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- Verbs that denote uncontrolled event (*lie, be warm, melt down*) are middle;
- Exception: uncontrolled events/states typically undergone by human beings: active (*die, live*)

7. Conclusions

To sum up, middle voice does indeed seem connected with a high degree of intransitivity, and could be a grammatical marker of unaccusativity, even though it must be stressed that some transitive verbs are middle. The development of =z(a) to cover non-unaccusative usages of middle voice may point in the direction of an increasing connection of middle voice with unaccusativity. The extension of subject clitics to intransitive verbs could also be a similar phenomenon: in this connection, it is interesting to note that directional motion verbs, which were the last intransitive verbs to acquire obligatory clitic subjects, also had active morphology: if split intransitivity is to be considered relevant for Hittite, directional motion verbs certainly were located on the verge between two types of intransitive verbs.

the author’s theoretical framework, with typical middle voice functions or with unaccusativity. Note however that the notions of ‘typical’ middle voice meaning and unaccusativity do not coincide: as remarked by various authors, middle voice is not directly connected with intransitivity. Some typical usages of middle voice are found with transitive verbs: see for example the following passage from Ancient Greek:

(29) οὐαῖε βωμουχ ποιευῆται οὐαῖε πυρῆ ἀκαίρουσι μέλι οντέϊν
 “when about to sacrifice, they do not build altars or kindle fire” (Hdt. 1.132.1).

In the above example, the form ποιευῆται is middle. As well known, active voice could also occur in this same context, without any changes in transitivity: by the choice of middle voice the author indicates that the agent performs an action in his/her own interest.

As remarked above (see Fig. 3), the Hittite data seems to point toward a sub-division in the domain of middle voice: in particular, subject involvement is connected with the particle *-z(a)*, while spontaneous events are connected with grammatical middle.

In a recent publication BENEDETTI [forthcoming] argues that a similar distinction also characterizes the distribution of so-called passive aorists in Homeric Greek. Benedetti divides the typical functions of middle voice into four categories: passive, ‘inaccusative’, direct reflexive, indirect reflexive. Based on a thorough study of the homeric passive aorists (ALLAN [2003]), Benedetti shows that forms with the suffixes *-h-* or *-qh-* cover the first two categories (passive and unaccusative), while middle voice in the aorist covers direct and indirect reflexive usages. Benedetti also shows that this situation owes to a Greek innovation, since there is evidence for an older situation, in which the grammatical middle covered the whole range of middle voice meanings (as it does outside the aorist). Much in the same way, BOLEY [1993] shows that there is some evidence in Hittite that the development of the particle *-z(a)* for direct and indirect reflexive took over some usages of the grammatical middle.

Another problem is connected with the chronology of middle voice. Many verbs that only inflected in one voice in Old Hittite developed voice opposition later; some of these originally only had active voice, while some others only had middle voice. Besides, morphological marking of middle voice became heavier after Old Hittite: NEU [1968a] has shown that middle endings containing *-r* are later than middle endings that did not contain it. JUSTUS [forthcoming] argues that the extension of *-r* endings owed to a re-structuring of the voice system, in the transition from phase I to phase II illustrated below:

Figure 4.

Stage I	Verb classes: person endings have a classifying function. Verbs are semantically either (intransitive) active or stative, transitive actions are syntactically or morphologically derived.
Stage II	Transition: verb classes are collapsing together. Various transitivity-changing strategies appear.
Stage III	One overt verb class with voice transformation. Verbs can be transformed from (transitive) active to passive.

Justus provides examples with the verb *mer-/mar-* which is active in Old Hittite and later acquires middle morphology (but active morphology still continues, with no apparent change of meaning):⁸

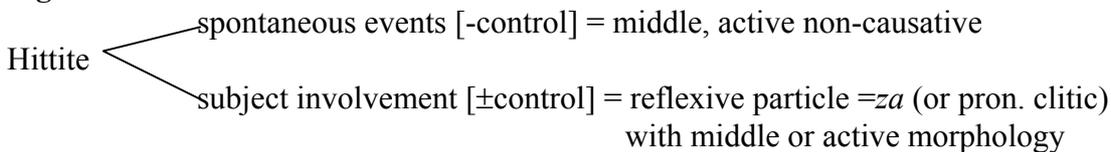
(30) *man=kan* ^{LU}*MESHEDI=ma arha mirzi*
 ‘When the *MESHEDI* men go entirely missing ...’
 (IBoT I 36 I 53)

⁸ Fig. 4 and examples (30) and (31) are quoted from JUSTUS [forthcoming].

