternative, the MM *-si has been connected with a nominalizing suffix *-s, whose reflexes can be observed in several Tibeto-Burman languages, e.g., Tibetan *za* ‘eat’ → *zas* ‘food’, as well as in Old Chinese (Jacques 2016:206, 208–209). It is thus possible that Tibeto-Burman *-si* ultimately goes back to a Proto-Tibeto-Burman stative nominalizing suffix *-s (Matisoff 2003:471–472).

Verbalizers creating intransitive verbs can also be the source of MMs. A possible candidate for the VERBALIZER > MM shift comes from Kuki-Chin and Gyalrongic languages. Among Tibeto-Burman languages, Kuki-Chin languages do not show reflexes of *-si but instead feature a distinct *ŋə- prefix that behaves as a MM (see LaPolla 1996; Jacques 2021). A good example is Daai Chin *ng-*, which displays anticausative, reflexive, passive, and reciprocal functions, as in (12) (So-Hartmann 2009:202–209). The cognate Mizo prefix *in-* shows a comparable usage (Chhangte 1993:152–155).

- (12) Daai Chin (Sino-Tibetan, Tibeto-Burman) (So-Hartmann 2009:203, 206)
 a. *bou* ‘split (tr.)’ → *ng-bou* ‘split (intr.)’ (ANTC)
 b. *thuh/thup* ‘hide’ → *ng-thuh/ng-thup* ‘hide oneself, be hidden’ (REFL, PASS)
 c. *shun* ‘stab’ → *ng-shun* ‘fight each other’ (RECP)

As Jacques (2021:439) points out, the Kuki-Chin prefix can historically be connected with cognate reciprocal/passive prefixes in Gyalrongic languages such as Japhug *a-* and Khroskyabs *Ɂ-*. Lai (forthcoming) further argues that the source of the voice prefix in the Gyalrongic languages is the Proto-Rgyalrong prefix *ŋa-, which in origin must have been a derivational suffix for denominal stative verbs. This function is still evident Japhug, where one finds derivational patterns of the type *a-ci* (DENOM-water) ‘to be wet’ from *tr-ci* ‘water’ (also Jacques 2020:555).

A verbalizer has also been suggested as the source of middle prefixes in Malayo-Sumbawan (Austronesian) languages. According to Karaj and Sansò (forthcoming), the Malayo-Sumbawan middle prefixes such as the Malay MM *bər-* go back to a Proto-Malayo-Sumbawan form *(mb)AR-, whose first component *ma- might have been a verbalizer creating agent-oriented intransitive verbs.

4.1.4.4 *MMs from aspectual-like markers*

The Hausa verbal system features different conjugation classes (or Grades). Among these, the Grade 7 suffix *-u* behaves in fact as an MM expressing passive, facilitative, and autocausative functions (Jaggar 2001: 260–267), as in (13). As discussed by Jaggar (1988: 405–408), Hausa *-u* goes back to a Proto-Chadic resultative suffix $*-k^w_0$.

- (13) Hausa (Afro-Asiatic, Chadic) (Jaggar 2001: 261, 265)
- a. *kirā* ‘call, summon’ → *kirā-wu* ‘be summoned’ (PASS)
 - b. *yi* ‘do’ → *yì-wu* ‘be doable, possible’ (FAC)
 - c. *rabà* ‘separate (tr.)’ → *ràb-u* ‘separate (intr.)’ (ANTC)

An aspectual-like source is proposed by Palancar (2006: 632) for the Otomi (Otomanguean) MM *N-*, which was in origin characteristic of a subset of imperfective intransitive verbs (§4.2.2). Other aspectual-like sources are dubious. The Proto-Bantu Neuter suffix $*-ik-$ has also been treated as a stative suffix, but, as discussed in §4.1.2, an anticausative/passive origin is more likely (Chavula 2018). A connection with an original stative marker has also been proposed for the Tibeto-Burman suffix *-si* and for the prefix *ma-* of Pagu, which is a borrowing from Austronesian languages (Wimbish 1991: 34–36; Holton 2006). However, as discussed in §4.1.4.3, these are best viewed as originating in nominalizers/verbalizers.

4.1.5 *MMs from multiple sources*

Individual MMs may also have more than one source (on multiple sources see De Smet et al. 2013). In several Salish languages, including Bella Coola, the MM *-m* shows, besides a number of valency-reducing functions, including anticausative in (14a), also an applicative function, as in (14b). This is unexpected, because MMs generally do not have valency increasing functions.

- (14) Bella Coola (Salish) (Beck 2000: 228, 243)
- a. *sx^w* ‘burn (tr.)’ → *sx^w-m* ‘be burning’ (ANTC)
 - b. *qaax̄la* ‘drink (something)’ → *qaax̄la-m* ‘take a drink’ (APPL)

The exceptional polyfunctionality of Bella Coola *-m* in (14) can historically be explained as the outcome of the merger of two suffixes that were fully differentiated Proto-Salish: Detransitivizer $*-m$ and Applicative $*-mi$ (Nater 2015).

Considering that applicative is not a function normally associated with MM, one could simply analyze Bella Coola as having two distinct homophonous suffixes: Middle *-m* and Applicative *-m*. A homophony analysis is however less immediately obvious for markers that go back to different sources but synchronically show a range of functions compatible with those of MMs in general.

Consider the reconstruction of MMs in Cushitic languages. Several Cushitic languages feature an MM *-t-* (Mous 2001; Fufa Teso 2009), as shown by Oromo *-at-* in (15):

- (15) Oromo (Afro-Asiatic, Cushitic) (Fufa Teso 2009:77–78)
- a. *dik'-at-* 'wash oneself', *bit-at-* 'buy for oneself', *k'ut'uut'-at-* 'crouch',
bar-at- 'learn'
 - b. *gudd-at-* 'grow', *diim-at-* 'become red', *holl-at-* 'shiver'

As the (non-exhaustive) list of verbs in (15) shows, Oromo *-at-* covers situation types featuring either Agent-like, in (15a), or Patient-like subjects, in (15b) (Mous 2001; Fufa Teso 2009:77–98). Taken at face value, this polyfunctionality matches that of MMs cross-linguistically. However, a historical perspective unveils a more complex scenario. As Hayward (1984) argues, Oromo *-at-* results from the conflation of two suffixes that were differentiated in Proto-Eastern-Cushitic: a suffix **-at* that was possibly reflexive and occurred with Agent-like subjects and a suffix **-āt* that occurred with Patient-like subjects, and was especially used to build denominal/deadjectival change-of-state verbs. This means that the occurrence of *-at-* across controlled and non-controlled situations is not the outcome of a direct semantic extension in either direction, but results from the historical merger of distinct markers.

