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VERBS AND OBJECTS IN SEMANTIC AGREEMENT: MINOR DIFFERENCES BETWEEN ENGLISH AND GERMAN THAT MIGHT SUGGEST A MAJOR ONE

FRANS PLANK

"The soup sounds good."
Marc Antony McGonigle

ABSTRACT

Even though not boasting overt and systematically used noun classifiers of the variety known as classificatory verbs, languages may still have predicates (co-)signalling particular categories of nominal classification (outside syntactic agreement). Standard examples are English verbs such as *to bark/neigh/gallop* requiring subjects which refer to particular animals, or otherwise classify their subject referents a being in the relevant respects comparable to the animals in question. I hope to demonstrate in this paper that semantic agreement of this kind, which has often figured in theoretical discussions about the structure of the lexicon and the interface of semantics and syntax, is not as unsystematic as is commonly assumed. Although there may be considerable cross-linguistic variation, this variation at least appears to be quantitatively patterned insofar as some languages (such as German) have relatively more instances of semantic agreement between verbs and objects than others (such as English). I suggest further that the incidence of semantic verb-object agreement is not a minor, isolated, and entirely unpredictable difference between individual languages, but correlates with the typology of the grammatical core relations of subject and object, and in particular with the object-differentiation characteristics of a language verbs and objects seem to agree more commonly in languages which give morphosyntactic, and in fact lexical, recognition to at least two semantically relatively specific types of core objects (such as direct and indirect object).

1 ON THE ALLEGED UNSYSTEMATICITY OF SEMANTIC AGREEMENT

Argument expressions and predicate expressions both identify and classify aspects of the universe of discourse of the speech-event participants, including their own position within this universe. The number of these lexically and grammatically manifest classificatory aspects is obviously enormous, and may, in addition, differ from language to language or from culture to culture, although not a few of them tend to recur with more than

chance frequency, for reasons that presumably have to do with invariants of human perception and cognition. It seems significant that argument and predicate expressions often classify quite different aspects of the universe of discourse. To mention only a few of such apparent classificational preferences. arguments tend to classify what can be regarded as more or less individuated, whereas predicates tend to classify such 'things' as events, processes, activities, experiences, states, (clusters of) properties, and the like, which are hardly conceptualized as possessing individuality. Most attitudinal or evaluational aspects are preferably dealt with by mode categories of predicates, although a few of them also show an affinity to argument expressions (e.g. those concerning the relationship between the speaker and other individuals respect, politeness, endearment, etc.). Temporal deixis typically seems to belong to the domain of predicate classification, local deixis to that of argument classification.[1] Many quantificational categories are associated primarily with arguments, but there are others, especially aspectual ones, which are typically expressed in the predicate. Such preferences notwithstanding, there certainly are classifications which are neutral with respect to the parts of predications they may be associated with; and there are, furthermore, categories which, although not necessarily conceptually neutral, may be encoded simultaneously by argument and predicate expressions, with the obvious consequence that such dual classifications have to agree with each other for the respective predication to be semantically coherent. Such classificational agreements are the subject matter of this paper, and therefore deserve some initial illustration.

For example, certain English verbs classify activities (of sound production or of locomotion) as being characteristically performed by specific animals, and these verbs, thus, can only co-occur with arguments referring to animals of the appropriate kind or to appropriate classes including these specific animals.

(1) a. *The dog/fox/*lion/*eagle/animal/*sergeant barked*
b. *The horse/*ostrich/animal/*sergeant galloped across the field and neighed*

Violations of such agreement requirements typically do not result in ungrammaticality but in metaphor. in the starred examples of (1), the sound production or locomotion of the subject referents is compared to that of those animals which characteristically perform these activities. Of course there may be circumstances where it is difficult to draw a clear boundary line between literal and metaphorical uses of predicates, as metaphors are prone to fade, resulting, in the case at issue, in changes of the basic meaning of predicates, but even though occasionally blurred, and perhaps not in-

variant for all members of a speech community, distinctions between literal and metaphorical meaning certainly cannot be argued away on the strength of some controversial instances. Needless to emphasize, zoological classifications are not the only ones featuring in such agreement requirements, nor are verbs the only kind of predicates potentially stipulating such requirements English, for example, has a verb of departure such as *elope* and an adjective of shape such as *buxom* which literally combine only with arguments referring to females rather than males. There also exist in English predicates which lexically classify the number of entities their arguments may refer to, or (and this is the interpretation of Sapir & Swadesh 1946) the number of performances of the action they denote.[2]

(2) a. *The dogs/*the dog/the crowd trooped away*
b. *They massacred *Smith/the whole tribe*

