

The space between one and two

Transitives, intransitives and the middle voice

Abstract

Many languages may mark their verbs with the *middle voice*, a verbal marker that signals meaning categories like Reflexivity, Reciprocity and the Passive. Kemmer (1993) claims that the meanings of the middle voice separate the meaning categories of Two-Participant events and One-Participant events, the semantic counterparts of transitive and intransitive verbs, respectively. However, data from a number of languages show that there is no such separation; there is a direct connection between Two-Participant and One-Participant events, with the meanings of the middle voice being of secondary importance.

Keywords: transitive, intransitive, reflexive, middle voice, passive

1. Introduction

All languages have ways to express Two-Participant – or transitive – events (1a) and One-Participant – or intransitive – events (1b), as Dixon (1979) notes. In addition, many languages have ways to

express events where the number of participants is not really one and not really two. A well-known example is the Passive (1c).

Syntactically it is very close to an intransitive sentence, but semantically it involves both an agent and a patient, just like an archetypical transitive sentence.

- (1) a. John kissed Pete
b. Pete slept
c. Pete was attacked

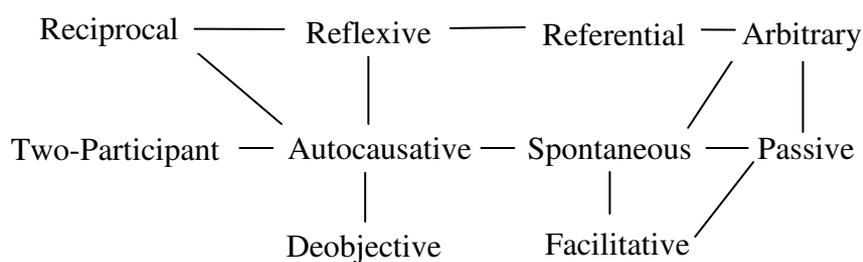
Event types that, like the Passive, have neither really one, nor really two participants, are collectively known as the *middle voice*, a term popularized by Kemmer (1993). Besides the Passive, the middle voice involves the Reflexive meaning and the Reciprocal meaning, among others.

Kemmer claims that the middle voice acts as an intermediary between Two-Participant and One-Participant events: languages may use it as a means to develop a Two-Participant marker into a One-Participant marker or vice versa. In this paper I will investigate whether the middle voice connects Two-Participant and One-Participant events to each other. Both synchronic and diachronic data will be considered.

A way to model the connections between meanings is a semantic map. Semantic maps are well-suited for the representation of a range of related meanings. A semantic map can best be described as a network of meaning concepts. *Grams* – linguistic elements like words, affixes, syntactic constructions, intonation, etc. – may cover one or more concepts on the map. The only constraint is that a single gram may only cover concepts that are adjacent, i.e. connected by lines. In other words, a gram must cover a contiguous area on the map. Additionally, each language may use one or more grams for a semantic map.

Earlier semantic maps for the Middle voice can be found in Kemmer 1993 and Haspelmath 2003. In this paper I will present a new map – see (2) – which diverges from the other two maps in a number of respects. Note that the names of the concepts are capitalized in this paper to signal that the definitions of these concepts might be different from the ones that are widely used

(2) Semantic map for the middle voice



The remainder of this paper will be concerned with a discussion of each of the meanings of the map in (2) and how these meanings relate to the connection between Two-Participant and One-Participant events. For matters of convenience the meanings will be discussed in three parts. Section 2 will feature the *Referential*, *Reflexive* and *Reciprocal* meanings. In this section it will be shown how pronouns and pronoun-like elements may eventually become markers of voice phenomena. Section 3 will feature the middle row of the map in (2), the *voice row*. The term “voice row” shows that this row hosts the traditional categories of Active and Passive voice. This will be the central row of the map, because it includes the *Two-Participant*, *Autocausative*, *Spontaneous* and *Passive* meanings. These meanings relate to the basic two-participant (*Two-Participant*) and one-participant predicates (*Autocausative*, *Spontaneous* and *Passive*). Section 4 will feature the three meanings that are left: *Deobjective*, *Facilitative*, and *Arbitrary*. These three meanings have a generic meaning component in common. I will end this paper with my conclusion in Section 5.

2. The pronominal stage

The top row of the map in (2) has three meanings, Referential, Reflexive, and Reciprocal. I will see these meanings as the pronominal stage. The terms “pronoun” and “pronominal” are used very loosely here to refer to a grammatical element that has its own participant in the semantics. Via the Reflexive and Reciprocal meaning the grams that express these three meanings gain access to the voice-related meanings of Section 3.

