

Antitransitivity and constructionality

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An analysis is offered of English anticausatives (a.k.a. ‘unaccusatives’, ‘inchoatives’) and middles, jointly classified as ‘antitransitives’. It having been argued that passives have both an ‘inner’ and an ‘outer’ subject, it is then argued firstly that there exists a semantic constraint whereby for every verb, the innermost subject does not express a participant less agentive than another participant, and secondly that antitransitive syntax consists of ‘movement’/‘promotion’ of a complement to (inner) subject position. From just these two grammatical properties there follow, through processes of ordinary pragmatics, all other superficially distinct properties of the two constructions. From the various senses in which the term ‘construction’ gets used, an important distinction is drawn between ‘u(sage)-construction’ and ‘g(rammar)-construction’. Neither jointly nor separately do middles and anticausatives constitute a g-construction. It is further suggested that antitransitives are not grammatically distinct from other intransitives, and that intransitives do not constitute a g-construction separate from transitives.

1. Introduction

This [opus] aims to provide an analysis of the grammar of the English middle and anticausative constructions. The middle construction, also called ‘medio-passive’ (e.g. Bresnan 1982), is exemplified in (1a–b). The anticausative construction, also called ‘unaccusative’ (following Perlmutter 1978), ‘inchoative’, ‘ergative’ (following Burzio 1986), is exemplified in (2a–b).²

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² I use the term ‘anticausative’ (as used by e.g. Haspelmath 1987) to denote verbs that have causative transitive counterparts. ‘Unaccusative’, the more usual name, has a broader sense that includes intransitives, such as *come* and *fall*, that don’t have causative transitive counterparts (see §5). The name ‘inchoative’ is potentially

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| (1) | INTRANSITIVE (MIDDLE) | TRANSITIVE |
| | a. This car steers easily. | c. The driver steers (the car) easily. |
| | b. These bureaucrats bribe all too easily. | d. We bribed these bureaucrats all too easily. |
| (2) | INTRANSITIVE (ANTICAUSATIVE) | TRANSITIVE (CAUSATIVE) |
| | a. The window shattered. | c. The bullet shattered the window. |
| | b. The baby woke up. | d. The noise woke up the baby. |

What middles and anticausatives have in common is their ‘antitransitivity’. Antitransitives are intransitives where the subject has been ‘moved to subject position’. (For convenience and expository clarity, in this [opus] I’ll use the transformationalist metaphor that describes syntax in terms of positions and movements.) Speakers vary, I have found,³ as to whether the subject must have moved from object position, as in (3a), or whether it is possible, as in (3b), for the subject to have moved over a longer distance from a more deeply subordinate position, as is possible with passives, as in (3c–e).

- (3) a. Paper cups discard easily.
 b. %Paper cups dispose of easily.
 c. Paper cups were disposed of.
 d. The paper has been written on one side of. [from Hudson 1984: 118]
 e. The box has been scrawled all over the underside of the top of.

2. Constructionality

In speaking of the middle and anticausative ‘constructions’ above, I used the term ‘construction’ strictly atheoretically. But it is important to make a terminological and theoretical distinction between ‘usage-constructions’ (‘u-constructions’) and ‘grammar-constructions’ (‘g-constructions’), for only the latter has any analytical import. The distinction between u- and g-constructions rests upon a distinction between usage and grammar. For reasons laid out below, only when constructionality is part of grammar as distinct from usage does it become interesting.

misleading, since some anticausatives, such as *shine* and *flutter*, have senses that are not inchoative. On the evils of ‘ergative’, see Pullum 1988.

³ From consulting classes of British students sporadically over the last fifteen years.

The grammar–usage distinction has been going in and out of fashion – in and out of the intellectual ascendancy, that is – for the last century. It was In with Saussure (not to mention Panini and some millennia’s worth of grammarians in general), then Out with, say, C. C. Fries and the highly inductivist strand of American Structuralism that he represents, and then it was In again with Chomsky. And of late it has been under attack again, as the influence of Chomsky has waned and intellectual alternatives gain in maturity. The current prominence and liveliness of the debate is exemplified by the ongoing outbreak of articles, replies and rejoinders that includes Newmeyer (2003, 2005, 2006). Gahl & Garnsey (2004, 2006), Laury & Ono (2005) and Meyer & Tao (2005). For my part, and for the purposes of this [opus], I defend the grammar–usage distinction, but as one that, regardless of what, if any, empirical basis it has, is ontologically necessary. This, it should be clear, is not to deny that grammar is learnt inductively from usage; nor is it to claim that language involves any particular cognitive architecture (such as encapsulated modules). Rather, I insist merely that just as the rules of chess can be abstracted from chess-playing behaviour, so the grammatical rules of a language can be abstracted from language-use behaviour. For grammar as with chess, the rules once abstracted can be studied for their content and formal properties.

The recipe for abstracting grammar from usage is as follows.⁴

- (i) Suppose, rather uncontroversially, that one’s knowledge of usage is a body of structured memories of recurrent patterns in usage, of variously greater and lesser specificity, as well as memories of tokens of usage. The usage patterns are of various sorts: some are sociolinguistic, some are stylistic, some involve systematic correspondences between form and symbolic meaning.⁵
- (ii) Discard all but the sound–meaning correspondence patterns.
- (iii) Define ‘Pragmatics’ as an amalgam of ‘Processing’, ‘Discourse Context’, ‘General Knowledge’ and ‘Common Sense’.

⁴ I expect many linguisticians might find this recipe to be a trite and unnecessary statement of the bleedin’ obvious. But my protracted conversations over the years with various estimable self-proclaimed deniers of the grammar–usage distinction have demonstrated to me that the recipe does indeed need to be stated with this degree of explicitness.

⁵ By ‘symbolic’ meaning I mean what the linguistic form symbolizes – i.e. quasi-propositional and illocutionary meaning. This contrasts with, say, sociolinguistic ‘meaning’ (e.g. rudeness, formality, dysphemism), where the linguistic object is a symptom (rather than a symbol) of social conditions.