These verbs differ from such plural-only verbs as *gather, assemble, surround,* or *separate* (cf. Meyer 1909) insofar as their classificatory meaning component is semantically arbitrary rather than being a constitutive and integral part of their lexical meaning. it is possible to imagine verbs with roughly the same basic meaning as *troop* or *massacre* but lacking their quantificational aspect (and analogously for *bark, gallop, neigh, elope,* and *buxom*), whereas verbs like *gather* or *assemble* are such that this quantification cannot possibly be separated from their meaning - in fact not much meaning would be left behind if this component were removed. Of course it would again be unrealistic to expect the distinction between arbitrary and constitutive classificatory meaning components of predicates always to be clear-cut. as with the metaphor-literal distinction, some instances are bound to be doubtful, but these should not mislead us into abandoning the distinction as a matter of descriptive principle.[3]

Talking of distinctions, the agreement requirements in the cases that interest us here are due to the specialized meaning of predicates, hence differ from ordinary grammatical agreement between predicates and their arguments, where in principle any predicate combinable with an argument in a given construction is subject to agreement requirements. Again, this is not to say that the difference between classificational (semantic and grammatical (morphosyntactic) agreement is necessarily categorical. the categories utilized to establish syntagmatic coherence may be quite similar (cf. number or animacy),[4] and it may not always be easy to decide whether an agreement regularity is still sporadic or already systematic.

Returning to the arbitrary-constitutive distinction, it seems reasonable to expect, then, that the more arbitrary predicate-related classifications pertaining to properties of argument expressions are more likely candidates for cross-linguistic variation. To stay with our examples, one would

hardly be surprised to come across languages which have verbs of sound production, locomotion, departure, and killing and adjectives of shape without the zoological-species, sex, or number restrictions found with English lexical items such as *bark*, *gallop*, *troop*, *elope*, *massacre*, or *buxom*. In a recent fundamental work on semantic analysis, Viehweger et al. (1977:353), the likelihood of this kind of variation between languages is mentioned rather cursorily, on the basis of the following comparison between Russian and German (I have added the English equivalents), it is concluded that such 'sememic' agreements, as only observed in Russian, are language-particular idiosyncrasies.

(3) a. *myt':golovu,lico ..., stirat':bel'e, brjuki ..., promyvat':zoloto ...*
b. *waschen:Kopf, Gesicht ..., waschen. Wäsche, Hosen ..., waschen: Gold ...*
c. *wash:head, face ..., wash:laundry, trousers ..., wash. gold ...*

It would indeed seem difficult to predict to what extent and in which lexical areas languages may vary in this respect, although it would also seem natural to expect, for example, that if certain animals play a considerable role in a culture, the language might have predicates for the exclusive purpose of denoting the culturally most salient activities of these animals. Thus, for example, a rich fund of specialized verbs of reproduction, with concomitant agreement requirements pertaining to the various species of animals (cf. Grimm 1853. 17ff.), is likelier to be found in rural livestock economies than in industrial societies of city dwellers. A formerly quite popular, and somewhat more general, approach to prediction at least ought to be mentioned here, according to which different predicates for different semantic classes of arguments are more likely to be found in languages of 'primitive' cultures, where people, struggling with the concrete and the particular, are allegedly unable to generalize. In this view, as espoused e.g. by Jespersen (1922: 429ff., *passim*), a single, invariable predicate of washing, for instance, is characteristic of a superior, efficient language (like English), whereas three (cf. Russian) or even thirteen or fourteen verbs of washing (as, allegedly, in Cherokee) are symptomatic of inferior, more 'primitive', less efficient languages. Without denying the possibility of a cultural determination of grammatical and lexical patterns, it may be safely assumed that this general way of ethnopsychological reasoning is as obsolete as the belief that Cherokee really has thirteen or fourteen different verbs of washing chosen in agreement with the referent of the object (oneself, one's face, another's face, clothes, dishes, meat, etc., cf. Hill 1952).

Cross-linguistic unpredictability of such classificational agreements is, however, not the only problem facing linguistic theories that emphasize

the general rather than the particular in human language. Grammars of individual languages also often relegate such agreement to the domain of the accidental, genuine morphosyntactic agreement rules are supposed to take care of all co-signalling that is in any way regular in the syntagmatic combinations of a language, and if there are further combinatorial restrictions pertaining to predicate and argument expressions, they have to be registered individually as unpredictable lexical idiosyncrasies. This is not to say that syntagmatic lexical relations - variously known as "wesenhafte Bedeutungsbeziehungen" (Porzig 1934), "lexikalische Solidaritäten" (Coseriu 1967), "semantičeskoe soglasovanie" (Gak 1972, Leisi 1975 employs the corresponding German term), or selectional restrictions (transformational grammar) - differ from syntagmatic relations which are encoded by means of inflectional morphology in that they do not form patterns at all they, together with paradigmatic lexical relations, determine the structure of patterns known as lexical fields. But the possibility of lexical-field patterning still does not imply predictability. The field analyst may be able to discover some restrictedly regular lexical patterns once he knows the full set of lexical items of a language, but he should not be able to tell in advance which particular lexical items (denoting particular meanings) will bear which syntagmatic relations to which other items. Or is there any reason to believe that it should be predictable, on linguistic grounds, that in English a set of verbs of movement and sound production are (non-metaphorically) applicable only to particular animals (*gallop, waddle ..., neigh, bark, bleat ...*)?