2.1 *Referential*

The first meaning under discussion is the Referential meaning. This meaning is illustrated by an ordinary English personal pronoun like *him* in *I like him*. Semantically, this *him* is an individual constant, whose reference is determined by contextual saliency. At first view the Referential category may look like a well-delineated category. Yet, the data are more complicated, as the next subsection will show.

2.2 *Reflexive*

The second meaning on the map is the Reflexive meaning. Semantically a Reflexive element is also an individual variable, yet one that has to be bound syntactically. Pronoun *himself* in (3a) has a Reflexive meaning. In contrast, pronoun *him* in (3b) has a Referential

meaning. However, pronoun *him* in (3c) has a Referential meaning when it does not refer to John, but when *him* and *John* are the same person, *him* can also have a Reflexive reading. This can be shown by looking at the additional phrase *and so does Pete* in (3c). This addition can either have a strict reading (*Pete also thinks I like John*), which shows the Referential use of *him*, or a sloppy reading (*Pete also thinks I like Pete*), which shows the Reflexive reading of *him* in (3c).

- (3) a. John likes himself
 b. John likes him
 c. John thinks I like him, and so does Pete

Now it would seem that *him* in (3b) has only a Referential meaning, and that *him* in (3c) has both a Referential and a Reflexive meaning. This is a problem if one strives for a uniform account for the Reflexive meaning in English. The problem might be handled by saying that the Reflexive meaning in (3c) is a distinct meaning – one might call it *Long-Distance Reflexive* or *Logophor* for example, see Koster & Reuland 1991, Huang 2000, and Cole, Hermon & Huang 2001. Let us therefore look at the definition of the Reflexive proper in (4), which we will use in the rest of this paper.

(4) Reflexive: NP's referent is both V's agent and V's patient

Reference is made to an NP and a V in (4), so these should also be part of the gram. The corresponding gram in the English sentence in (3a) now is *NP V himself*. Similarly, the gram for Long Distance Reflexive (3c) will be *NP ... [CP... V him]*. However, this gram is also covered by the Reflexive meaning as defined in (4). This is why there is no need for distinguishing a separate Long Distance Reflexive category semantically. The problem of the two instances of *him* in (3b) and (3c) is solved instead by the analysis that (3b) and (3a) involve different grams. Because different grams may cover different meanings, the problem disappears. In other words, the difference between the instances of *him* in (3b) and (3c) is not semantic but syntactic. For more information on the elaborate syntactic typology between Referential and Reflexive pronouns, see Menuzzi 1999 and Kiparsky 2002. For other routes to develop a Reflexive meaning, see Faltz 1985.

Proto-Indo-European (PIE) also had a pronoun with Referential meaning: **se* (see Szemerényi 1999:220, Puddu 2005). In many Indo-European languages a third person pronoun cognate of **se* that has a Reflexive meaning but no Referential meaning can be found. The Referential origin of these pronouns is however often still

visible in its paradigmatic similarity to first and second person pronouns with Referential meaning, cf. Latin *mē, tē, sē*; French *me, te, se*; and German *mich, dich, sich*. Apparently these third person pronouns lost their Referential function somewhere in their history. The first and second person pronouns, on the other hand, kept this function besides the Reflexive one.

2.3 *Reciprocal*

The third and final meaning of the top row is the *Reciprocal* meaning. Its definition in (5) is quite close to the definition of the Reflexive meaning in (4).

(5) *Reciprocal: NP's referents are alternately V's agent and V's patient.*

The corresponding gram in a sentence like *They understand each other* will be *NP V each other*. See Haspelmath 2007 for more on reciprocal meaning and reciprocal form.

There are also cognates of PIE **se* that express the Reciprocal meaning. Two examples that were derived directly from the Reflexive meaning are Czech *sebe* and Polish *siebie*. However, most Reciprocal meanings of the cognates of **se* came about through a detour (see

Gast & Haas, forthcoming). This detour is one of the things that will be dealt with in the next section.

3. The voice row

The middle row on the map in (2) – the voice row – contains four meanings: Two-Participant, Autocausative, Spontaneous and Passive.

The first three terms are the semantic counterparts to transitive, unergative and unaccusative, respectively. Note, however, that there is not always a one-to-one correspondence between syntax and semantics here. For example, a syntactically unergative predicate may have a Two-Participant meaning, see English *John ate* or *John killed* (Hopper & Thompson 1980, De Swart 2007). This row constitutes the core of the map in (2), since it is the purpose of this paper to show the connection between Two-Participant events and events with one participant, Autocausative and Spontaneous events.