- (iv) Subtract from the sound–meaning correspondence patterns, and discard, all elements that Pragmatics can account for.
- (v) The residue is Grammar.

We turn now to the distinction between u-constructions and g-constructions. The term ‘construction’ gets used in a variety of senses, including:

- (i) a pattern in usage – the sense favoured by recent inductivist usage-based approaches, e.g. Hilferty (2003: 42ff);
- (ii) a grammatical pattern in usage – the traditional sense;
- (iii) a gestalt category in grammar – the sense present in early work in Construction Grammar, notably Fillmore, Kay & O’Connor (1988) and Kay & Fillmore (1999);
- (iv) a gestalt category involving a form–meaning pairing – the sense used in Cognitive Grammar (Langacker 1987: 409ff) and Goldberg’s influential fusion of Cognitive Grammar and Construction Grammar (e.g. Goldberg 1995: 1).

I accept that all of these senses, and doubtless others beside, are both intrinsically useful, and valid, and terminologically convenient. But they are not equally substantive, measured in terms of how informative and how nonobvious a claim one makes in stating “X is a construction” or “X is not a construction”. Of the four senses above, (iii) signally outscores the others in substantiveness, and hence in theoretical interest. It is usually pretty obvious whether something is a construction in sense (i) or (ii), since people are such excellent perceivers of pattern. And I have not yet managed to see the virtue of the more narrow definition of (iv) as opposed to one of (i–iii). Accordingly, for purposes of clarity, I’ll call type-(iii) ‘g-constructions’, and type-(i)/(ii) ‘u-constructions’.

U-constructions. There are, of course, a multitude of sorts of pattern in usage. There are collocational probabilities, such as exist between, say, *dig* and *spade*, and *heavenly* and *abode*, and *rely* and *on*. There is formulaic language, both in the form of fixed phrases such as *All’s well that ends well* and *Every cloud (has a silver lining)* and *Well, what do you [whaddaya] know*, and in the form of more abstract templates, termed ‘snowclones’ by Whitman 2004 (see Pullum 2004) and documented extensively on Language Log⁶ and other correspondent parts of the language-focused blogosphere; examples are:

- X is the new Y* (‘X is as fashionable as Y was’);
- I for one welcome our new X_{masters}*;
- X is a few Y short of a Z* (‘X is unintelligent’);

⁶ <http://itre.cis.upenn.edu/~myl/languagelog/>

X_{verb} *me* Y_{particle} *and call me* Z_{name} (expression (often ironic) of astonishment);

X is just another word for Y ('X amounts to Y');

to X_{verb} *or not to* X_{verb} .

And there are word order patterns showing statistical rather than categorical tendencies to reflect phrase-weight and form–meaning iconicity and to minimize processing difficulty caused by load on short-term memory. And alongside all these sorts of pattern, and others beside, there are grammatical patterns. Grammatical phenomena, even of the most general and basic sort, such as, say, adjunction and extraction, can be seen as u-constructions, albeit of a very general and abstract sort, but nevertheless inducible from usage.

G-constructions. The essence of a g-construction is that it is a gestalt: the properties of the whole do not follow from the properties of the independent parts, where these properties are part of grammar – i.e. they define sound–meaning correspondences and are not pragmatically explicable. This gestalthood can occur in various ways. The g-construction may have non-compositional meaning, as with idioms, such as *kick the bucket*, or as with the scope of negation in examples like (4a–c).

- (4) a. He doesn't seem to be here. ['He seems to not be here.']
 b. I don't think I'll be late. ['I think I won't be late.']
 c. %You haven't to walk on the grass. [%'You have to not walk...']

Or the g-construction may have unique morphosyntactic properties, as with *need(s) must*, (5a–b), in which, among a raft of other eccentric properties, an inflected verb has some sort of intimate syntagmatic liaison with an auxiliary.

- (5) a. The problem needs must persist.
 b. %The problems need must persist.

Or the g-construction may have both noncompositional meaning and peculiar syntactic properties, as with, say, exclamative and *the-more-the-more* constructions. And lastly, the gestalthood may reside simply in the licitness of the cooccurrence of properties. For example, along with an open class of verbs of perception and a closed class of other verbs, *know* can take a bare infinitive complement, but for most speakers this is licit only when *know* (like auxiliary *dare* and *need*, in this respect) is in a nonassertive (– negative or interrogative) environment, (6a–b).

- (6) a. Did you ever know anyone make such a mess?
 b. I've never known anyone make such a mess.
 c. %I have known people be bitchy in circumstances like these.⁷

Because it has the further property of having to be in a nonassertive environment, *know* with a bare infinitive complement is a g-construction.

I will be offering an analysis of the grammar of middle and anticausative u-constructions, according to which, the respective grammatical properties of the two u-constructions do not constitute a g-construction either jointly or separately. This, I would argue, provides an important lesson about constructionality. Even though documenting usage patterns is valuable in its own right and is a necessary precursor to further grammatical analysis, a linguistic 'analysis' consisting solely of facile documenting of u-constructions⁸ (i) fails to discover their underlying workings, (ii) distorts and traduces our view of the nature of language, by exaggerating the complexity, specificity, idiosyncrasy and heterogeneity of its internal workings, and (iii) debases the valuable notion of (g-)construction if phenomena that lack g-constructionality still get called constructions.

3. Distinctive characteristics of the u-constructions

The essential difference between middles and anticausatives is that with middles but not anticausatives there is an implicit agent. Unlike with passives, the agent can't be made explicit and expressed by a *by*-phrase:

- (7) a. *The car steers easily by even inexperienced drivers.
 b. *Those officials bribe easily by shady entrepreneurs.
 (8) a. The car can be steered easily by even inexperienced drivers.
 b. Those officials got bribed by shady entrepreneurs.

⁷ Google finds only two examples of *have known them be*, (i–ii), which surprisingly don't sound all that bad to my ears.

(i) I have known them be everywhere

(ii) I have known them be strewn along a dining table

Have never known them be googles 4. *Have known them to be* and *Have never known them to be* google about 700 each.

⁸ Hilferty (2003) calls this, with irony, 'butterfly collecting'.