- The Hittite middle can have passive meaning, but this is a semantic extension that was only at the onset in the Old Hittite period. In some cases, suppletive verbs that appear in the causative/anticausative alternation can be used as active/passive: anticausative verbs in this case can co-occur with agent phrases, thus denoting controlled events (see below, the remarks from JUSTUS [forthcoming]).
- This alternation is parallel to the alternation intransitive/causative (with intransitive verbs denoting controlled events), as in *ar-* ‘arrive’, ‘get there’ / *arnu-* ‘bring’.
- Intransitive verbs denoting controlled events are very often active (*pai-* ‘go’, *uwa-* ‘come’).
- Uncontrolled states or achievements with typically human subj. (as ‘live’ or ‘die’) are often active.

According to KEMMER [1994], middle voice is a semantic category intermediate in transitivity between one-participant and two-participants events. It is typically used with verbs that denote spontaneous events ([−control]), or to indicate subject-affectedness ([±control]). Kemmer’s definition fits morphological middles in many Indo-European languages, e.g. Ancient Greek (see ALLAN [2003]). In Hittite the semantic properties of middle voice are distributed between morphological middle and reflexive constructions:

Figure 3.



In particular, this function of the particle *=z(a)* developed especially after Old Hittite, as shown in BOLEY [1993]. In any case its limited occurrences in Old Hittite also have this function, as shown for example in (27):

- (27) *nu= zza DUMU.NITAMEŠ karti= smi piran memir*
 CONN PTC boy-PL heart-D/L 3PL-POSS-D/L before speak-3PL-PRET
 “the boys said to themselves”, *StBoT* 17, obv. 14.

A typical post-Old Hittite usage of *=z(a)* involves the verb *kis-*. Without the particle the verb means ‘happen’, while with the particle it usually takes a predicative complement and mean ‘become’, as shown in (28), which also contains an example of *=z(a)* with the verb *es-* ‘sit down’ (the verbs without the particle means ‘be sitting’):

- (28a) *mahhan=ma= za ABU-YA^mmursilis DINGIR^{LIM} kisat*
 when CONN PTC father my M.-NOM god become-3SG-PRET
 b) *ŠEŠ- YA=ma= za= kan^mNIR.GÁL ANA GIŠGU.ZA ABI- ŠU esat*
 brother my CONN PTC PTC M. on throne father his sit-3SG-PRET
 c) *ammuk=ma= za ANA PANI ŠEŠ- YA EN.KARASŠ kishahat*
 1SG-NOM CONN PTC in-front-of brother my army-commander become-3SG-PRET
 “when my father Mursili became a god (i.e. died), my brother Muwatalli sat on his father’s throne while I became army commander in front of my brother”, *StBoT* 24 i 22-28.

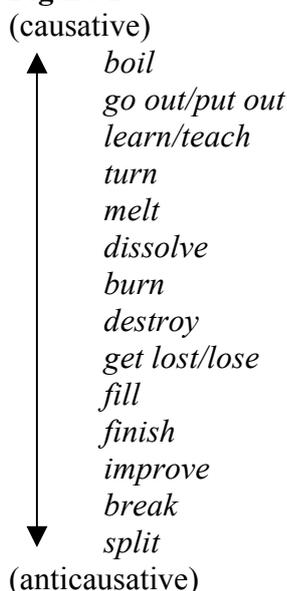
JOSEPHSON [2003] studied the function of the particle in the framework of typical middle voice meanings, and compared it to Spanish *se*. He argues, among other things, that the subject of an intransitive verb with *=z(a)* is more actively involved in bringing about a certain event than the subject of the corresponding verb without *=z(a)*. Active involvement however does not mean transitivizing the verb, it rather means control: it can be intentionality on the side of the subject, or reflexivity, i.e. adding a direct object which is coreferent with the subject.

Both Josephson and Boley compare the use of *=z(a)* with some usages of reflexives in the Romance languages: Josephson refers to MALDONADO [2000] on Spanish *se*, while Boley has some non-systematic remarks on Italian *si*. Non-reflexive usages of *si* have been connected, depending on

The verbs that I have listed under ‘equipollent’ are verbs that have causative forms with the suffix *-nu-*, but, because they are derived from adjectives, the anticausative counterpart also has a derivational suffix: however, they can be considered as a subset of verbs with causative derivation.