Among Cushitic languages, Iraqw is exceptional in that its MM *-t* also displays an imperfective function, as in (16).

- (16) Iraqw (Afro-Asiatic, Cushitic) (Mous & Qorro 2000:168)
- faar* 'count' → *fadut* 'be counting'

The Iraqw situation is not exceptional among the languages of the world, as MMs often show a connection with imperfective aspect (Inglese 2021:22–23). However, imperfectivity is not merely a meaning extension of middle *-t* (Mous & Qorro 2000:167–169). Historically, the original way to form the imperfective of verbs in *-t* was reduplication of the penultimate consonant. Thus, the imperfective of the verb *tlehhut* 'build' would have been **tlehhahhut* 'be building'. Due to phonological processes, reduplication was lost, thus yielding a reduced form *tlehhut* 'be building'. Traces of this process remain in verbs showing a formal distinction between the middle imperfective and the non-imperfective variant, e.g., *gweer* 'open (tr.)' → *gweerut* 'be open.MM' vs. *gwedut* 'be opening.MM.IPFV'. For most verbs, the consequence of the loss of reduplication was that the imperfective middle came to coincide with simple middle *-t*, as in (16). Therefore, from a historical perspective, in Iraqw there is no direct semantic connection between the domain of the middle and that of imperfectivity.

A similar case is discussed by Meira (2000) for the Detransitivizing prefixes in Cariban. In Panare, as in other Cariban languages, the Detransitivizing prefix, realized by a number of allomorphs, e.g., *Vt-* and *V'-* (Payne & Payne 2013:180–181), encodes typically middle functions, including passive, reflexive, and reciprocal, as in (17) (Payne & Payne 2013:333–339). A comparable situation is attested in Trió (Meira 1999:254–260), where one also finds an allomorph *e-*, as in (18).

- (17) Panare (Cariban, South Amazonian) (Payne & Payne 2013: 335, 338, 339)
- a. *e'ñapa w-ës-amaanë-pítí-nyaj*
people INTR-MM-create-ITER-CIRCUM
'When the people (were) formed.' (PASS)
 - b. *w-ës-ëkëta-yaj chu*
INTR-MM-cut-PPERF1 1SG
'I cut myself.' (REFL)
 - c. *pake pëkë-pëtu t-o-s-ama*
before before-AUG GNO-INTR-MM-hit/kill
'Long ago they killed each other off.' (RECP)
- (18) Trió (Cariban, Tiriyo) (Meira 1999: 255)
- a. *apë(i)* 'grab (tr.)' → *ët-apë(i)* 'grab oneself/each other' (REFL, RECP)
 - b. *[t]pi* 'bathe' → *e-pi* 'bathe oneself' (REFL)

As discussed by Meira et al. (2010:505–512), the bewildering proliferation of allomorphs of the Cariban Detransitivizer is the result of several phonological changes, and all attested forms ultimately derive from two distinct sources: a prefix **-ôte-*, which underlies the various (*V*)*C-* prefixes in (17) and (18a), and a prefix **-e-*, reflected e.g., in Trió *e-* in (18b). In origin, the two prefixes were semantically distinct. The prefix **-ôte-* was possibly reciprocal, as evidenced by its occurrence with a postposition in reciprocal function, e.g., Trió *ët-akëërë* 'with each other (lit. RECP-with)'. This leaves open the possibility that **e-* might have been reflexive. In time, the two prefixes have semantically merged, to the effect that "the two have now become suppletive allomorphs of the same prefix, which now includes both [i.e., reflexive and reciprocal] semantic values" (Meira et al. 2010: 511).

The last example that I wish to mention is that of MMs in Oceanic languages. According to Brill (2005), the Proto-Oceanic prefix **paRi-*, indicating plurality of relations (§3, §4.1.4.2, §4.2.3), can be reconstructed as being originally involved in a number of different constructions: it could occur alone, together with the suffixes **-aki* and **-i*, or combined with root reduplication. These constructions were in part semantically differentiated: for instance, distributive and dispersive actions could only be expressed by **paRi-...-aki* or by **paRi-* and reduplication,

but not by *paRi- alone. In northern New Caledonian languages, outcomes of Proto-Oceanic *paRi- show a broader range of polysemy than what can be observed in the rest of the Oceanic languages. However, this is not merely the result of semantic extension of the prefix *paRi- to new contexts. As argued by Brill (2005: 64), what happened in New Caledonian languages is that in constructions originally involving *paRi- together with reduplication or the suffixes *-aki/*-i, this additional marking was lost, so that functions originally associated with distinct complex constructions all fell on the reflexes of *paRi- occurring on its own (Brill 2005: 64).

The evidence presented in this section shows that MMs may also come about through the merger of multiple sources. This means that, while the polyfunctionality of MMs can often be historically motivated by specific paths of semantic extension, in the cases discussed here the association of individual MMs with a given set of functions is in part accidental, because it is the by-product of the retention of the distinct meaning(s) of the original sources.

4.2 Oppositional and non-oppositional middles in diachrony

Historical research on the middle voice has predominantly been concerned with the investigation of possible etymological sources of MMs (§4.1) and of the possible historical connections among various valency-related functions (§3). Less attention has been paid to the actual (set of) processes that lead from individual sources to the complex cluster of functions typical of MMs. In particular, a topic that has received insufficient attention is the possible historical relationship between the oppositional and non-oppositional components of MVSSs, as defined in §2.