3.1 Autocausative

An important link between the top and the middle row runs through the Autocausative category: both Reflexive and Reciprocal grams may expand to cover the Autocausative meaning. In an Autocausative predicate some participant does some action all by herself. An important feature of the meaning of the Autocausative is that the

meaning of an Autocausative predicate strongly depends on the type of verb the Autocausative marker applies to. We will look at two types of verbs with Autocausative meaning, *inherently reflexive verbs* and *inherently reciprocal verbs*.

3.1.1 *Inherently reflexive verbs*

First, let us go back to the definition of the Reflexive meaning in (4). This meaning belongs to a Dutch reflexive pronoun like *zichzelf* in (6a). However, as is widely known, some languages also have a second type reflexive pronoun, like Dutch *zich* in (6b).

- (6) a. *Jan waste/verplaatste/haatte/hielp zichzelf*
John washed/moved/hated/helped himself
- b. *Jan waste/verplaatste/*haatte/*hielp zich*
John washed/moved/hated/helped himself

The special thing about the *zich*-type is that its use is limited to a small set of verbs, the so-called inherently reflexive verbs: verbs that represent actions for which it is very common that people apply them to themselves, like washing and moving.

The important question now is, whether sentences with inherent reflexivity, like (6b), also involve the Reflexive meaning in (4) or a different meaning. If we assume that in both (6a) and (6b) the

Reflexive meaning is expressed we have to say, for example, that Dutch has two grams to express the Reflexive meaning: *NP V zichzelf* and *NP V zich*. As a consequence one needs to assume that *NP V zich* expresses a patient role, because of the definition in (4). Two counterarguments against this assumption can be made.

But before we can address these counterarguments we need to take a closer look at inherent reflexivity. Inherent reflexivity marking is limited to a small set of verbs, which differs – although minimally – across languages. This means that each of these verbs has to be lexically specified as being inherently reflexive or not. As a result, a language like Dutch has two lexical entries for a verb like *wassen* ‘to wash’: *wassen*_[+inh refl] in (6a) and *wassen*_[-inh refl] in (6b), cf. Reinhart & Reuland 1993. Additional evidence for this comes from a verb like *zich spoeden* ‘to rush’ in (7), a cognate of English *to speed*, cf. Everaert 1986.

- (7) *Jan spoedde zich/ *me naar het station*
John speeded REFL me to the station
‘John rushed to the station’

As (7) shows, *zich spoeden* ‘to speed’ no longer has a transitive counterpart. Apparently the link between an inherently reflexive verb and its transitive counterpart can be severed, which is additional

evidence that the two must be separate lexical entries. And since the inherently reflexive item is a separate entry, it does not need to have the two-participant semantics of the transitive entry.

Now we can go on to the two counterarguments. The first one is that the marker on an inherent reflexive predicate may not be stressed. It is impossible to emphasize *zich* in (6b), while it is allowed to emphasize *zichzelf* in (6a), as (8) shows.

- (8) *Jan waste mij en zichzelf/*zich*
John washed me and REFL REFL
'John washed me and himself'

A coordination construction as in (8) requires emphasis on both elements of the coordination, which is impossible for *zich*. Also, it is impossible to emphasize the alleged patient role in (7) by stressing *zich* or otherwise. If an inherent reflexive predicate has a patient role then it should be possible to put emphasis on the patient participant, but this is not the case.

The second counterargument to the presence of a patient role in inherently reflexive predicates is that in many languages the types of sentences in (6b) are less transitive than those in (6a). An example is English, where *John washed* and *John moved* are intransitive, but they may nevertheless express the inherent reflexivity of the

equivalent predicates in (6b). This tendency for intransitivity is left unexplained under an approach that assumes that the inherently reflexive predicates in (6b) express the same meaning as the predicates in (6a).

Together these two counterarguments suggest that there is no patient present in inherent reflexive predicates. Instead I propose that the *Autocausative* meaning, as defined in (9) applies to the sentences in (6b).

(9) Autocausative: NP's referent is V's agent

Thus I assume that the sentences in (6b) have no patient. Semantically they correspond to one-argument predicates. It is the verb stem, and not the marking, that produces the inherent reflexivity. The Dutch verb *wassen*_[+inh refl] in (6b) means 'to be engaged in an act of self-washing' just like the English verb *to wash*_[+inh refl], and the Dutch verb *bewegen*_[+inh refl] in (6b) means 'to be engaged in an act of self-moving' just like the English verb *to move*_[+inh refl]. The difference between English and Dutch is that Dutch has the Autocausative gram *NP V*_{[+inh refl] zich}, where English just has *NP V*_[+inh refl].