As u-constructions, prototypical middles are characterized by two further properties that are not characteristic of prototypical anticausatives.⁹

I. Adverbials. There is a tendency for an adverbial such as *easily* to be present, as in (1a–b). There are also nonadverbial variations on this tendency, such as the *refuse*, the negation and the polarity *do* in (9a–d).

- (9) a. The car refused to steer. c. Faroese cops never bribe.
 b. The cable won't cut. d. So the cop did bribe after all.

But exceptions to the tendency are also plentiful. Hundt (2006), which employs the ingenious idea of using consumer catalogues as a corpus in which to seek examples of middles, finds no end of examples of bare, adverbialless, middles, such as (10a–c).

- (10) a. The lightweight aluminum pole telescopes from 39-to-70-inches
 long.
 b. Outdoors, the two ends of the net simply anchor securely into the
 ground.
 c. The auto jack plugs into the cigarette lighter with a 12" cord.

II. Habituality. The middle verb phrase tends to be interpreted as habitual – as expressing not a single event, nor even a specific series of recurrent events, but rather a property of the middle's subject. It is, though, possible to have middles with an implicit agent but without habitual aspect, as in (11a–d).

- (11) a. At long last, the nearly incorruptible customs officer bribed.
 b. The Christian Democrats took office; and all of a sudden, govern-
 ment officials were bribing left right and centre.
 c. I waved a bundle of fivers in front of the doorman and at once he
 bribed.
 d. Australia dismissed for 514. [“were dismissed for 514 runs at cricket”]

It is possible to find ‘pseudo-middles’, such as (12a–b), with a middle-favouring adverbial and habituality, and perhaps with, in the case (12a), an implicit agent, but – as the ungrammaticality of (12c) shows – without antitransitive syntax.

⁹ These, and other alleged properties (of greater dubiety), are discussed at greater length in Rosta (1995).

- (12) a. The knife cuts easily.¹⁰
 b. Cigarettes kill.
 c. *She cut the knife easily. [* on reading corresponding to (12a)]

The similarity of (12a–b) to middles is purely superficial. Although nonhabitual counterparts of (12a–b) would, as with middles, be odd, the habituality of (12a–b), but not of middles, is a result of a semantic constraint on null objects: any object can be null, as in (13a–b), but only if the verb’s interpretation does not involve a single event. (Some verbs, such as *read* and *eat*, are exempted from the constraint.)

- (13) a. To devour _ fastidiously is scarcely to devour _ at all.
 b. Though shalt not kill _, but need’st not strive officiously to keep _ alive.¹¹

4. Semantics of subjecthood

The strong tendency of middles to have an adverbial and be habitual are argued by Rosta (1995), in an account recapitulated in revised form in §6 below, to be pragmatic epiphenomena. Drawing on the insights of Lakoff (1977), which noted that middles’ subjects are interpreted as primarily responsible for the situation described by the middle, Rosta (1995) treats middles as a g-construction whose sole semantic property is that the subject is specified as bearing the semantic role of ‘archagonist’. ‘Archagonist’ is conceived of as defined, within the force-dynamic model of Talmy (1985, 1988), as the participant some of whose properties constitute necessary conditions for the situation described by the middle to obtain – which really boils down to Lakoff’s notion of primary responsibility. Already simple though the Rosta 1995 account of middles is, there is scope for refining and further simplifying it (and – as will be seen in §6 – in a way that brings anticausatives into the picture). Start by considering linking, i.e. the rules determining which participants get expressed by which syntactic arguments. It is generally the case that if you know what syntactic arguments a word has and what participants it has, then it can with a high degree of accuracy be predicted which associates to which.

¹⁰ From Yoshimura & Taylor (2004).

¹¹ From Arthur Hugh Clough’s ‘The latest decalogue’, cited in Rosta (2005).

There is therefore a need for an analytical model of linking that will make these predictions.¹²

In my view, the most promising model of linking is one in which some grammatical relations (or, if you will, syntactic argument ‘positions’ at some appropriate level of syntactic structure) have intrinsic semantic content.¹³ Linking is then achieved by finding the overall best semantic match between the semantic arguments and the intrinsic, ‘constructional’, meanings of the syntactic positions; the match is between (i) the semantics of the predicate and its relations to its participants, and (ii) the intrinsic semantics of the syntactic frame into which the predicate is inserted. Here is not the place to thrash out such a model in detail; but for our present purposes it is sufficient simply to point out the most obvious example of its operation: of a predicate’s semantic arguments, it is generally the most agentive that gets expressed by the subject.

We are now in a position to simplify the Rosta 1995 analysis by discarding the putative semantic role ‘archagonist’ as something distinctive to a middle *g*-construction. Instead we can appeal to the rule – applying to subjects in general – that the most agentive participant gets expressed by the subject. This was the insight of Lakoff (1977) and van Oosten (1977): that the essence of middlehood is that by virtue of being expressed by a subject, a patient takes on agentive characteristics. In contrast to the Rosta 1995 analysis, then, rather than middles constituting a *g*-construction in which the subject has the semantics of primary responsibility, middles constitute a *u*-construction in which, as explained in §6, the semantics of primary responsibility is the pragmatically aptest way of satisfying the grammatical rule requiring the subject to express the most agentive participant.

But the claim that subjects have intrinsic semantic content, namely expressing the most agentive participant, runs into a number of problems of

¹² Levin & Rappaport Hovav (1996, 2005) provide a good survey of the main sorts of models of linking found in the lexical semantics literature.

¹³ The notion of a grammatical relation with intrinsic semantic content pretty much corresponds to the notion ‘ θ -role’ – in particular, to such species of θ -role as the ‘proto-role’ of Dowty (1991) and the ‘macrorole’ of Role-and-Reference Grammar (Van Valin & Foley 1980, Van Valin 1993). θ -roles are ordinarily thought of as relations that are independent from, but assigned to, syntactic positions. But for a proposal that does away with this distinction between θ -role and position, see Baker (1997), whose idea is a version of Perlmutter & Postal (1984)’s Universal Alignment Hypothesis, which, particularly in its application to subjects, is what I am advocating.

greater or lesser severity. The problems arise with passives, discussed and solved in §5, with ‘passivoids’, as found in locative inversion, discussed in §8, and with raised and *there* subjects, which will be discussed now, and will motivate a slightly revised analysis of subject semantics.