In principle, two main diachronic scenarios may account for the synchronic occurrence of MMs across oppositional and non-oppositional middles: (i) markers of valency-related oppositional functions extend to non-oppositional verbs, (ii) the reverse, i.e., markers confined to non-oppositional middles serve as the basis for oppositional functions. In practice, it is only the first scenario that has received scholarly attention, to the extent that the shift OPPOSITIONAL > NON-OPPOSITIONAL is often considered unidirectional. As Kaufmann (2007) puts it:

Historical data provide evidence that the *media tantum* [i.e., non-oppositional verbs] develop after both the direct reflexive and the anticausative reading in languages that encode the middle function by reflexive verbs [...]. I, therefore, assume that the existence of *media tantum* in middle marking languages is a consequence of a reinterpretation of the device which derives the differential readings. (Kaufmann 2007: 1688)

In the next sections, I begin by briefly outlining the dynamics of the well-known process (i). I then move on to discussing possible evidence in favor of the existence of process (ii). Moreover, I also tentatively suggest a third possible scenario, i.e., (iii) under which both oppositional and non-oppositional verbs evolve in parallel from a third source.

4.2.1 *Oppositional > non-oppositional*

The textbook example of the OPPOSITIONAL > NON-OPPOSITIONAL shift is the rise of the Reflexive middle of the modern Indo-European languages of Europe, including Romance, Germanic, Slavic and Baltic languages (Kemmer 1993: 151–193; Ottosson 2008; Holvoet 2020, among others). For reasons of space, I focus on the development from Latin to Romance (the following discussion is based on Kemmer 1993: 151–182 and Cennamo 1993, 1999, 2020a, 2020b: 182–185 with extensive references).

Similarly to Ancient Greek in (1), Latin featured two inflectional voices, the Active and the Mediopassive, or *R*-, inflection. The *R*-inflection is in fact an MM: several verbs exclusively take *R*-endings (Gianollo 2010), as in (19a), while with other verbs Active-Mediopassive voice alternation encodes valency-related operations such as passive and anticausative, as in (19b). In addition, Latin also had a Reflexive pronoun *se*.ACC/*sibi*.DAT (from Proto-Indo-European (PIE) **swe*; §4.1.1): this mainly occurred in (direct/indirect) reflexive contexts, as in (19c), and only more marginally in anticausative and reciprocal contexts (see Cennamo et al. 2015 and Pinkster 2015: Chapter 5 for details).

- (19) Latin (Indo-European, Italic) (Gianollo 2010: 41–42; Pinkster 2015: 231, 262)
- a. *irascor* ‘get angry’, *nitor* ‘lean’, *nascor* ‘be born’
 - b. *laudo* ‘praise’ → *laudor* ‘be praised’ (PASS)
moveo ‘move (tr.)’ → *moveor* ‘move (intr.)’ (ANTC)
 - c. *occido* ‘kill’ → *se occidere* ‘kill oneself’

The voice system of Latin underwent radical changes in the transition to Romance languages. The *R*-inflection was lost and was replaced in most Romance languages by new MMs ultimately based on Latin *se*. Consider the Italian Reflexive pronoun *si*, which may have reflexive, reciprocal, anticausative and passive functions, as in (20a), but also obligatorily occurs with a few non-oppositional verbs, as in (20b)

- (20) Italian (Indo-European, Italic) (personal knowledge)
- a. *uccidere* ‘kill’ → *uccidersi* ‘kill oneself, each other’ (REFL, RECP)
rompere ‘break (tr.)’ → *rompersi* ‘break (intr.)’ (ANTC)
leggere ‘read’ → *si leggono molti libri* ‘many books are read’ (PASS)

- b. *arrabbiarsi* ‘get angry’, *accorgersi* ‘realize’, *inginocchiarsi* ‘kneel down’,
fidarsi ‘trust’

The REFLEXIVE > MM macro-shift undergone by Latin *se* in the transition to Romance can be decomposed into a number of distinct processes.

The original reflexive function of Latin *se* constituted the starting point for new valency-related oppositional functions (see §3). The extension to anticausative and reciprocal contexts must have taken place at an early date, as these functions are already attested alongside the reflexive since Early Latin texts (see Cennamo et al. 2015; for possible instances of *se* passives in Latin see Pinkster 2015: 278). The other functions, including the facilitative and the impersonal (e.g., Giacalone Ramat & Sansò 2011; Wolfsgruber 2019) and also the antipassive (Janic 2016a), are Romance innovations.

The origin of non-oppositional middles in Romance languages remains a relatively understudied topic. First, non-oppositional verbs may result from the obligatorification of reflexive marking with intransitive verbs that only allowed optional reflexive marking in origin. Already in Late Latin, reflexive marking could be optionally added to intransitive verbs with no effect on valency, e.g., (*sibi*) *perire* ‘perish’ and (*se*) *poenitere* ‘repent’ (see Cennamo 1999 for discussion and references). Optional (or pleonastic) reflexives are also continued in Romance languages, e.g., Old French (*se*) *repentir* ‘repent’ (see further Hatcher 1942: 92–126), and, for some of these verbs, reflexive marking eventually became obligatory over time, e.g., Modern French *se repentir* ‘repent’.

In addition, non-oppositional middles may be formed on analogy to oppositional ones, as is the case of Spanish *reír(se)* (de Benito Moreno forthcoming). In Colloquial Spanish, the continuant of the Latin intransitive verb *rideo* ‘laugh’ essentially behaves as a non-oppositional middle *reírse* ‘laugh’. Historical data shows that middle marking of *reírse* was optional in origin but became increasingly frequent over time at the expense of unmarked *reír*. This extension was possibly due to analogy with semantically similar middle-marked members in oppositional pairs, such as *alegrar* ‘please’ vs. *alegrar-se* ‘be pleased’.

Alternatively, non-oppositional verbs arise through a process of lexicalization (in the sense of loss of compositionality, see Brinton & Traugott 2005: 47–57) and loss of the original oppositional counterpart. Consider the history of Spanish *quejarse* ‘complain’ (Portilla 2007: 141). The Latin transitive verb *quasso* ‘shake’ was continued into Spanish *quejar* ‘afflict’, out of which an oppositional *quejar-se* ‘afflict oneself, be afflicted’ could be formed. Later on, intransitive *quejarse* underwent a semantic shift to ‘complain’ and the transitive counterpart *quejar* ‘afflict’

got lost.¹² As a result, the combination of the verb base with the reflexive pronoun lost semantic compositionality (Haspelmath & Müller-Bardey 2004:1139), and the remaining form *quejarse* effectively turned into a non-oppositional verb.