Up to now we have seen that the two categories of the present account, Reflexive markers and Autocausative markers, differ from each other in two ways. First of all, Reflexive markers are productive,

while Autocausative markers of inherently reflexive predicates are obviously restricted to inherently reflexive predicates. Secondly, Reflexive markers may be stressed, while Autocausative markers may not, which was shown in (8). Nevertheless, there are languages where the Reflexive marker is not a strong, stressable pronoun; French, for example, has a clitic *se* as its Reflexive marker. Now if the patient role in a French reflexive sentence has to be emphasized, the intensifier *lui-même* has to be invoked (10). In other words, there is always a way to get patient emphasis in Reflexive sentences (but not in Autocausative sentences).

(10) *Jean se déteste lui-même*

John REFL detests him-self

‘John detests himself’

The approach to reflexivity and inherent reflexivity sketched here resembles Reinhart & Siloni’s (2005) approach, but differs from it in important ways. Reinhart & Siloni distinguish three categories of reflexivity markers:

1. *anaphors*; markers of the Reflexive meaning in (4)
2. *syntactic reflexivity markers*
3. *lexical reflexivity markers*; markers of inherent reflexive verbs

The category of syntactic reflexivity markers is the category of interest here. For Reinhart & Siloni, German *sich* is an example of a syntactic reflexivity marker. They claim that such a marker does not represent an argument of the predicate, like an anaphor does.

However, it is possible in German to put *sich* in a coordination, see (11). In such a construction *sich* receives contrastive emphasis, which, I argue, could only happen if it represented the argument of a verb.

- (11) *Mama füttert meinen Bruder und mich und sich*
Mom feeds my brother and me and REFL
'Mom feeds my brother and me and herself'

Another reason for Reinhart & Siloni to distinguish between anaphors and syntactic reflexive markers is the fact that it is almost impossible for a German direct object *sich* to be bound by an indirect object (12a), see Grewendorf 1989. *Sich selbst*, on the other hand, they see as an anaphor, which would explain the absence of syntactic constraints on its use.

- (12) a. ??*Ich habe ihm sich gezeigt*
I have him.DAT REFL shown
b. *Ich habe ihm sich selbst gezeigt*

I have him.DAT REFL self shown

‘I have showed him himself.’

Yet, the German Reciprocal pronoun *einander* in (13) has the same syntactic constraint as *sich* in (12a), see Putnam 2005.

(13) **Dass Fritz den Gästen gestern ein-ander*
that Fritz the.DAT guests.DAT yesterday each-other
vorge stellt hat.
introduced has

Nevertheless, German *einander* is uncontroversially an anaphor – albeit a reciprocity marking anaphor – since it can receive emphasis. This is why it is unlikely that syntactic reflexivity markers may have syntactic constraints, but anaphors may not.

In sum, it is better to assume that there are only two reflexivity markers in language:

1. Reflexive meaning markers
2. Autocausative meaning markers on inherent reflexive verbs

Reinhart & Siloni’s category of syntactic reflexivity markers is now subsumed under the category of Reflexive meaning markers. The differences they see between anaphors and syntactic reflexivity

markers can be reduced to syntactic differences between affixes, clitics, and weak and strong pronouns.

3.1.2 *Inherently reciprocal verbs*

Parallel to the situation for reflexivity marking a two-category split can also be made for reciprocity markers:

1. Reciprocity meaning markers
2. Autocausative meaning markers on inherently reciprocal verbs

Inherent reciprocal verbs correspond to Kemmer's (1993) category of Natural Reciprocals. Like inherently reflexive predicates inherent reciprocal predicates are also often syntactically intransitive. In English a verb like *to kiss* can be an inherent reciprocal predicate and only needs a subject argument: *John and Mary kissed*.

An additional observation comes from German. In many languages there is a construction called the *discontinuous reciprocal* (14b), which expresses a Reciprocal-like meaning, cf. Dimitriadis 2008. The construction is syntactically intransitive; *sich* cannot be replaced by stressable *einander*, for example.

- (14) a. *Johann und Marie schlugen sich*
John and Mary hit REFL
'John and Mary fought'
- b. *Johann schlug sich mit Marie*

John hit REFL with Mary

'John fought with Mary'

Interestingly, these discontinuous constructions can only be formed from inherently reciprocal verbs, like *sich schlagen* 'to fight'.

Sentence (14a) can therefore be considered Autocausative, since it contains an inherently reciprocal verb. On the other hand, if a verb is not inherently reciprocal, like *vergöttern* 'to idolize', the discontinuous construction is not possible (15b). Sentence (15a) should consequently be considered Reciprocal, since it does not contain an inherently reciprocal verb.