In (14a–b), *promise* has three syntactically expressed participants (—the promiser, the promisee and the promise), and *threaten* has two (—threatener and threat). Of these, the promiser/threatener is most agentive, and, as per predictions, is expressed by the subject. In contrast, in (15a–b), in which there is a raised subject, and (16a–b), in which there is a *there*-subject, *promise/threaten* have just one semantic argument, the promise/threat, and the subject does not express a participant in the promising/threatening.

- (14) a. She promised (him) to be more considerate in future.
 b. She threatened to be more censorious in future.
- (15) a. The day promised to be sunny.
 b. Books threatened to topple off the shelf.
- (16) a. There promised to be certain advantages arising from the reorganization.
 b. There threatened to be certain problems arising from the reorganization.

It is an extremely well-known property of dummy *there* that it can occur only in positions not associated with semantic content. This accounts for raising/equi contrasts like (17a–b): the object position of *persuade* has semantic content and the object position of *believe* doesn’t.

- (17) a. I believed there to be a problem.
 b. *I persuaded there to be a problem.

The ability of *there* to occur in a given position therefore diagnoses that position’s lack of semantic content.

But that hardly fits with the claim that the subject expresses the most agentive participant. In (18a–b) the subject, *there*, does not express a participant; and in both there is just a single participant, nonagentive in (18a) and agentive in (18b), so in both (18a–b) it is the object that expresses the most agentive participant.

- (18) a. In the forest, there toppled an oak.
 b. In the garden, there chirped a throng of children.

Clearly it is untenable to claim that the subject must express the most agentive participant. But the claim can be straightforwardly revised to be that the subject of X must not express a participant (in what X expresses) less agentive than another participant (in what X expresses). To this revised constraint, raised and *there* subjects would not be an exception. If the subject of X is raised, then it does not express a participant in what X expresses. And *there* subjects do not express a participant at all.

5. Syntax of passives and antitransitivity

There is a further, glaring exception to the generalization that the most agentive participant gets expressed by the subject: in passives, the most agentive participant gets expressed not by the subject but by the *by*-phrase (which may of course be implicit). There is an obvious and, I believe, correct solution to this: distinguish ‘surface subjects’ from ‘underlying subjects’. For the purposes of this [opus] it is sufficient simply that this distinction be made in some way or another; but I’ll suggest one plausible way in which it can be made.

I’ll assume, in the absence of evidence to the contrary, that predicates ordinarily have just a single subject position, the subject position being what makes them predicative. The difference between the italicized phrases in (19a–d) and those in (20a–d) would be that only the latter have subjects. (In (20a–c) the italicized phrase is predicated of the verb’s subject; in (20d) it is predicated of the verb.)

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| (19) a. He saw <i>a right idiot</i> | (20) a. He seems <i>a right idiot</i> . |
| b. She chose <i>a bright pink</i> . | b. She went <i>a bright pink</i> . |
| c. She dreamt about <i>after the war</i> . | c. The election was <i>after the war</i> . |
| d. She imagined <i>after the war</i> . | d. They married <i>after the war</i> . |

What would be special about the passive construction is that, for reasons it is not necessary to investigate here, it would add an extra, outer, subject position to a phrase already containing an inner subject position. There is a movement chain connecting the outer subject position to the object position or (in the case of prepositional passives) to some more deeply subordinate position.¹⁴

¹⁴ As for how the outer subject gets added, I would, if asked, suggest that passives are a fusion of a nonfinite auxiliary and a verb, the auxiliary’s subject being the ‘outer’ subject, and the overall structure being similar to auxiliary inversion, as notated in (i–ii). (Φ = Phonology/Form; Σ = Syntax/Semantics/Symbolic Meaning.)

(i) Φ: *Shoes* *mended* *here* (*by experienced cobblers*).
 Σ: [[(SHOES)]_{i,s} HAVE [_j]_o [[_j]_s MEND [_j]_o {HERE} [(BY E. C.)]_{j,ADJ}]]

Given this sketch of an analysis, the generalization is that it is the innermost subject, not an outer subject, that expresses the most agentive participant – or more accurately, that it is the innermost subject of X that must not express a participant (in what X expresses) less agentive than another participant (in what X expresses). The generalization applies both to actives and to passives, if, when the verb is passive, it is the *by*-phrase that is the inner subject. (Since *by*-phrases occupy surface positions characteristic of adjuncts, it is reasonable to suppose that the *by*-phrase is obliged to move from inner subject position to an adjunct position.)

Antitransitives are like other verbs in that when they are passive, as in the passive middles in (21a–b) and the passive anticausatives in (22a–b), there is an outer subject distinct from an inner subject.

- (21) a. This very office has been bribed in (by that most august of officials).
 b. Such unofficial meetings are wont to get bribed at by all officers present.
- (22) a. Her snatched moments of sleep are forever getting woken up during (by the baby).
 b. Even the quietest hours get woken up during (by those uneasy of conscience).

But antitransitives are like passives in that just as nonprepositional passives involve movement from object position to (outer) subject position, so nonprepositional antitransitives involve movement from object position to (inner) subject position. In the case of prepositional passives and prepositional antitransitives (as in (3b)), the movement is not from object position but from a position within a prepositional phrase subordinate to the verb.

It follows from this characterization of antitransitivity that antitransitivity and unaccusativity are either the same thing or closely related, with one being a subtype of the other. The vagueness with which I have formulated this statement is because as an analytical category, unaccusativity has a clear prototypical centre but is somewhat nebulous beyond that (cf. Levin & Rappaport Hovav 1995). Perlmutter (1978) originally characterized unaccusativity as promotion from ‘2’, objecthood, to ‘1’, subjecthood. If this is understood strictly as promotion only from objecthood, then it would not cover examples like (23a–b); unaccusativity would be more narrowly defined than antitransitivity.