The development of Latin *se* into the Romance MM shows that there are multiple pathways leading to the rise of non-oppositional middles and these involve a complex interplay of language change mechanisms such as semantic shifts, analogy and obligatorification. More corpus-based historical research is needed to fully understand the ways in which middle marking spreads across the verbal lexicon.

The dynamics of the OPPOSITIONAL > NON-OPPOSITIONAL shift discussed in this section also pertain to MMs originating in valency-reducing sources other than reflexives (§4.1.2).

4.2.2 *Non-oppositional > oppositional*

A non-oppositional origin of MVSs is explicitly ruled out by scholars such as Kaufmann (2007:1688), but this development is in principle well conceivable. These are cases in which MMs “develop functions that enter the realm of syntax and thus come to serve a syntactic function where the valency of the verb is [...] decreased.” (Palancar 2004: 55). It is admittedly difficult to find compelling evidence for genuine cases of MVSs emerging out of non-oppositional verbs. In this section, I review some possible cases.

First, MMs from nominalizers/verbalizers may instantiate this pathway. Recall the history of the Kuki-Chin prefix *ŋə- (§4.1.4.3). The prefix was originally used to create denominal stative verbs. Since these verbs are directly derived from nouns, and do not necessarily have a transitive counterpart, they can be considered non-oppositional at this stage. Only later on does the prefix gain valency-related oppositional functions and develops into a genuine MM.

Another example comes from Otomi. Otomi features a middle nasal prefix *N-*, which is associated with typically middle functions (Palancar 2004), including grooming verbs, anticausatives, and reciprocals, as in (21):

- (21) Otomi (Otomanguean) (Palancar 2004: 58, 62, 77)
- a. *n-kə* ‘dress below waist’ (GROOM)
 - b. *m-ʔedi* ‘get lost’ (ANTC)
 - c. *m-phɔts’i* ‘help each other’ (RECP)

As Palancar (2006) argues, the Otomi *N*-prefix was in origin a clitic that characterized the inflection of a subset of imperfective intransitive roots with no tran-

12. More research is needed to ascertain the temporal and causal connection between lexicalization and loss in these verb pairs.

sitive counterpart; that is, it was limited to non-oppositional verbs. Later on, this marker developed valency-related oppositional functions such as antipassive and reciprocal, thereby effectively turning into an MM.

A comparable example comes from ancient Indo-European languages. The origin of the Middle inflection of Indo-European languages such as Ancient Greek in (1) and Latin in (19) constitutes a long-standing matter of debate (see Inglese 2020: 250–265 for a recent overview). A number of scholars have proposed that in origin, verbal voice followed a lexical distribution, that is, all verbs were either *activa* or *media tantum*, i.e., non-oppositional middles, and that the use of voice alternation to indicate valency change must be an innovation (e.g., Lazzeroni 2004: 142). Historical data from Hittite, the oldest known Indo-European language, fully support this idea. In Old Hittite, 76% of middle verbs are non-oppositional whereas oppositional functions gain ground in time and only by New Hittite oust *media tantum* (Inglese 2020: 220). In particular, most original *media tantum* encode various types of intransitive spontaneous/uncontrolled situations, e.g., *kiš-* ‘happen’, *ūr-* ‘burn (intr.)’. Out of this group, oppositional verbs with anticausative function first emerged, subsequently leading to the development of the other valency-related functions (Luraghi 2012; Inglese 2020: 228–241; see Romagno 2010: 439–440 on Ancient Greek).

A different case is that of the Yuracare suffix *-tA*. Among its various functions, *-tA* may express reflexive and anticausative situations, as in (22a)–(22b), and it also occurs with non-oppositional verbs, as in (22c) (van Gijn 2010). A peculiarity of *-tA* is that it can either be added to an unmarked verb base, as in (22a), or it stands in opposition to verbs carrying a causative suffix, e.g., *-che* in (22b).

- (22) Yuracare (Isolate, South America) (van Gijn 2010: 277, 274, 262)
- a. *sisë* ‘touch’ → *sisë-të* ‘touch oneself’ (REFL)
 - b. *du-che* ‘light fire’ → *du-ta* ‘catch fire’ (ANTC)
 - c. *dyojloto* ‘be angry’

It is convincingly argued (van Gijn 2010) that the MM *-tA* is historically connected to the verb *ta-* ‘say’ (§4.1.3). This verb could be originally used in light verb constructions with sound-imitating ideophones ‘say X’ and was later extended to visual and other ideophones. In support of this reconstruction, van Gijn mentions that most roots that take part in the pattern (22b) are in fact ideophones. This use led to a progressive semantic bleaching of the verb and to a process of morphological merging with the ideophone base. As a result, *-tA* effectively turned into a verbalizer ‘say, be, become, do X’ forming intransitive verbs, i.e., non-oppositional verbs (see §4.1.4.3). Intransitive X-*ta* verbs with spontaneous change-of-state meaning subsequently started being paired with causative counterparts in *-che* (and other causative suffixes). This is how *-tA* acquired an anti-

causative function, which served as the starting point for the development of other oppositional functions.

The processes discussed in this section all involve markers in origin confined on a lexical basis to non-oppositional verbs that developed valency-reducing functions at a subsequent stage. This evidence seriously challenges Kaufmann's (2007: 1688) idea that valency functions of MMs are always primary and that non-oppositional verbs must be a secondary outcome of lexicalization.

4.2.3 *The emergence of MVSs: A third way?*

A few MMs are historically less easily amenable to the NON-OPPOSITIONAL > OPPOSITIONAL vs. OPPOSITIONAL > NON-OPPOSITIONAL dichotomic typology outlined in §4.2.1 and §4.2.2. MVSs in these languages may be more easily explained by postulating the existence of a logically distinct third pathway of development: both non-oppositional verbs and valency-related oppositional functions independently derive from a third source. For reasons of space, I limit myself here to the history of three affixes: Proto-Oceanic *paRi-, Proto-Bantu *-øk-, and Pan-Australian *-dharri-.