- (15) a. *Johann und Marie vergöttern sich*
John and Mary idolize REFL
'John and Mary idolize each other'
- b. **Johann vergöttert sich mit Marie*
John idolizes REFL with Mary

Apparently German *sich* can mark both the Reciprocal meaning (14a), and the Autocausative meaning for inherently reciprocal verbs (15a). As Gast & Haas (2008) show, the diachrony is quite interesting here. They note how German *sich* can mark both Reflexive and Reciprocal meaning in a sentence like (16a), but when

sich is in sentence-initial position (16b), it receives emphasis and it consequently loses its ability to mark the Reciprocal meaning.

Apparently, Reciprocal *sich* cannot be emphasized.

- (16) a. *Die Spieler konnten sich nicht leiden, aber*
the players could REFL not bear but
sie mochten den Trainer.
they liked the coach
‘The players couldn’t stand themselves/each
other, but they liked the coach.’
- b. *Sich konnten die Spieler nicht leiden, aber*
REFL could the players not bear but
sie mochten den Trainer
they liked the coach
‘The players couldn’t stand themselves/*each
other, but they liked the coach.’

The reason for this is the following (see Gast & Haas 2008). German

sich, or its predecessor, originally only marked the Reflexive

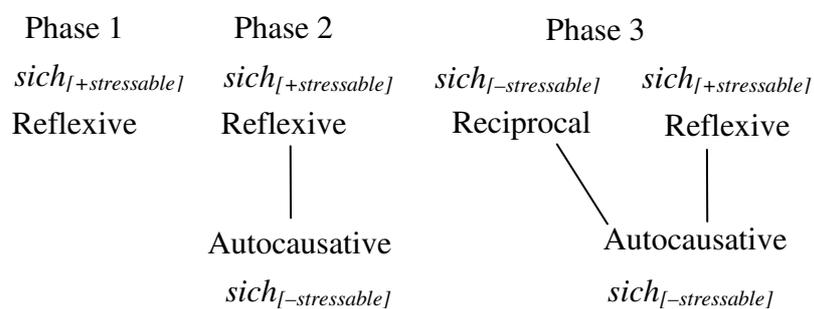
meaning, and had the possibility to be stressed – Phase 1 in (17).

After this it gained the possibility to mark the Autocausative

meaning, first for inherently reflexive verbs and later on for

inherently reciprocal verbs. Because there is no patient in Autocausative predicates which could be emphasized, Autocausative *sich* lost its possibility to be stressed – Phase 2 in (17). Then, finally, from Autocausative *sich* a new Reciprocal *sich* developed. Yet, because Autocausative *sich* was not stressable, neither was Reciprocal *sich*. And this is the situation in which the German language finds itself at the moment – Phase 3 in (17).

(17) Development of the German Reciprocal *sich*.



This concludes the subsection on the Autocausative meaning.

In sum, the following can be said about Autocausative predicates: they have an agent argument, but no patient argument; the Unergativity marker cannot receive emphasis; and any special meaning like inherent reflexivity or inherent reciprocity has to be given in the lexical entry of the verb.

3.2 Spontaneous

A meaning related to the Autocausative meaning is the *Spontaneous* meaning. Whereas Autocausative verbs only have an agent participant, the Spontaneous verbs only have a patient participant, like English *to fall* in (18a). Logically it might be odd to see the falling of a vase as a one-participant event: vases do not fall by themselves. But since I can say *the vase fell by itself*, it seems that semantically these events can be seen as one-participant events, as events that happen spontaneously. It is possible to derive the agent of the falling from the context (18b) and it is possible to specify a non-volitional causer role of the breaking process (18c), but it is impossible to have a volitional agent role as an argument of a Spontaneous verb like *to fall*. This is why I will consider the Spontaneous as a meaning with one participant.

- (18) a. The vase fell
b. John hit the vase; the vase fell
c. The vase fell during the earthquake

Kemmer (1993:Ch5) shows how the Romance pronoun *se* acquired the Spontaneous meaning. In Latin, the pronoun *sē* had an Autocausative meaning, but not yet a Spontaneous one. But in

Modern French, for example, the cognate pronoun *se* can mark the Spontaneous meaning, as (19) shows.

- (19) *Le vase s'est brisé*
the vase REFL=is broken
'The vase broke'

Interestingly, Kemmer mentions that the first expansion out of the Autocausative meaning in Old French involved emotion verbs and cognition verbs. A parallel to this can be seen in present-day Dutch. As is well-known, a normal transitive predicate (*John read a book*) has an agent (*John*) and a patient (*a book*). Agents cause an action and they are mentally involved in the action, and patients do not cause the action and are not mentally involved in the action (see Hopper & Thompson 1980, Reinhart 1996, Primus 1999). Emotion and cognition verbs, on the other hand, have an experiencer role. Experiencers are mentally involved in the action but do not cause the action. In (20a) *Jan* has the experiencer role of the verb *verbazen* 'to amaze'. Now in Dutch many of these experiencer verbs can also have a Spontaneous meaning with only the experiencer role (20b). We know that (20b) must be Spontaneous because semantically there is no agent there: it cannot be the case in (20b) that someone

deliberately amazed John. So (20b) is an example of an experiencer Spontaneous verb marked by a reflexive pronoun.