According to the data in HASPELMATH [1993] verbs that are most likely to have causative derivation vs. verbs that are more likely to have anticausative derivation in his sample are aggregated as follows:⁷

Figure 2.



Even though the list does not cover all Hittite verbs surveyed above, it can be seen that, with few exceptions, verbs that have causative derivation in Hittite are the same or are semantically similar to verbs that tend to have causative derivation across languages, while verbs that have a causative/anticausative alternation based on voice are close to those that tend to have anticausative derivation.

That middle voice in Hittite is connected with anticausative meaning is clear also from the fact that many verbs that have causative derivation have *media tantum* anticausative underived counterparts.

BENEDETTI [2002] has argued that the Indo-European middle was connected with unaccusativity. Unaccusative verbs are intransitive verbs whose subject has patient properties, as shown in § 1: this group includes verbs denoting spontaneous events, and verbs denoting states. Indeed, these two groups of verbs cover the original functions of middle voice in Hittite, according to NEU [1968a].

5. Diathesis and control

Below are some observations that can be made regarding to the distribution of causative derivation and diathesis in Hittite:

- Inchoative verbs that have morphological causative counterparts are either *media tantum* or they have active=medium, i.e. no matter the morphology, they denote uncontrolled events (or states: *e-* ‘become/be warm’, *zae-* ‘boil/be boiling’).
- Morphological causatives with the suffix *-nu-* can often be inflected in the middle. In the middle, they have reflexive (mostly with the reflexive clitic $\text{=z}(a)$) or passive meaning; i.e. they denote controlled events. The main function of *-nu-* then can be said to change the meaning of the predicate from [-control] to [+control].

⁷ These are only a part of the verbs surveyed in HASPELMATH [1993], for which I have found a correspondence in Hittite.

<i>war-</i> middle	<i>warnu-</i>	CAUSATIVE
28. turn		
<i>weh-</i> active=middle	<i>wahnu-</i>	CAUSATIVE
29. boil		
<i>zea-</i> middle	<i>zanu-</i>	CAUSATIVE
30. finish		
<i>zinna-</i> active=causative	middle= anticausative	VOICE
(partly labile: active can also be anticausative)		

Figure 1.
Distribution of Hittite verbs among derivation types

VOICE	CAUSATIVE	EQUIPOLLENT	LABILE	SUPPLETION
	2 warm up			
	3 collapse			
	6 delay			
	8 go out			
	14 get lost			
	16 fear			
	18 get drunk			
	20 become tall			
	22 disappear			
	27 burn			
	28 turn			
	29 boil			
		5 dry		
		11 grow		
		19 become tall		
4 split				
7 finish				
9 prosper				
10 survive				
12 melt				
15 be invisible				
17 turn				
23 purify				
24 fill				
26 break				
30 finish				
			21 break	
				1 die
				13 fall
				25 appear

active=causative middle= anticausative

middle from OS, active from OH/NS less frequent

13. fall/fell

maus- *pessya-* SUPPLETION

active=middle

14. get lost/loose

mer- *marnu-* CAUSATIVE

active=middle

middle after OH/OS

15. to be invisible/hide

munnai- VOICE

active=causative middle=anticausative

active from OH/NS, middle from MH/NS, less frequent

16. fear/frighten

nahsariya- *nahsarnu-* CAUSATIVE

active=middle

(middle forms are more frequent; 'be afraid' is *nahh-*, mostly act.)

17. turn

nai- VOICE

active=causative middle= anticausative

(both from OS)

18. become/make drunk

nink- *ninganu-* CAUSATIVE

active= middle

19. become/make tall

parganes- *parganu-* EQUIPOLLENT

active=middle

20. become/make tall

parkiya- *parkiyanu-* CAUSATIVE

active=middle (in OH apparently LABILE, causative derivation from MS)

21. break

pars- LABILE

active=transitive middle= anticausative, transitive

(active only from OH/NS)

22. disappear/eliminate

samen- *samenu-* CAUSATIVE

active=middle

23. purify

suppiahh- VOICE

active=transitive middle= anticausative

24. fill

suwai- VOICE

active=causative middle= anticausative

25. appear/show

dug- *tekkussai-* SUPPLETION

middle active

26. break

duwarnai- VOICE

active=causative middle= anticausative

27. burn

Although passivization is not very productive in Old Hittite, another valency changing operation exists, partly involving derivational morphology, i.e. causative derivation. The suffix *-nu-* is used with a number of intransitive verbs to form transitive counterparts; often is also used to form transitive verbs from adjectives. In such cases, an intransitive verb that denotes a spontaneous event is also formed with the suffix *-es-* (see LURAGHI [1992]).