As anticipated in §3 and §4.1.4.2, Proto-Oceanic had a plurality prefix *paRi- which served as source for MMs in various Oceanic languages (see Lichtenberk 2000; Brill 2005; Moysse-Faurie 2008, 2017; Janic 2016b). As an example, consider the Bwato prefix *ve-* (< *paRi-) in (23):

- (23) Bwato (Austronesian, Oceanic) (Brill 2005)
- a. *bitake* 'turn (tr.)' → *ve-bitake* 'turn around' (ANTC)
 - b. *catra* 'hit' → *ve-catra* 'hit each other' (RECP)
 - c. *xothit* 'look' → *ve-xothit* 'look at oneself (in the mirror)' (REFL)
 - d. *tan* 'jump' → *ve-tan* 'float around'
 - e. *tatae* 'surpass' → *ve-tatae* 'try to surpass'
 - f. *tobewaa* 'run' → *ve-tobewaa* 'be running'
 - g. *ve-xahna-nyima* 'party', *ve-xhapwa* 'curse', *ve-hnya-thaten* 'choose',
ve-hnyam 'be at peace'

As shown in (23), Bwato *ve-* synchronically occurs in a wide range of contexts, covering valency-related oppositional functions (23a)–(23c), non-valency-related oppositional functions such as the dispersive, tentative, and imperfective functions in (23d)–(23f), as well as non-oppositional verbs, illustrated in (23g). It is not altogether clear how the various functions are diachronically related. Among specialists, there is a consensus that Proto-Oceanic *paRi- in origin expressed plurality of relations (Lichtenberk 2000). From this general meaning, the prefix underwent a number of specializations that resulted in its evolution into a full-

fledged MM in individual languages. On the one hand, *paRi- developed valency-related oppositional functions. The prefix possibly developed first into a marker of reciprocals and antipassives, since these functions are more directly connected with plurality of relations (Sansò 2017: 206–207), and also, in the case of reciprocals, more widely attested across the family. Anticausatives and reflexives, which are attested in fewer languages (Bril 2005: 33), are a further extension of the reciprocal function. The bridging context between reciprocals and anticausatives is probably offered by spatial reciprocal events of the “join” and “split” types, which easily lend themselves to an autocausative interpretation (see discussion in Inglese 2020: 238–239). Non-valency-related oppositional functions such as unbounded and dispersive events may well be extensions of the plurality-of-relations semantics (spatial distributive and imperfective-like events are in fact linked with plurality of participants, see Mattioli 2017).

Non-oppositional middles marked with *ve-* do not necessarily develop from valency functions of the prefix, as they can also be easily conceived as directly linked with the original plurality of relations semantics. This holds especially true for naturally reciprocal or collective events, such as *ve-xahnanyima* ‘party’ (< *xahnanyimian* ‘happy’) and *ve-hnyam* ‘be at peace’, which also, due to their denominal nature, are likely not to merely represent lexicalized forms of *ve-* in its oppositional reciprocal function.

Evidence for similar developments can be found in Bantu languages. The Bantu verbal system is characterized by extensive use of derivational suffixes, or *verbal extensions*. In individual Bantu languages, some of these extensions display a synchronic polyfunctionality such that they qualify as MMs (Dom et al. 2016; Dom et al. forthcoming).¹³ Possible Proto-Bantu sources of MMs in Bantu languages included in my sample are the following extensions: Neuter *-ik- (§4.1.2), Associative *-an- (§4.1.4.2), and Reversive *-øk- (§4.1.3) (see Schadeberg & Bostoen 2019: 179–181, 182–184, 185–186). With the possible exception of *-ik- (see §4.1.2), the other extensions are not usually reconstructed as being in origin connected with valency change.

The history of *-øk- is particularly of interest (Dom et al. 2016: 140–143; Guérois & Bostoen 2018). Reflexes of *-øk- behave as MMs with valency-related anticausative, passive, and facilitative functions for example in Yeyi (Seidel 2008: 246–247), Chuwabo (Guérois 2015: 254–257, 269–271), and Fwe (Gunnik

13. Dom et al. (2016) prefer the term *quasi-middle*, to highlight the fact that Bantu MMs typically display a narrower range of polyfunctionality as compared to the better-known Indo-European inflectional type of Ancient Greek. In this paper, I consider the Bantu extensions as genuine MMs that simply show a more restricted polyfunctionality pattern, which is not uncommon cross-linguistically (see Inglese 2021).

2018: 234–239). Valency-related functions of *-øk- must be an innovation. In Proto-Bantu, the suffix is reconstructed as forming intransitive verbs with separative meaning “movement out of some original position” (Schadeberg & Bostoen 2019: 186). The original meaning of *-øk- is clear in ablative motion verbs such as Proto-Bantu *-táøk- ‘come from’ and *-jínøk- ‘come out (of water)’ (Schadeberg 1982: 61–65). At this stage, the suffix can be described as encoding a non-valency-related oppositional function, in the sense that it can be optionally added to verbs to add a specific meaning component.

From this function, the suffix underwent two developments. On the one hand, it developed valency-related functions. The first step is arguably the development of a reversive function, as in (24a), following a known ABLATIVE > REVERSIVE semantic shift (Gibert-Sotelo 2018). In some reversative verb pairs, as in (24a), *-øk- came to be associated with intransitive spontaneous events, thereby providing the natural bridging context to expressing anticausative events, as in (24b). The anticausative eventually led to a full-fledged passive use (Guérois & Bostoen 2018: 228–229), as in (24c). On the other hand, the original separative/reversive semantics was progressively bleached with some verbs that ended up as non-oppositional middles, even with no immediate separative semantics (Guérois & Bostoen 2018: 220–221), as in (24d).