(ii) Φ : *What have they mended?*
 Σ : [[{WHAT}]_{i,s} HAVE {THEM}]_{j,o} [[$_j$]_s MEND [$_i$]_o]]

ivity, and hence would readily be analysed as a subvariety of antitransitivity, though the distinction would probably be merely terminological, with unaccusativity, on the narrower definition, being analytically redundant.

- (23) a. Your garbage has disposed of successfully. [anticausative]
 b. Paper cups dispose of easily. [middle] (= (3b))

A further reason for caution in fully equating antitransitivity and unaccusativity is that some verbs standardly analysed as unaccusative do not have transitive counterparts. Verbs like *come*, *go*, *fall*, *arrive* lack transitive counterparts but have properties standardly associated with unaccusativity, such as occurring in *be*-perfects (*is come/gone/fallen/arrived*).

The evidence for syntactic unaccusativity in English, i.e. raising to (innermost) subject position from a complement position, is rather slender. The best evidence I know of is Simpson's celebrated observation (1983) that resultatives can be predicated of objects and (some) intransitive subjects but not transitive subjects, which is explained if resultatives are always predicated of objects and (some) intransitive subjects are also objects.¹⁵ But at any rate, it is worth noting here that the case for unaccusativity is strengthened by examples like (23a–b), in which the 'gaps' after *of* especially favour a 'movement' analysis.

I offer two pieces of evidence for the distinction between outer and inner subjects. The first piece is the one we've already seen, namely the dissociation between them in passives, as shown notationally in (24). (The conjectured movement from inner subject position to adjunct position is not notated.)

- (24) [(The bed)_{*i*}]_{OUTER-SUBJ} was slept in [_{*i*}] [(by Sophy)]_{INNER-SUBJ}.

The second piece of evidence comes from interesting restrictions on depictive adjuncts.¹⁶ Depictives can be predicated of the object, as in (25a), or of the

¹⁵ Even this is challenged by Wechsler (1996) and Rappaport Hovav & Levin (2001), though their argument is that it is unnecessary to posit syntactic unaccusativity, rather than that there is syntactic evidence against the existence of syntactic unaccusativity.

¹⁶ The term 'depictive' comes from Halliday 1967. Strictly speaking, in the likeliest reading of *drink coffee black* (as in (25a–g)), i.e. 'drink coffee (only) if/when it is black' rather than 'drink coffee while it is black', *black* is, in Halliday's terms, not a 'depictive (attribute)' but a 'condition'. But in the likelier reading of *stir coffee black*, i.e. 'stir coffee while it is black', *black* is a true Hallidayan depictive. It is unclear

subject, as in (25b). When there are multiple depictives, those predicated of the object must be nearer to the verb than those predicated of the subject (pace Aarts 1992: 53), as (25c–d) show. The grammaticality of the ordering *naked black* in (25e–f) is therefore contrary to predictions. However, the ordering of depictives in both (25c–d) and (25e–f) is explained if inner subjects are distinguished from outer subjects and the ordering rule is that (i) depictives predicated of objects are innermost, (ii) then come depictives predicated of inner subjects, and depictives predicated of outer subjects are outermost. This is shown notationally in (25g).

- (25) a. $\{ \text{Sophy} \}_{\text{subj}} \left\{ \begin{array}{l} \text{drank} \\ \text{stirred} \end{array} \right\} \{ \text{the coffee} \}_{\text{obj}}^{\text{obj}} \{ \text{black} \}.$
- b. $\{ \text{Sophy} \}_{\text{SUBJ}} \left\{ \begin{array}{l} \text{drank} \\ \text{stirred} \end{array} \right\} \{ \text{the coffee} \}_{\text{OBJ}}^{\text{SUBJ}} \{ \text{naked} \}.$
- c. $\{ \text{Sophy} \}_{\text{SUBJ}} \left\{ \begin{array}{l} \text{drank} \\ \text{stirred} \end{array} \right\} \{ \text{the coffee} \}_{\text{OBJ}}^{\text{OBJ}} \{ \text{black} \}^{\text{SUBJ}} \{ \text{naked} \}.$
- d. $*\{ \text{Sophy} \}_{\text{SUBJ}} \left\{ \begin{array}{l} \text{drank} \\ \text{stirred} \end{array} \right\} \{ \text{the coffee} \}_{\text{OBJ}}^{\text{SUBJ}} \{ \text{naked} \}^{\text{OBJ}} \{ \text{black} \}.$
- e. The coffee was $\left\{ \begin{array}{l} \text{drunk} \\ \text{stirred} \end{array} \right\}$ naked black (by Sophy).
- f. The coffee was $\left\{ \begin{array}{l} \text{drunk} \\ \text{stirred} \end{array} \right\}$ unsweetened naked black (by Sophy).
- g. $\{ \text{The coffee} \}_{i, \text{OUTER-S}} \text{ was } \left\{ \begin{array}{l} \text{drunk} \\ \text{stirred} \end{array} \right\} \{ _ \}_{\text{OBJ}}^{\text{OBJ}} \{ \text{unsweetened} \}^{\text{INNER-S}} \{ \text{naked} \}^{\text{OUTER-S}} \{ \text{black} \} \{ \text{by Sophy} \}_{\text{INNER-S}}.$

For clarity's sake some additional notated examples of the syntactic phenomena under discussion are given in (26–28).

- (26) a. $\{ \text{The criminal} \}_{i, \text{OUTER-S}} \text{ was nabbed } \{ _ \}_{\text{OBJ}} \{ \text{by the rozzers} \}_{\text{INNER-S}}.$
- b. $\{ \text{The criminal} \}_{i, \text{OUTER-S}} \text{ was caught up with } \{ _ \} \{ \text{by the rozzers} \}_{\text{INNER-S}}.$
- (27) a. $\{ \text{The window} \}_{i, \text{SUBJ}} \text{ shattered } \{ _ \}_{\text{OBJ}}.$
- b. $\{ \text{The garbage} \}_{i, \text{SUBJ}} \text{ disposed of } \{ _ \} \text{ in a trice.}$

whether the depictive–condition contrast is grammatical, or whether we are simply dealing with two interpretational poles of a single grammatical category. (That is not the sort of question to exercise Halliday.)