Below I list a number of Hittite verbs that display either causative derivation or causative/anticausative meaning connected with diathesis, whereby the middle voice is typical for spontaneous events. Note that causative verbs in *-nu-* may have middle voice, see § 5.⁶

1. die/kill
ak-/ *kuen-* SUPPLETION
active active
(infreq. middle=active)
2. warm up
e- *inu-* CAUSATIVE
middle
(also ‘be warm’)
3. collapse/destroy
hark- / *harganu-* CAUSATIVE
active=middle
4. split
harp- VOICE
active=causative middle=anticausative
5. dry
hates- *hatnu-* EQUIPOLLENT
mostly active
both verbs from OS
6. delay
istnatai- / *istandanu-* CAUSATIVE
active
7. finish
irha- VOICE
active=causative middle= anticausative (see 31)
8. go out/put out
kist- *kistanu-* CAUSATIVE
middle
9. prosper, flourish/set straight
lazziya- VOICE
active=causative middle= anticausative
middle also ‘recover’, from OS; more frequent than act. As ‘heal’ *huisnu-* caus. from *huis-*, ‘live’
10. survive/sustain
luluwai- VOICE
active=causative middle= anticausative
both voices from OH same frequency
11. grow
makkes- *maknu-* EQUIPOLLENT
middle
(from MS also active=middle); both verbs from OH
12. melt down/melt
mariya- VOICE

⁶ The data are partly from NEU [1968a], partly from *CHD*, and, for causative verbs, from LURAGHI [1992].

(23) *Qualcuno ha chiuso la porta/ la porta è stata chiusa* (passive)

(24) *La porta si è chiusa* (anticausative).

Passive sentences denote controlled events; their anticausative counterparts denote spontaneous (uncontrolled) events: the passive in (23) implies that somebody has caused the event, even if this agent is not mentioned; the anticausative in (24) implies that the event has happened by itself.

HASPELMATH [1993] has studied causative and anticausative derivation in a typological perspective. He describes four possible situations (some languages, as English, have more than one):⁵

i. **causative** alternation

the anticausative verb is unmarked, the causative verb is marked:

Georgian: *duḡ/a-duḡ-eb-s* (cook);

ii. **anticausative** alternation

the causative verb is unmarked, the anticausative verb is marked:

Italian: *rompersi/rompere* (break), Russian: *rasplavits'/rasplavit'sja* (melt), German: *verändern/sich verändern* (change). These three examples involve the usage of the reflexive particle for anticausative derivation;

iii. **equipollent** alternation:

both the causative and the anticausative verb have the same number of morphemes, but they are different:

Japanese *atumaru/atumeru* (gather), English *fall/fell*;

iv. **suppletive** alternation:

the alternation involves lexically different verbs:

English: *die/kill*; Russian: *goret'/žeč* (burn);

v. **labile**

there is no overt marker of the alternation:

English: *break, melt, open, ...*

Some verbs can be labile or have anticausative derivation, as Italian *fondere* 'melt':

(25) *Il metallo fonde/ il calore fonde il metallo* (labile)

(26) *Il metallo si fonde* (anticausative).

HASPELMATH [1993] has shown that across languages there is a scale of likelihood according to which verbs have causative or anticausative derivation. In general, verbs that denote events that are more likely to occur spontaneously tend to have causative derivation, while verbs that denote events that are more likely to be brought about by an agent have anticausative derivation (obviously, the extent to which such prediction applies to a single language is conditioned by the existence of more than one type of derivation in the specific language).

Not all verbs have anticausative/causative alternation, but only those that refer to events that can be either spontaneous or brought about by an agent (see Fig. 2). In languages that have syntactic correlates of split intransitivity, like Italian, anticausative verbs are unaccusative; from the point of view of the event type, they denote achievements. Note that not all achievements are denoted by anticausative verbs, but only the sub-set that includes spontaneous events (so for example directional motion verbs are not anticausative).

4. Causatives and anticausatives in Hittite

Hittite diathesis has been the topic of various studies. In the Old Hittite texts its distribution is by a large part lexical: many verbs are either *activa* or *media tantum*. A number of verbs are attested in both diathesis, but only very few have middle forms with passive meaning. The real function of the middle diathesis has been a matter of debate ever since the decipherment of Hittite; in any case, middle voice seems at least in part connected with intransitivity.