- (24) Fwe (Niger-Congo, Atlantic-Congo) (Gunnik 2018: 234–235)
- a. *-rwàrà* ‘become sick’ → *-rwàrukà* ‘become better’
 - b. *-kùàrukà* ‘open (intr.)’ (ANTC)
 - c. *-kúzyùkà* ‘be peeled’ (PASS)
 - d. *-bàrukà* ‘taste a crop to test if it’s ripe’, *-bùtùkà* ‘run’

The last example comes from Australian languages. Australian languages, both Pama-Nyungan and non-Pama-Nyungan, show outcomes of a common Pan-Australian suffix *-dharri- (Dixon 2002: 206–207). Continuants of *-dharri- are often described as reflexive/reciprocal and antipassive markers, on account of the high frequency of these functions (Alpher et al. 2003: 341–342). In some languages, continuants of *-dharri- gave rise to MVSs proper. These include e.g., Warungu *-li-* (and the innovative form *-gali-*; Tsunoda 2006), Worrorra *-ye-* (Clendon 2014: 405–419), Bardi (*ma-*)...*-inyj* (Bowern 2012: 478–487; the form is common to Nyulnyulan languages more generally, see McGregor 2000), and Kayardild *-yii-ja-* (Evans 1995: 276–279). The range of valency-related functions of these suffixes is summarized in Table 1.

As Table 1 shows, the widespread use of continuants *-dharri- in reflexive function across languages as compared to the narrower distribution of the other functions has been taken as evidence to reconstruct *-dharri- as a reflexive marker

Table 1. Valency-related functions of MMs in some Australian languages

	Reflexive	Reciprocal	Antipassive	Anticausative	Passive
Bardi	+	+	–	–	–
Kayardild	+	–	–	+	+
Warungu	+	–	+	+	–
Worrorra	+	+	+	+	+

(Terrill 1997: 78; Evans 1995: 297). Under this reconstruction, Australian languages instantiate the REFLEXIVE > MM shift (§4.1.1).

Dixon (2002: 530–536) challenges this reconstruction, and objects that the widespread reflexive usage is not sufficient ground for reconstructing *-dharri- as originally reflexive. In his view, decisive evidence comes instead from languages such as Yidinj (Pama-Nyungan; suff. *-:dji-*) and Kuku-Yalanji (Pama-Nyungan; suff. *-dji-*), where the suffix does not only correlate with valency change, but indicates situations of less prototypical agenthood (e.g., involuntary/inanimate/unknown/generic agent). For this reason, Dixon reconstructs *-dharri- as a marker of non-prototypical Agents. This original usage led the suffix on the one hand to be further associated with intransitive non-oppositional verbs, and on the other hand to develop syntactic functions connected with valency, possibly starting with the reflexive.

The history of Proto-Oceanic *paRi-, Proto-Bantu *-uk-, and Australian *-dharri- suggests that MVs may come about following a third path of development. This scenario differs from the one discussed in §4.2.1 and §4.2.2 because both valency-related oppositional functions and non-oppositional verbs ultimately derive from the same source as the outcome of independent processes, and, crucially, there is no need to postulate a direct historical connection between the two. More research is needed to fully explore the validity of this proposed third scenario.

5. MVs and language contact

Language contact also plays a role in how MMs come about and develop. This is in line with the known role of contact in the spread of transitivity-related patterns (e.g., Grossmann 2021). In the remainder of this section, I discuss some potential examples, which however should be tested against a more rigorous analysis of the specific contact scenarios.

First, language contact may intervene as “matter replication”, that is, “replication of morpheme and phonological shapes from a source language” (Matras & Sakel 2007: 829). One example comes from Wambaya. Wambaya features an MM *-ngg-* which basically has a reflexive/reciprocal meaning (Nordlinger 1998: 142–143, 185, 193–194), as in (25):

- (25) Wambaya (Mirndi, Ngurlun) (Nordlinger 1998: 142)
Janji gini-ngg-a wagardbi
 dog(NOM) 3SG.M.A-MM-NFUT wash
 ‘The dog is washing himself.’

As Green (1995) points out, the Wambaya reflexive strategy is shared by the Ngurlun languages, but not by the other branch of the Mirndi group, that is Western Mirndi languages, which instead show a reflexive/reciprocal affix deriving from the Pan-Australian suffix **-dharri-*, e.g., Nungali *-djV-*. This suggests that Ngurlun *-nggV-* is an innovation. A possible source of Ngurlun *-nggV-* can be pinpointed in the neighboring language Garrwa, where reflexive/reciprocal free pronouns are built by attaching the suffix *-ngka* to the oblique pronominal stem (Mushin 2012: 99–103), as in (26). It is therefore possible that the Garrwan pronominal suffix *-ngka* was borrowed into Proto-Ngurlun, where it became a bound verb affix, whence Wambaya *-ngg-* (Green 1995: 422–423).¹⁴

- (26) Garrwa (Garrwan) (Mushin 2012: 101)
yanyba bula-ngk=i jungku
 talk 3DU-MM=PST sit
 ‘Those two were sitting down talking (to each other).’

Other possible cases of matter replication are the Pagu MM *ma-* borrowed from Austronesian languages (Holton 2006) and the Semelai MM *br-*, borrowed from Malay (Kruspe 2004: 82, 117).

Alternatively, contact may lead to “pattern replication” when “it is the patterns of distribution, of grammatical and semantic meaning [...] that are modelled on an external source” (Matras & Sakel 2007: 829–830). With respect to MVs, one can speak of pattern replication when the distribution of an MM is modeled after that of the MM of a contact language. Mapudungun is a case in point. The Mapudungun MM *-(u)w-* can express, among other things, reflexive and reciprocal situations (Smeets 2008: 290–293), as in (27):

14. In Garrwa the Reflexive suffix *-ngka* is in fact an MM (Mushin 2012: 102). This shows that along with matter replication of the suffix, Proto-Ngurlun possibly also replicated its pattern of polyfunctionality.

- (27) Mapudungun (Auracanian) (Smeets 2008: 290)
- a. *petú üna-w-ün*
still scratch-MM-IND.1SG
'I am scratching myself'. (REFL)
- b. *leli-nie-w-üy-ng-u*
watch-PRPS-MM-IND-3NSG-DU
'They are watching each other'. (RECP)

In origin, Mapudungun *-(u)w-* was only reflexive in function (historically, it is connected with the 1st person agent suffix *-(u)w-*, Smeets 2008: 293) and it likely evolved into an MM due to contact with Spanish (Fernández Garay 2005: 58–59). Clear evidence comes from borrowed Spanish reflexive verbs. For example, the reflexive Spanish verb *casarse* 'get married' is borrowed into Mapudungun as *kasa-w-*. This contrasts with the native Mapudungun verbs *vüta-* 'marry (the woman)' and *kure-* 'marry (the man)' which do not carry the MM *-(u)w-*, suggesting that middle marking on *kasa-w-* is a replication of the Spanish pattern (Fernández Garay 2005: 58).