- (28) a. [(This kind of packaging)]_{i,SUBJ} discards [⌊_i]]_{OBJ} easily.
 b. [(Paper cups)]_{i,SUBJ} dispose of [⌊_i]] easily.

6. *Ætiology of the middle–anticausative distinction*

I will argue in this section that as far as the grammar is concerned, there are no differences between middles and anticausatives, and perhaps no differences between these and other intransitives either. This section explains the processes through which differences between the u-constructions arise, and shows that these processes are entirely pragmatic.¹⁷

In §3 we saw it is characteristic of middles but not of anticausatives to have an adverbial and to be habitual. These distinctive properties were shown in Rosta (1995) to arise by virtue of facilitating pragmatic interpretations consistent with a semantic constraint on middles' subjects. This constraint I have in §5 reformulated as a semantic constraint on subjects in general, namely that the subject cannot express a participant less agentive than another.

Habituality is a kind of genericity. It describes, or claims the existence of, a class of events. So, for instance, *Sophy smokes* means, on the obvious habitual reading, that there is a class of events of Sophy smoking. And for the middle in (29), the interpretation is that there is a class of events of the dress getting zipped up.

- (29) This dress zips up.

The reason for middles' preference for a habitual interpretation is as follows. In any single event of zipping, the primarily responsible participant will usually be the zip puller. But the existence of the CLASS (of events of the dress's zip getting pulled up) is due mainly to properties of the dress. This makes the dress the participant primarily responsible for there being a class of zippings up. In other words, a habitual interpretation is a way of satisfying the grammatically imposed requirement that the subject should be interpreted as primarily responsible.

As for the reason for middles' preference for an adverbial, consider (1a) (*The car steers easily*). The responsibility for X's steering Y is likely to be at least as much with X as with Y, but the responsibility for X's steering Y EASILY is far more likely to rest mainly with the properties of Y, making Y a cor-

¹⁷ See also Goldberg & Ackerman (2001) on 'pragmatic obligatoriness' (including the middle adverbial).

respondingly better candidate for being the primarily responsible participant. The same sort of story goes for the likes of (9a–d). Take (9a), for instance: if X has the power to refuse to do Y, then it is X that will be primarily responsible for Y happening or not happening.

A further reason for the prevalence of, in particular, *easily* with middles, especially in linguists' example sentences, is that *easily* tends to force an interpretation with an implicit agent, because often the readiest interpretation is that it's the agent that the action is easy for. For example, (30a–b) do not really imply the involvement of any agent, while (31a–b) do (even though they still permit an interpretation in which it is the middle subject – the computer and (with greater pragmatic oddity) the varnish – that the action is easy for).

- (30) a. The computer switches off after a few minutes of inactivity.
 b. The varnish peels off after a day or two.
- (31) a. The computer switches off easily after a few minutes of inactivity.
 b. The varnish peels off easily after a day or two.

To summarize, the reason why middles tend in actual usage to have an adverbial and be habitual is merely that these properties add to the overall interpretation elements that make it more plausible that the subject is not less agentive than the implicit agent.

The remaining difference between middles and anticausatives is that, as stated in §3, middles involve an implicit agent (IA) and anticausatives don't. It is from this difference that the other differences between the u-constructions stem. Just as much as the middle interpretation, the anticausative interpretation is a way of reconciling the pragmatic interpretation with the grammatical constraint on subject semantics: in the anticausative interpretation, there is only one participant, which, by virtue of being the sole participant, must necessarily not be less agentive than another. In order for there to be only one participant, the situation must be construed in such a way that any ultimate causer is not involved in it. And conversely in the causative transitive, as we have known since Fodor (1970), the subject must be a causer sufficiently proximate to be involved – sufficiently involved, that is, for its agentivity to outrank that of the transitive object, which, as the existence of the middle interpretation proves, can itself have some degree of agentivity.

The middle–anticausative distinction becomes rather blurry when the IA has a very low degree of agentivity, especially given that the lesser the IA's degree of agency, the less are habituality and an adverbial required to facilitate

an interpretation in which the subject is not outaged by the IA . We see examples of this blurriness in (11a–c), in which it is implied that the bribe recipient is under the sway more of their own cupidity than of the bribe-giver's actions, and in (10a–c) and (32a–c),¹⁸ in which the IA , if indeed there is one, is of a nebulous identity and highly uninvolved.

- (32) a. Your internet order has despatched.
 b. The book has already sold two hundred copies.¹⁹
 c. That problem will solve, so I'm not worried about it.
 [=“The problem will naturally end, without the speaker having to take more than the usual steps to end it.”]

Similarly with (33a–b): the grammatical terms *raise* and *extract* presumably originate with a metaphor involving an agent that is perhaps the speaker, or perhaps an engine-like grammar, but is at any rate not of much pertinence to the metaphor; and as we would expect, the terms get used as anticausatives without any oddity, even though *raise* is the causative counterpart of *rise* (as evidenced by the ungrammaticality of causative *raise*: **They raised the flag*).

- (33) a. The NP has raised to subject position.
 b. Adjuncts don't extract well out of wh-islands.

The presence versus absence of the IA is, then, crucial to the difference between the u-constructions.²⁰ But there is no reason to suppose that the grammar is sensitive to the presence or absence of an IA . The steering and bribing described by the middles in (1a–b) do involve an IA , and the shattering and waking up described by the anticausatives in (2a–b) don't; but in the context of grammatical analysis, this is no more significant or worthy of remark than the facts that cutting involves a (usually implicit) blade, that spitting and drooling involve an implicit mouth, that chewing involves teeth, that licking involves a tongue, or that manicuring involves hands. In other words, the pre-

¹⁸ (32a–b) were brought to my attention by Dick Hudson. (32a–c) are all attested data.

¹⁹ I am supposing that *two hundred copies* is a measure phrase, not an object.