⁵ Note that Haspelmath uses the term 'inchoative' for anticausative. The examples below are partly from HASPELMATH [1993] partly mine.

“Of old king Muwatallis gave him to my father Hattusilis to exalt, and of old my father exalted him” (Boley, 1992: 55).

- (19) UGULA LÚ^{MEŠ} MU *hassas katta ket arta 6 HAR-nai^{SAR} harzi LÚ^h hesta*
 head cook hearth:GEN down on-this-side stand:M/P.3SG six *h.* have:3SG *h.*-man
hassas katta edi parsanan harzi 6 HAR-nai^{SAR} harzi
 hearth:GEN down on-that-side crouch:PART.N/A have:3SG six *h.* have:3SG
 “the head cook stands near the hearth on this side, he holds six *h.*; the LÚ^h *hesta* crouches near
 the hearth on that side, he holds six *h.*” *StBoT* 25 n. 27;
- (20) ... INA^{URU} *puranda sara pan esta*
 to P.:DIR up go:PART.N/A be:PRET.3SG
 “... (the population) went to Puranda” *AM* 60.55;
- (21) ... *uedanza esta*
 build:PART.NOM be:PRET.3SG
 “... (the city) had been built” *AM* 98:24.

As well known, Hittite also has transitivity-sensitive case marking: neuter nouns as such can only be the subject of an intransitive verb; in order to be the subject of a transitive verb, a neuter noun must take a special suffix, which transposes it into the common gender. In principle split intransitivity should have reflexes in case marking: one would expect a special behavior of unergative verbs, different from the behavior of unaccusative verbs. Indeed, all transitive verbs, denoting both achievements and activities (unergatives), trigger derivation for neuter subjects; however, to my knowledge, there is no evidence for intransitive (a) (unergatives).

The only piece of evidence for different treatment of a group of intransitive verbs has been detected by GOEDEGEBUURE [1999], who has shown that in Old Hittite directional motion and perhaps verbs denoting state (notably the verb ‘be’)⁴ often occur with null third person subjects. This includes active and middle (deponent) verbs. Verbs denoting change of state never come without 3 person subject.

As I have already remarked above, directional motion verbs are somewhat different from other unaccusative verbs, because their subject is volitional, even though the fact that they denote a change of position can be conceived as equivalent to a change of state. So it is possible that in Old Hittite these verbs were treated as unergative, or at least that, at the time when special syntax for unaccusative verbs was being established, they were the last to acquire it.

3. Valency changing operations

Transitive verbs can passivize. In the passive, they have a single argument: subj. = patient (the agent is demoted but it is implied). Indeed, passive verbs behave as unaccusative in languages that have split intransitivity.

Beside valency reduction, valency increase is also possible, through the formation of causatives (see COMRIE [1995]). Some intransitive verbs that denote spontaneous events have causative counterparts, i.e. they have causative derivation. In English this mostly happens without overt morphological marking:

- (22) *The ice melts / the sun melts the ice.*

Anticausatives, as intransitive *melt*, denote spontaneous events. They have a single argument: subj. = patient, similar to the passive of active verbs. In many Indo-European languages, the unmarked verb is transitive, and the intransitive verb is morphologically marked (anticausative derivation). In causative derivation, derived verbs have two arguments, subj. = agent and obj. = patient. In anticausative derivation, derived verbs have a single argument, subj. = patient.

An example of anticausative derivation can be found in Italian, where one also finds passivization:

⁴ Goedegebuure’s examples of the verb ‘be’ are not clear: possibly they contain the verb ‘sit down’, so they should be included in motion verbs.

obligatory when the object is not a full NP or accented pronoun. Third person subject clitics never occur with transitive verbs. Examples are the following:

- (16) a) *nu= kan INA KUR^{URU}arzauwa parranda paun*
 CONN PTC in country A. upwards go:1SG.PRET
 b) *nu INA^{URU}apasa ANA URU^{LIM}ŠA^{muhha-LÚ} andan paun*
 CONN in A. to city of U. into go:1SG.PRET
 c) *nu= mu^{muhha-LÚ-is} UL mazzasta*
 CONN 1SG.OBL U.-NOM not resist:3SG.PRET.M/P
 d) *n= as= mu= kan huwais*
 CONN 3SG.NOM 1SG-OBL PTC escape:3SG.PRET
 e) *n= as= kan aruni parranda gursawanza pait*
 CONN 3SG.NOM PTC sea:D/L toward island-DIR go:3SG.PRET
 f) *n= as= kan apiya anda esta*
 CONN 3SG.NOM PTC there in be:3SG.PRET
 “I went up to the country of Arzawa. In the city of Apasa I went into Uhhaziti’s quarters and Uhhaziti did not make any resistance. He escaped me and went to the island and stayed there”, *AM* 50.28-32;

- (17) a) *sallanun= war=an kuit ammuk*
 promote:1SG.PRET PTC 3SG.ACC because 1SG.NOM
 b) *nu= war=an huwappi DI-esni huwappi DINGIR^{LIM}-ni UL para*
 CONN PTC 3SG.SCC bad:D/L tribunal:D/L bad:D/L god:D/L NEG PREV
UL kuwapikki tarnahhun
 never hadle:1SG.PRET
 c) *kinuna=ya= war=an karapmi*
 now CONJ PTC 3SG.ACC take:1SG.PRES
 d) *nu= war=an ANA^{DUTU} URU^{TÚL-na AŠŠUM^{LÚ}} SANGA-UTTIM tittanumi*
 CONN PTC 3SG.ACC to sungod Arinna for priesthood install:1SG.PRES
 “because I promoted him, I never handled him over to a bad tribunal or to a bad god; and now I will take him and make him priest for the sungoddess of Arinna”, *StBoT* 24 IV 11-15.

The above examples contain coordinated clauses with a high degree of continuity, both for the third person subject in (16d-f) and for the third person direct object in (17a-d). In such conditions, the other ancient Indo-European languages allow for omission of both the subject and the direct object (see LURAGHI [forthcoming]). The fact that Hittite does not allow omission (but it allows for omission of the subject of transitive verbs) demonstrates that Hittite third person clitics do not only have anaphoric function, but also have the function of indicating the verb’s transitivity.

According to GARRET [1996] the distribution of subject clitics is connected with split intransitivity, since unergative verbs behave as ergative ones. However, the evidence for the existence of unergative verbs that do not have ergative counterparts (i.e. type (a) intransitive in my terminology) is scanty. In the case of auxiliary selection, too, intransitive verbs that take the auxiliary ‘have’ like transitive verbs are few: the best piece of evidence is provided by the form *parsanan harzi* in (19):³

- (18) *annisan=pat=an¹ NIR.GÁL-is LUGAL-us ANA ABU-YA¹ hattusili*
 of-old PTC 3SG.ACC M.:NOM king:NOM to my-father H.:D/L
sallanummanzi piyan harta n= an annisan=pat ABU-YA
 exalt:INF give:PART.N/A have:PRET.3SG CONN 3SG.ACC of-old PTC my-father
sallanuskit
 exalt:PRET.ITER.3SG

³ On the distribution of auxiliaries see BOLEY [1992], HOUWINK TEN CATE [1973], and LURAGHI [1997].

Besides, intentional actions denoted by motion verbs are achievements in much the same way as uncontrolled spontaneous events, but the participant denoted by their subject is a controller, and brings about the event intentionally, rather than a patient as the subject of a verb which denotes a spontaneous event, which is not volitional.

A possible way of grouping different types of transitive and intransitive verbs is shown below:²

- Transitive (a): *break, kill*
2 arguments: subj. = agent, object = patient (undergoes change of state); such verbs typically never occur without a direct object;
- Transitive (b): *eat, paint, drive*
2 or 1 argument: can denote accomplishments (*eat a sandwich, paint a picture*) or activities (*be eating, be driving*);
in the case the verb denotes an activity it has a single argument: subj. = agent
- Intransitive (a): *walk*
subj. = subj. of transitive verbs (agent); they denote activities and as such are similar to transitive (b) when used with one argument only;
- Intransitive (b): *die, melt down, be red*
subj. = obj. of transitive verbs, or subj. of passive (patient); they can denote states or achievements. (Motion verbs are included in this class but, as remarked above, their subject has some agent properties, namely it is volitional.)

Of these verbs, transitive (a) and transitive (b) when used with two arguments are also called ‘ergative’, transitive (b) when used with a single argument and intransitive (a) are also called unergative, and intransitive (b) are also called unaccusative. Passive of ergative verbs are unaccusative.