- (20) a. *Het verhaal verbaasde Jan*
the story amazed John
- b. *Jan verbaasde zich*
John amazed REFL
'John was amazed'
NOT: 'John was amazed by someone/people'

In addition, it must be mentioned that in total Dutch has very few Spontaneous verbs that are marked with reflexive pronoun *zich*. A telling example is the verb *bewegen* 'to move', see (21).

- (21) *De tak bewoog (#zich)*
the branch moved REFL
'The branch moved'

Without the reflexive pronoun the Spontaneous meaning is the most natural meaning in (21), but with the reflexive pronoun, an Autocausative meaning – which means that the branch is volitional – is enforced on the sentence. Yet, the German counterpart of (21) is perfectly acceptable with the reflexive pronoun under the

Spontaneous reading. To be more precise, Dutch has very few *non-experiencer* Spontaneous verbs marked by the reflexive pronoun, perhaps only a handful, examples are *zich bevinden* ‘to be located’ and *zich vullen* ‘to fill up’. On the other hand, it does have quite a few experiencer Spontaneous verbs marked by the reflexive pronoun, for example *zich verbazen* ‘to be amazed’ in (20b). Apparently, experiencer verbs are the first verbs that take on an Autocausative-marker-turned-Spontaneous-marker like French *se* or Dutch *zich*. This bridging function of experiencer verbs can be explained by the fact that experiencers are more agent-like than a prototypical patient: they are mentally involved in the action, but they do not cause the action. Consequently, they stand between the agents of Autocausative predicates and the patients of non-experiencer Spontaneous predicates, and this is why experiencer verbs serve as a link between Autocausative and Spontaneous.

Finally, it must be noted that the map in (2) does not include a proper One-Participant category, whereas Kemmer’s (1993) map does include it. Kemmer never gives an example of this category, and I would not know of a group of verbs outside of the Spontaneous category that would be a likely candidate. Perhaps copula and locational verbs could be considered as such, but they are outside the scope of this paper.

3.3 *Passive*

The Passive closely resembles the Spontaneous meaning type. The main difference is that Passives have an agent semantically, and Spontaneous events do not. This is shown by the fact that Spontaneous events cannot be combined with agent-oriented phrases like *To collect the insurance money* (22a), while Passive events can (22b), see Solstad & Lyngfelt 2006.

- (22) a. The boat sank (*to collect the insurance money)
- b. The boat was sunk (to collect the insurance money)

Thus, for a Spontaneous marker to become a Passive marker, a non-prominent Agent participant has to be added to the semantics of the marked predicate (I will use the term “prominent” to mean ‘argument that is to become the subject’). This step is described in Haspelmath 1987 and Kemmer 1993:Ch5. In many Indo-European languages the cognate of PIE **se* developed into a Passive marker; an example is Russian *-sja* in (23), adapted from Geniušienė 1987.

- (23) *Ona dolžna ispolnjat’-sja vsemi*

she obligatorily uphold-REFL all.INS.PL

graždanami

citizen.INS.PL

‘It (= the Constitution) must be upheld by all citizens’

The sentence in (23) also shows that the agent of a Passive predicate can be expressed syntactically (here by the instrumental *vsemi graždanami* ‘by all citizens’), which means that passive markers like Russian *-sja* does not express the agent participant themselves syntactically. This will be important in the discussion of the Arbitrary meaning in Section 4.3 below.

3.4 Two-participant events

Very close to the Autocausative meaning is the Two-Participant meaning, which corresponds to an English sentence like *John kissed Mary*. In order not to complicate the discussion, we shall limit the meaning of Two-Participant events to events with an Agent (the high-prominence participant) and a Patient (the low-prominence participant). In many languages a Two-Participant event is syntactically zero-marked; again see English *John kissed Mary*. The corresponding gram is *NP V NP*. Interestingly, many other meanings on the map in (2) can have zero-marking, like Autocausative and Spontaneous. Meanings that cannot have zero-marking are Reflexive,

Reciprocal and Passive. This means that there is no language where the equivalent of *John and Pete deceived* means ‘John and Pete deceived themselves’, ‘John and Pete deceived each other’ or ‘John and Pete were deceived’ (cf. Haspelmath 1990). The frequent zero-marking of Two-Participant, Autocausative and Spontaneous shows that these three meanings must somehow be linked to each other.