²⁰ This is the mainstream view, but one also comes across those (e.g. Massam 1987, 1992) who take the essence of middle semantics to be the attribution of a property to the subject, with a particular modal–aspectual characteristic manifest in the genericity (habituality) of the verb. This difference of views seems more terminological than substantive, but at any rate it remains the case that whichever definition of middlehood one favours, the grammar is blind to it all the same.

sence or absence of an IA, though a genuine difference in meaning, is not the basis of a grammatical property. Positing a constructional distinction solely on the basis of IAS is as daft and pointless as making a constructional distinction on the basis of implicit blades or mouths or teeth or hands.

In the ever-burgeoning literature on English middles, this view of the status of the IA, though previously proposed by others (Lakoff 1977, van Oosten 1977, Condoravdi 1989), is a decidedly minoritarian one. Most of the debate has supposed the IA to be lurking either in the 'lexicon' (prior to lexical insertion into sentence syntax) or in the 'syntax', and has instead focused on which of these two alternatives is superior (e.g. Keyser & Roeper, 1984, Fagan 1988, Stroik 1992, 1995, 1999). The literature on the status of the IA is surveyed in Klingvall (2005), which presents the various arguments that have been made for the (quasi) syntactic presence of the IA. Although the arguments are deeply unpersuasive, Klingvall herself nevertheless concludes that the IA must be syntactically represented because (i) *This machine breaks easily* is ambiguous between a middle and an anticausative reading, and (ii) "[w]hen-ever a sentence has more than one interpretation, [...] it is likely to be due to a difference in structure".²¹ I think her conclusion is unwarranted, though, because (ii) is untenable. For example, *The express train crossed the viaduct* is eight ways ambiguous, according to whether the situation is (i) semelfactive or iterative, (ii) habitual or nonhabitual, and (iii) perfective or imperfective. But there is no evidence to indicate that these ambiguities exist in the grammar of the sentence. Perhaps a compromise position is to be found in Iwata (1999), which argues that the IA is indeed represented structurally, but at the level of conceptual structure (in the sense of Jackendoff, e.g. 1990).

Whereas in *X kissed Y willingly* it is only X that is willing, in *Y was kissed by X willingly* it can be either X or Y that is willing (Lakoff 1970). Thus from this it appears to be the case that *willingly* can be predicated of a subject, either inner or outer. Lakoff (1977) and van Oosten (1977) claim that in (34), *willingly* can be predicated only of the subject and not of the IA. This would then be suggestive evidence against the IA being some kind of demoted subject.

²¹ She continues: "However, if one argues that the agentive flavour is not structurally determined, one would probably argue the same to be the case with the causative flavour. The question is then what determines what interpretation the sentence will get." This [opus] provides the answer to that question, explaining how the intransitive syntax coupled with presence of the implicit agent in the interpretation gives rise to the middle interpretation.

(34) Harry seduces easily and willingly.

But in fact, adverbs can be predicated of the *IA*, as in (35a–b). Must this lead us to conclude that the *IA* is represented in syntax after all? It would be surprising if adverbs were syntactically controlled, and in fact the apparent restriction against the adverb being predicated of a nonsubject is not categorical, as (36) proves. I suggest instead that adverbs like *willingly* are predicated of either a subject or a comparatively agentive participant.

- (35) a. This paradisiacal holiday resort does not leave willingly.
 b. So delicious was the liqueur that all too easily did it gulp down eagerly.
- (36) The narcotics entered his possession $\left\{ \begin{array}{l} \text{willingly} \\ \text{knowingly} \end{array} \right\}$.

7. Unergatives and the valency of the default verb

The semantic constraint on subjects seems sufficient to explain why ‘unergatives’ tend not to alternate with causative transitive counterparts such as those in (37a–b).

- (37) a. *The comedy laughed me. b. *Gastroenteritis shat me a lot.

The standard story, originating with Perlmutter (1978), is that unergatives’ sole argument is not associated with object position, thence to move to subject, but rather is associated directly with subject position. This, according to Perlmutter & Postal (1984), would be consonant with the intrinsic agentivity of unergatives’ sole argument. In fact, though, unergatives appear to behave like anticausatives: the causative transitive counterpart of unergatives is acceptable in proportion to the degree that the subject is more agentive than the object. The rarity, in the world, of situations in which the intrinsically rather agentive undergoer is less agentive than a causer is sufficient to account for the rarity of causative unergatives. This can be seen with (38a–b): (38a) is a rare case of X having control over Y’s bodily functions; (38b) similarly implies an unusual situation, in which the speaker has less control over their giggling than does the cause of the giggling.

- (38) a. The nurse burped the baby. [from Smith (1970)]
 b. Stop giggling me!

Consider also the oddity of (39a) compared to (39b). We see from (40a) that by default, *slip* describes a manner of motion, not a change of ubication. But we see from (40b) that the presence of a locative resultative can force a construal in which *slip* means “change location, with a slipping manner of motion”. The acceptability of (39b) compared to (39a) is because it is, I suggest, easier to conceive of X as having more control over and responsibility for Y’s change of ubication than Y does, as in (39b), than it is to conceive of X as having more control over and responsibility for Y’s manner of motion than Y does, as in (39a).

- (39) a. !You slipped me!²² b. He slipped the ring onto her finger.
 (40) a. The ring slipped. b. The ring slipped off her finger.

Applying Occam’s razor, we should therefore analyse unergatives as anticausatives. Besides the evidence of (39–40) in support of this conclusion, note also that unergatives, like other intransitives, can have *there* subjects, as in (18b) (*There chirped a throng of children*). As for possible counterevidence, i.e. evidence for unergatives being a class in their own right, at first glance it seems that only to unergatives does the imperfective *a-* prefix attach – cf. (41a–c). Yet on closer inspection it turns out that there is no grammatical incompatibility between a given intransitive verb having an *a-* prefix on one occasion, (41d), and a causative transitive version on another, (41e).

- (41) a. Her eyes were adance. d. Her eyelashes were aflutter.
 b. ?Icebergs were amelt. e. She fluttered her eyelashes.
 c. *The rosebush is adie.