Another example is that of European Romani. North Lovari Romani features a Reflexive pronoun *pe-* which functions as an MM (Wagner 2012: 68–70). While the REFLEXIVE > MM shift is *per se* unproblematic, it is possible that the development of *pe-* into an MM was triggered by contact with Slavic languages, which have reflexive-based MMs (Meyer 2020: 285–287). The role of areal convergence is discussed by Comrie (2006: 316) also for the rise of the Reflexive middle in modern Indo-European languages of Europe (§4.2.1).

6. The typology of MVSs: Weighing the diachronic evidence

The evidence presented in §4 demonstrates that, if one broadens the investigation to a larger language sample, MMs arise out of a much more heterogeneous range of sources and processes than previously thought. Data on the etymological sources of the 149 MMs in the language sample are summarized in Table 2.

Table 2. Sources of MMs

Source	Languages
Non-reflexive	60 (40%)
Reflexive	40 (27%)
Unknown	49 (33%)

This evidence calls for a more accurate reformulation of the widely assumed idea that reflexives are the most frequent sources of MMs (e.g., Kemmer 1993:197). Leaving aside those MMs whose origin is unknown, it is true that reflexives constitute the single most frequently attested source of MMs and that non-reflexive sources taken individually are less frequent than reflexives. However, taken together non-reflexive sources outnumber reflexive ones.

This finding also calls into question Kemmer's idea that the preference for reflexive sources can be explained in terms of "a closer cognitive connection between the categories of reflexive and middle" (1993:197).¹⁵ Instead, adopting a source-oriented perspective (Cristofaro 2019), the purported closer relationship between reflexives and MMs may just be a by-product of a number of accidental factors (Grossman & Polis 2018: 389–392), without any immediate bearings on a cognitive connection between the two categories.

The first factor is the frequency of individual source elements. For example, the higher frequency of MMs from reflexives can be linked to the fact that reflexive pronouns are widespread across languages (König & Siemund 2013). Conversely, other possible source elements display a narrower cross-linguistic distribution. For instance, a source construction involving ideophones plus the verb 'say' is only attested in Yuracare (van Gijn 2010): this partly follows from the fact that ideophones appear to be less frequent than reflexive pronouns (Dingemans 2019).

The second factor pertains to the availability of contexts required for a certain source element to develop into an MM. Reflexives are a more frequent source of MMs because the REFLEXIVE > MM shift follows general grammaticalization pathways. In principle all reflexives with plural subjects may be reinterpreted as reciprocals (Heine & Miyashita 2008) and all reflexives with non-Agent subjects may develop into anticausative and eventually passive markers (Haspelmath 1990). By contrast, passives may develop into markers of other valency-related functions only out of a very restricted set of contexts, e.g., when Agentless passives are reinterpreted as impersonal and then as anticausatives (see discussion in §3). This makes the REFLEXIVE > MM shift more likely to occur than for example the PASSIVE > MM.

15. Concerning the origin of reflexive markers, Kemmer also formulates the strong prediction that "middle markers from non-reflexive sources will not develop into markers of reflexive semantics" (Kemmer 1993:229). This turns out to be unwarranted (see also §3). The case of Oceanic *paRi- and Turkic *(I)š- shows that markers of plurality/reciprocal may also extend to reflexive semantics as the last stage in their development (§4.1.4.2). In Nakh-Daghestanian languages, the Detransitivizing suffix -aR- shows a secondary reflexive function only in Hunzib (§4.1.4.3; Authier 2012). The reflexive function appears also to be a secondary development in Hittite (Inglese 2020: 234–237; §4.1.4.1).

Over the past decades, typologists have repeatedly advocated a diachronic approach to cross-linguistic regularities, claiming that these may in part be explained by “mutational constraints”, that is, “constraints on possible diachronic transitions or possible diachronic sources, which can have an effect on synchronic distribution.” (Haspelmath 2019:8; see also Sansò 2018; Cristofaro 2019). Once properly taken into consideration, the historical evidence presented in §4 also offers an explanation for several tendencies in the synchronic variation of MVs.

First, MVs synchronically differ as to whether they are more attracted towards the oppositional or the non-oppositional pole (Inglese 2021:30–31). Diachrony may partly explain such skewed distributions. For example, the reason why (Old) Hittite is particularly rich in non-oppositional middles as compared to oppositional ones is that the former group is older (Inglese 2020:220). By contrast, the reason why in Wambaya the MM *-ngg-* predominantly occurs with oppositional verbs is that it originates as an oppositional marker of reflexivity (§5).

Secondly, the synchronic polyfunctionality of individual MMs may also reflect the retention of some feature of their sources. For example, MMs derived from (anaphoric) pronouns show a stronger affinity with the reflexive domain (§4.1.1). MMs that are synchronically associated with only passive/anticausative oppositional functions are often derived from markers originally restricted to uncontrolled events (§4.1.4.1). In a similar vein, the fact that most non-oppositional middles in several Oceanic and Turkic languages belong to the class of natural reciprocal events can be readily explained when one considers that Proto-Oceanic **paRi-* and Proto-Turkic *-(I)š- were originally markers of plurality (§4.1.4.2).

On a more general level, diachronic evidence should be integrated into current explanations of the nature of MVs. Since Kemmer (1993), the explanation for the fact that MMs recurrently occur across a specific set of situation types is that these share a common general semantics, which has been defined in terms of lower degree of elaboration of events (§2). The need for this overarching motivation to explain the distribution of MMs has already been questioned from a synchronic perspective (Palmer 1995; Haspelmath 1995; see also Inglese 2021:32–33). The diachronic evidence discussed in this paper also poses a challenge to such an approach.