4. Generic excursions

On the map in (2) there are three meanings springing out of the middle row – the voice row – that give generic reference to one of the arguments of the predicate that their marker belongs to. These meanings are Deobjective, Facilitative and Arbitrary. Interestingly, this generic reference goes hand in hand with what has been called a “human flavor” (Rivero 2000). Both notions will be investigated further in this section.

4.1 Facilitative

The most well-known of the three generic meanings is probably the facilitative. One way to express the facilitative in English is the *middle* construction in (24a), see Steinbach (2002). Another way is the *tough movement* construction in (24b-c).

- (24) a. Bureaucrats bribe easily
b. Bureaucrats are easy to bribe
c. It is easy to bribe bureaucrats

Semantically, the facilitative expresses the property of some NP – *bureaucrats* in (24a-c) – and this property involves the NP as the patient of a verb – *to bribe* in (24a-c). The agent is rarely expressed syntactically, and if it is left unexpressed a generic agent is intended. Usually, this comes down to a human generic agent, since the prototypical agent is a human (cf. Steinbach 2002).

It is clear that the Facilitative resembles meanings like Spontaneous and Passive, where the patient participant also has the most prominent role. And indeed, there are diachronic links between Passive and Facilitative (see Haspelmath 1990), and German suggests that there should also be one between Spontaneous and Facilitative since those two meanings (but not the Passive) may be expressed by the gram *NP V sich*, see Steinbach (2002).

4.2 *Deobjective*

Another example of a meaning with a generic, human referent is the Deobjective – illustrated in (25) for Russian – also known as the Null Object Impersonal (Rivero 2000, Haspelmath 2003). The Deobjective

is used to signal a generic reading of a verb with humans as patient;

(25) could also be translated as ‘The dog bites people’.

(25) *Sobaka kusaet-sja*
dog bites-REFL
‘The dog bites’

As the translation in (25) shows, in English the Deobjective can be unmarked, the English gram being *NP V*. The Deobjective is a very restricted meaning; when the Russian gram *NP V-sja* expresses a predicate with an implicit patient – as it does in (25), – this patient is both generic and human.

Russian *-sja* in (25) is once again a cognate of PIE **se*. So how did this meaning develop out of the other meanings of the map in (2)? Haspelmath (2003) suggests the Spontaneous meaning instead, but the Deobjective differs greatly from the Spontaneous: the Deobjective has a generic meaning and the prominent participant (the subject) is not a patient but an agent. Therefore, from a semantic point of view, it is better to see the Deobjective as an extension from the Autocausative.

4.3 Arbitrary

The final meaning on the map in (2) is the Arbitrary meaning, as expressed by the arbitrary pronoun *one* in *one should eat three meals a day*. A number of cognates of PIE **se* express this meaning (see Rivero 2000). An example of the Italian Arbitrary *si* is given in (26a). This example is rather close to the Passive *si* in (26b) with a postverbal subject. The verbal agreement shows that in (26a) *si* is the subject of the sentence, and in (26b) *le mele* ‘the apples’.

- (26) a. *Si mangia le mele*
REFL eat.3Sg the apples
‘One eats the apples’
- b. *Si mangiano le mele*
REFL eat.3PL the apples
‘The apples are eaten’

Thus the only difference between Passive and Arbitrary in these examples is the relative prominence of the participants; for the Passive (26b) the patient is the prominent argument, and for the Arbitrary (26a) the agent. This has led to the claim that the Arbitrary meaning of *si* (and its counterparts in other languages) came into existence because of the reinterpretation of the Passive marker *si* as

the subject of the verb. Note, however, that Zubizarreta (1982) describes an Italian dialect that has both Spontaneous and Arbitrary *si*, but no Passive *si*. This suggests that there must also be a direct connection between Spontaneous and Arbitrary.

The third connection that Arbitrary has is with the Referential meaning; Referential personal pronouns can develop into Arbitrary pronouns (see Naro 1976, Haspelmath 1990, Dobrovie-Sorin 2005). This can also be seen in English, where in an expression like *They say that linguistics is boring*, the personal pronoun *they* gets an Arbitrary interpretation. Now we have come full circle on the map in (2). We started out with the Referential meaning, the original meaning of PIE **se*, and eventually – via Reflexive, Autocausative, Spontaneous, and possibly Passive – we have reached the Arbitrary meaning, which can also be expressed by cognates of PIE **se*, see (26a). Yet, as we saw just now, Arbitrary is also connected to Referential in a more direct way.

5. Conclusions

The purpose of this paper was to show how events with two participants (transitive events) and events with one participant (intransitive events) are connected to each other. We have used the

optional further development for markers of One-Participant events.