In this instance as with so much else, the explanation has to do with a semantic constraint: alongside the syntactic requirement that *a-* prefixes to an intransitive, there is a semantic constraint requiring the situation to be dynam-

²² This sentence was uttered, when she was a young child, by one of the daughters of Dick Hudson. For many years it puzzled Dick (and in turn, me) how a child, having made the obvious generalization generating (39a), could then learn that it is ‘ungrammatical’. The explanation, I am suggesting, is that (39a) is grammatical but pragmatically anomalous, and what the child goes on to learn is the requirement that the subject should be not merely a causer but also more agentive than the object, this requirement being what gives rise to the pragmatic anomaly.

ic, atelic and imperfective. So (41b–c) are acceptable only to the (respectively somewhat and very exiguous) extent that they can be seen as atelic.

It seems a reasonable further step to suppose that by default,²³ ALL verbs have an object position, but have no further valency specification beyond this. It follows that a verb has, by default, both transitive and intransitive variants. All intransitives are syntactically unaccusative: there is movement from object to subject. In the case of transitives, the object stays put and the subject expresses a different participant. In other words, all verbs have the same default valency, which is unspecified for transitivity, and yields both transitive and intransitive variants of the verb. Only in the case of verbs that deviate from this pattern, by lacking a transitive or intransitive variant or by having a more complicated valency, need this default be overridden.

8. A spanner in the works?

Locative inversion is compatible with what look like passives, as in (42a), but not when the passive has a *by*-phrase, as in (42b) (Bresnan 1994).

- (42) a. In the alleyway were seen suspicious characters.
 b. *In the alleyway were seen suspicious characters by the police.

The most straightforward explanation for the restriction excluding *by*-phrases from passives in locative inversion would be to see these ‘passives’ not as true passives but as ‘passivoids’ in which, as happens with antitransitives, there has been movement to innermost subject position (and thence outwards to outer subject position, if passivoids, like passives, had an outer subject position). This would occupy the innermost subject position and therefore make it unavailable for occupation by the *by*-phrase, which would be what rules out (42b).

The big snag with that explanation is that these passivoids have the semantics of ordinary passives. Yet the prediction would be that they should receive either an anticausative-type or a middle-type interpretation, as ways of satisfying the requirement that the innermost subject not express a participant less agentive than another (i.e. than the participant expressed by the transitive subject). In the anticausative-type interpretation, the situation

²³ I am assuming a model of grammar in which categories are organized into an inheritance hierarchy, such as HPSG, Construction Grammar and Word Grammar. Generalizations are stated at as general a level in the hierarchy as possible and then inherit recursively down to subcategories by default unless overridden by stipulation. See Hudson (2007: 21ff).

would be construed as excluding the participant expressed by the transitive subject; for (42a), that would mean that the suspicious characters were somehow being seen without the involvement of a seer. That seems rather implausible. In the middle-type interpretation, the situation would be construed in such a way that the suspicious characters were not less agentive than their beholders (e.g. because the beholdees were wearing luminescent clothing and waving their arms about). While such an interpretation is compatible with (42a), it is not in the least necessary, nor even likely.

We are therefore faced with two options. On the one hand we can abandon this [opus]'s entire line of argument. Or, alternatively, we could seek a different analysis of passivoids that accounts for the ungrammaticality of an overt *by*-phrase by means other than supposing that passivoids involve movement to innermost subject position. Unsurprisingly, I favour the latter alternative, and accordingly propose that passivoids are passives whose innermost subject position is empty.²⁴

9. Conclusion

To properly understand how language works, it is necessary to distinguish grammar from usage, grammar being the body of symbolical form–meaning correspondences that pragmatics cannot account for. Grammar is the tool that usage is usage of. Once grammar is distinguished from usage, we can investigate its workings and enquire into how simple and elegant it is, and how complex and rife with idiosyncrasies and exceptionfulness it is. In an enquiry of this sort, g-constructionality is of crucial importance. The key lessons of Constructionism are, firstly, that not only can categories in grammar be defined by just a single property but also there are categories – g-constructions – defined by a cluster of properties, and, secondly, that (at least as a null hypothesis) there is in principle no limit to the degree of specificity of grammatical categories. But in heeding these lessons, the peril for the grammatical analyst is that it is all too easy to concoct a grammatical analysis by mechanically translating the properties of a u-construction into unwarranted g-constructions of unwarranted specificity. Only if the analyst undertakes a more arduous quest to discover to what extent the specificity and g-constructionality of the analysis can be reduced will we discover the true nature of a grammar.

²⁴ Empty in the sense that in *She read*, the object position of *read* is empty and is interpreted as “something”, i.e. “She read something”.

Such a quest, this [opus], in its attempt to analyse middles and anticausatives, has striven to undertake. I have argued that the grammar involves no more than the following very general rules.

- (i) Passives have an inner subject and an outer subject. The inner subject position is either empty or linked, by a movement chain, to a *by*-phrase.
- (ii) The innermost subject of a verb V cannot express a participant (in the situation expressed by V) less agentive than another participant (in the situation expressed by V).
- (iii) There is no grammatical distinction between middles and anticausatives. Both are antitransitives. Antitransitivity consists of movement from a complement position to innermost subject position.
- (iv) It may further be the case that all intransitives are antitransitives, and that by default, verbs are specified as having subject and object positions but are underspecified for transitivity, freely allowing both transitive and antitransitive variants of the verb.

Given (i–iv), there is no basis for seeing middles and anticausatives as involving, either separately or jointly, any g-constructionality – any gestalts, any categories defined by a cluster of properties. It may, though, be reasonable to attribute a small degree of g-constructionality to the categories Passive and Verb, but it is striking that these are categories of great generality. Perhaps it will turn out that these findings are indicative of the nature of language in general, and that Constructionism, if applied according to the injunction stated above, will reveal that underlying the messy, tangled, heterogeneous jungle of usage is a grammar of far greater simplicity and generality – and learnability – than the superficialities of usage would lead us to suspect.

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