In particular, there is virtually no compelling historical evidence supporting the idea that MVs are connected with lower degree of elaboration of events. First, the fact that MMs can derive from sources other than reflexives suggests that low elaboration of events is not necessarily the historical core of all MVs. In addition, there is no evidence that, whatever their source, MMs specifically evolve to encode events featuring a lower distinguishability among participants. Instead, what actually happens in the history of MVs is that specific sources undergo a

series of changes such that they end up being synchronically associated with the functional clusters typical of MMs. All these changes are independent from one another: specific semantic/functional motivations can be adduced to explain the extension of individual MMs to one specific context (e.g., reflexive) to another (e.g., anticausative), but this does not necessarily entail that these semantic/functional motivations apply to the MVS cluster as a whole (see Cristofaro 2010). Similar considerations also hold for non-oppositional middles, which even within the same language may be the result of a variety of mechanisms (see §4.2.1). MMs from multiple sources (§4.1.5) and those resulting from pattern replication (§5) also show that the polyfunctionality pattern of individual MMs may not reflect a single underlying functional motivation.

Taken together, the empirical evidence discussed in this paper casts doubt on the existence of a single cross-linguistic middle semantics and instead supports Haspelmath's (1995: 373) hypothesis that existing similarities among MVSs are the result of a network of recurrent diachronic changes and that "the manifold ramifications of the middle voice are the outcome of a heterogeneous set of mechanisms" (Holvoet 2020: 225; the same point has also been made by Post and Modi 2022).

7. Conclusions

In this paper, I have explored the sources and processes behind the emergence of MVSs in a cross-linguistic sample of 129 middle marking languages. The main finding is that MMs may originate out of a varied pool of sources, and that, contrary to a widely held belief stemming from Kemmer (1993: 197), reflexivity is by no means the only possible source of MMs. Besides the variety of sources, I have shown that processes whereby individual sources may develop into MMs fall into three major types. Data from my sample confirm that MMs often find their roots in valency-related markers (Kaufmann 2007), including reflexives. However, I have also argued for the existence of two alternative paths of development hitherto neglected in the literature: MMs may originate in non-oppositional verbs and develop valency-related functions at a later stage, or alternatively both valency-related oppositional functions and non-oppositional verbs emerge through unrelated processes from a third source. Finally, a diachronic approach also casts doubt on the possibility of explaining MVSs as the synchronic manifestation of the semantic notion of low elaboration of events and points towards a more complex scenario, in which the recurrent shape of MVSs across languages is the outcome of the fortuitous convergence of different historical processes of a different nature.

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Abbreviations

1, 3	first and third person	ITER	iterative
A	transitive subject	M	masculine
ABS	absolutive	MM	middle marker
ACC	accusative	MVS	middle voice system
ACT	active voice	NF	non-first-person
ANTC	anticausative	NFUT	non-future tense
ANTIP	antipassive	NPST	non-past tense
ASP	aspect	NSG	non-singular
AUG	augmentative	PASS	passive
CIRCUM	circumstantial	PST	past
CL	classifier	PL	plural
COM	completive aspect	PPERF1	immediate past-perfective aspect
DAT	dative	PRF	perfect
DEF	definite article	PRPS	progressive persistent
DU	dual	QUOT	quotative
GNO	gnomic time reference	RECP	reciprocal
IMPERS	impersonal	REFL	reflexive
INC	incompletive aspect	SG	singular
IND	indicative	U	uncountable
INTR	intransitive marker	VT	transitive verb
IPEV	imperfective		

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Résumé


Les marqueurs de la voie moyenne se caractérisent par une distribution à mi-chemin entre la grammaire et le lexique : avec certains verbes, le marqueur de la voie moyenne indique un changement de valence, tandis qu'avec d'autres, ils se produisent obligatoirement sans moti-

vation synchronique apparente. Malgré les travaux de nature comparative qui existent sur les marqueurs de la voie moyenne, leur histoire demeure encore mal connue. Dans la littérature typologique, l'avis général est que les marqueurs moyens proviennent principalement de marqueurs réflexifs, et que, dans leur développement, c'est invariablement la composante grammaticale qui s'étend à la composante lexicale. Dans cet article, je remets en question ces hypothèses en me basant sur l'analyse d'un échantillon de 129 langues qui présentent des marqueurs de la voie moyenne. Comme je le montre, les sources et les voies par lesquelles ces marqueurs apparaissent sont beaucoup plus nombreuses et variées que ce qui est rapporté dans la littérature. En adoptant une approche orientée vers les sources, je discute également de la manière dont les tendances récurrentes (dans toutes les langues examinées) dans la distribution des marqueurs de la voie moyenne peuvent s'expliquer en partie en examinant leur histoire.

Zusammenfassung

Die Medialmarkierung zeichnet sich durch eine Verteilung auf halbem Weg zwischen Grammatik und Lexikon aus. Bei einigen Verben kodiert die Medialmarkierung einen Valenzwechsel, während sie bei anderen obligatorisch und ohne offensichtliche synchrone Motivation auftritt. Trotz der vorhandenen typologischen Arbeiten über Medialmarkierung ist noch wenig über ihre Geschichte bekannt. In der typologischen Literatur herrscht die Ansicht vor, dass Medialmarkierung überwiegend aus reflexiven Markern hervorgeht und dass sich in ihrer Entwicklung stets die grammatische Komponente zur lexikalischen ausweitet. In diesem Beitrag stelle ich diese Annahmen auf der Grundlage der Analyse einer Stichprobe von 129 Sprachen mit Medialmarkierung in Frage. Es wird gezeigt, dass die Quellen und Wege, bei denen Medialmarkierung entstehen, viel zahlreicher und vielfältiger sind, als sie in der Literatur beschrieben werden. Von einem quellenorientierten Ansatz ausgehend erörtere ich auch, wie wiederkehrende typologische Trends in der Verteilung von Medialmarkierung zum Teil aus ihrer Geschichte erklärt werden können.

Address for correspondence

Guglielmo Inglese
Dipartimento di Studi Umanistici
Università di Torino
Via Sant'Ottavio 20
TORINO 10124
Italy
guglielmo.inglese@unito.it
 <https://orcid.org/0000-0003-2577-8348>

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