In a number of languages, such as Italian, Dutch, and German, intransitive unergative and unaccusative have different syntactic behavior: in particular, the former share some syntactic features of ergative verbs, while the latter do not. Evidence for split intransitivity in Italian includes the distribution of partitive clitics and auxiliary selection:

- (12) **Ho** mangiato (trans.) *due mele* / **ne** (obj.) *ho mangiate due*
 (13) **Hanno** telefonato (intr. a.) *due miei amici* / ***ne** hanno telefonato/i *due*
 (14) **Sono** venuti (intr. b.) *due miei amici* / **ne** (subj.) *sono venuti due*
 (15) **Sono** state mangiate (pass.) *due mele* / **ne** (subj.) *sono state mangiate due*.

Note that the notion of split intransitivity is relevant only if the class of unergative verbs also contains a sub-set of intransitive (a), and not only transitive (b): in the case that only transitive (b) behave as other transitive verbs one can simply assume that such verbs always have the same syntactic behavior.

As already remarked, the groups of events defined above only partly match the groups of verbs. In particular, unaccusative verbs are those whose subject has patient properties, i.e. verbs that denote a spontaneous event and a change of state undergone by the subject, so they denote achievements; verbs that denote states are also often treated as unaccusative. As I have already remarked above, however, not all achievements are spontaneous events, and many states are treated as actions.

2. Intransitive verbs in Hittite

In Hittite the distribution of subject and object third person clitics is sensitive to transitivity: while third person forms of intransitive verbs cannot occur without an overt subject, third person forms of transitive verbs can; on the other hand, omission of a referential direct object is almost inexistent. As shown in LURAGHI [1990], third person subject and clitics have a complementary distribution: subject clitics can only occur with intransitive verbs, and are obligatory when the subject is not a full NP or an accented pronoun, while object clitics can only occur with transitive verbs, and are

² This grouping considers transitivity and intransitivity as syntactic phenomena, which are certainly related to semantic properties of predicates, but should not be equated to them.

Transitivity, intransitivity, and diathesis in Hittite

di Silvia LURAGHI

0. Introduction

The aim of the present paper is to explore some transitivity related phenomena in Hittite. As well known, Hittite has a variety of features that affect or are affected by verbal valency, such as the distribution of nominative and accusative third person clitics, affixes used for verb derivation, the so-called reflexive particle *-z(a)*, and verbal diathesis. Arguably some of these features are connected with degrees of transitivity or intransitivity. After surveying previous research on the topic, I will especially concentrate on (pairs of) verbs that display a causative vs. anticausative semantic opposition, in order to better understand the function of middle voice, and its possible connection with split intransitivity.

1. Types of events and types of verbs

A common typology of events is based on telicity (see VAN VALIN [1990]). Atelic events can be states, in which case they are generally uncontrolled (but see fn. 1), as in:

- (1) *The boy is tall*
- (2) *John loves Mary*
- (3) *Mary is home*
- (4) *This book has forty pages.*

Activities are also atelic; they are often, but not necessarily, controlled. Activities are dynamic, but they do not denote change of state:

- (5) *The child is eating*
- (6) *Mary is walking*
- (7) *The door squeaks.*

Telic events involve a change of state. They can either require only one participant, or they can be brought about by an agent or another possible controller. The former type of event is called achievement, and denotes a change of state (or a change of position) of a participant that in English is the syntactic subject of the verb that denotes the event. Such events are often spontaneous and uncontrolled, though not always:

- (7) *the snow melted*
- (8) *the door opens*
- (9) *I went home*

Accomplishments are controlled telic events that denote a change of state brought about by an agent or controller on the side of the patient:

- (9) *John ate the pasta*
- (10) *The wind broke the window*
- (11) *Mary gave John a present*

These four types of event cross-cut a possible grouping of verbs defined by their syntactic behavior and based on transitivity, but there is no perfect match between transitivity and type of event encoded: suffice it to note that many verbs that denote states are transitive (*know, love*) (see below).

Note that, in general,¹ the subject of verbs that denote states does not control the event. In this respect, it is similar to a patient. From a syntactic point of view, however, it must be remarked that verbs denoting states, especially when they have an experiencer subject, are transitive, i.e. they are constructed as action verbs, and their subjects are treated as agents.

¹ A case can be made that the subject of verbs such as *have*, that denotes a state, does exert control. DIK (1970) actually classified events denoted by such verbs in a separate group, called 'positions'.