All in all, it seems that the meanings of the middle voice are not so much the middle ground between transitives and intransitives, but rather the periphery to them both.

References

- Cole, P., Hermon, G. & Huang, C.-T.J. (eds) 2001. *Long Distance Reflexives* [Syntax and Semantics: Long Distance Reflexives 33].
New York: Academic Press.
- Dimitriadis, A. 2004. Irreducible Symmetry in Reciprocal Constructions. In *Reciprocals and reflexives: cross-linguistic and theoretical exploration*, E. König & V. Gast (eds), 375-410.
Berlin: Mouton de Gruyter.
- Dobrovie-Sorin, C. 2005. The SE-Anaphor and its role in argument realization. In *The Blackwell companion to syntax, vol. 4*, M. Everaert & H. van Riemsdijk (eds), 118-179. Oxford: Blackwell.
- Everaert, Martin. 1986. *The syntax of reflexivization*. Dordrecht: Foris.
- Faltz, Leonard. 1985. *Reflexivization: a study in universal syntax*.
London: Garland.
- Gast, V. & Haas, F. 2008. On reciprocal and reflexive uses of anaphors in German and other European languages. In

Reciprocals and reflexives: cross-linguistic and theoretical exploration, E. König & V. Gast (eds), 307-346. Berlin: Mouton de Gruyter.

Geniušienė, E. 1987. *The typology of reflexives*. [Empirical Approaches to Language Typology 2]. Berlin: Mouton de Gruyter.

Grewendorf, Gunther. 1989. *Ergativity in German*. Dordrecht: Foris.

Haspelmath, M. 1987. *Transitivity alternations of the anticausative type*. [Arbeitspapiere, N.F., Nr. 4.] Cologne: Institut für Sprachwissenschaft der Universität zu Köln.

Haspelmath, M. 1990. The grammaticization of passive morphology. *Studies in Language* 14(1): 25-71.

Haspelmath, M. 2003. The geometry of grammatical meaning: Semantic maps and cross-linguistic comparison. In *The new psychology of language, vol. 2*, M. Tomasello (ed), 211-242. Mahwah, NJ: Lawrence Erlbaum.

Haspelmath, M. 2007. Further remarks on reciprocal constructions. In *Reciprocal constructions*, V. P. Nedjalkov (ed), 2087-2115. Amsterdam: Benjamins.

Hopper, P. J. & Thompson, S. A. 1980. Transitivity in Grammar and Discourse. *Language* 56: 251- 299.

Huang, Y. 2000. *Anaphora: A cross-linguistic study*. Oxford and New York: Oxford University Press.

- Kemmer, S. 1993. *The middle voice*. Amsterdam: Benjamins.
- Koster, J. & Reuland, E. (eds) 1991. *Long-distance Anaphora*.
Cambridge, UK: Cambridge University Press.
- Naro, A. 1976. The genesis of the Reflexive Impersonal in
Portuguese: A study in syntactic change as a surface phenomenon.
Language 52: 779-811.
- Primus, B. 1999. *Cases and Thematic Roles - Ergative, Accusative
and Active*. Tübingen: Niemeyer.
- Puddu, N. (2005). *Riflessivi e intensificatori: Greco, latino e le altre
lingue indoeuropee*. PhD dissertation, University of Pisa.
- Reinhart, T. 1996. Syntactic effects of lexical operations: reflexives
and unaccusatives. [UIL OTS Working Papers in Linguistics, 97-
002/TL.] Utrecht: Utrecht University.
- Reinhart, T. & Reuland, E. 1993. Reflexivity. *Linguistic Inquiry* 24:
657-720.
- Reinhart, T. & Siloni, T. 2005. The Lexicon-Syntax parameter:
Reflexivization and other arity operations. *Linguistic Inquiry* 36:
389-436.
- Rivero, M. L. 2000. Impersonal SIE \dot{z} in Polish: A Simplex Expression
Anaphor. *Journal of Slavic Linguistics* 8(1-2): 199-237.
- Solstad, T. & Lyngfelt, B. 2006. Perspectives on demotion:
Introduction to the volume. In *Demoting the Agent*, B. Lyngfelt &
T. Solstad (eds), 1-20. Amsterdam: Benjamins.

Steinbach, M. 2002. *Middle Voice: A comparative study in the syntax-semantics interface in German*. Amsterdam: John Benjamins

de Swart, P. 2007. *Cross-linguistic Variation in Object Marking*. PhD dissertation, University of Nijmegen.

Szemerényi, O. J. L. 1999. *Introduction to Indo-European linguistics*. Oxford and New York: Oxford University Press.

Zubizarreta, M. L. 1982. *On the relationship of the lexicon to syntax*. PhD dissertation, MIT.