Predicate meanings may change in time with regard to classificational agreement, and given the *post-hoc* character of potential synchronic generalizations it is only natural not to expect such diachronic developments to be predictable (again on linguistic grounds). John Lyons (1977. 263ff.) is one of the most recent advocates of this pessimistic view. Presupposing a very specific common original meaning of the English and German verbs *ride* and *reiten*, as defined by the syntagmatic lexical relation with horses (or animals very much like a horse),[5] he notes the different directions in which this meaning has been generalized in the two languages (cf. 4), and concludes that "there is no convincing evidence to support any kind of deterministic theory of semantic change" (1977 264).

(4) a. *ride (on a horse)/(auf einem Pferd) reiten*
b. **ride on a beam/auf einem Balken reiten* - posture as in (a), but no movement
c. *ride on a bicycle/*auf einem Fahrrad reiten* - posture, movement, control of conveyance as in (a), but less restricted choice of conveyance

d. *ride in a carriage (in a bus, on a train)//*in einem Wagen (mit dem Bus, im Zug) reiten* - only remaining condition (in English). being conveyed (by land)

A diachronic theory could presumably be so deterministic as to preclude, for instance, developments whereby *ride/reiten* would contract syntagmatic relations, say, with temporal specifications (e.g. 'before noon') or with specifications of the colour of the conveyance - at least I think it could.[6] But such negative statements on a common-sense basis probably are not very satisfactory if one is aspiring after a truly deterministic theory of lexical change.

2. COMPARING ENGLISH AND GERMAN

Although it is often taken for granted that classificational agreements between predicate and argument expressions are essentially unpredictable as far as their cross-linguistic variability, the domains of their occurrence within individual languages, and their historical developments are concerned, it seems to me unduly pessimistic to accept unquestioningly the view that in this area the search for any generalizations is bound to be in vain. For example, if one were to investigate which arguments predicates are most likely to agree with in semantic classification, one might uncover a universally valid implicational generalization. agreement requirements are more likely to obtain between predicates and (direct, non-direct) objects and intransitive subjects than between predicates and transitive subjects, or, if the generalization is to be stated in semantic terms, in view of the possibility that genuinely grammatical relations such as subject and object cannot be defined in all languages (cf. § 3.2): the argument in an agentive role (at least with two-or-more-place predicates) is less likely to be in semantic agreement with the predicate than arguments in roles such as patient and instrument.[7] Further lexico-grammatical regularities may then turn out to follow the same pattern. transitive subjects or agents, for instance, appear to be the least likely arguments, firstly, to form idiomatic expressions together with the predicate, secondly, to be incorporated into the predicate, not only in the classical noun-incorporating languages but also in compound types like *bird-watching, noun-incorporation, bird-chirping* in other languages, thirdly, to be the point of orientation in derivational relationships between nominals and predicates (cf., with direct-object/patient orientation. *washable, eatable, readable* etc., with intransitive-subject/patient orientation. *perishable*). Rather than trying to sample and explain such regularities,[8] I shall present in the following sections some data concerning only the relation of direct object which

bear on the issue of the alleged total unpredictability of semantic agreement between arguments in this relation and their predicates. When we compare English and German, two languages which are genetically, culturally, and areally closely related, we nevertheless observe considerable differences in semantic agreement between particular verbs, or verb groups, and their direct objects. After this survey, the question will be raised (in § 3) whether we really have to do with a random collection of idiosyncratic minor differences between the two languages, or whether these differences follow a pattern reflecting a characteristic major cross-linguistic difference.

2.1. With different nominals in the direct-object relation the English verb *tell* is translated differently in German.

(5) a. *to tell someone one's name/the truth/the difference/the time/the answer/one's opinion* / *jemandem seinen Namen/die Wahrheit/den Unterschied/die Uhrzeit/die Antwort/seine Meinung sagen*

b. *to tell someone lies/the news/a story/a tale/one's adventures* / *jemandem Lügen/die Neuigkeiten/eine Geschichte/ein Märchen/seine Abenteuer erzählen*

English in fact has more specialized verbs corresponding to *erzählen*, viz. *relate* or *narrate*, and there are also quite interesting constraints on what can be told and what can be said (cf. Taylor 1980, with further references). But the point here is that there is a set of object nouns, as suggested by the examples in (5), where *tell* may be used unrestrictedly, whereas even for this set there is no such general-purpose verb in German (cf. **jemandem Lügen/eine Geschichte/ ... sagen, *jemandem seinen Namen/seine Meinung/ ... erzählen*). It may be difficult to characterize precisely the common semantic denominators of the object nouns in (5a) and in (5b), but I think it is sufficiently accurate to say that in (5a) the content of the verbal communication is an unembellished piece of information demanded by the addressee, whereas in (5b) what is communicated requires some creative effort on the part of the speaker.[9] This formulation of the difference could seem to create problems for the semantic classification of arguments, since some of the object nominals of *sagen/erzählen* do not per se denote communicable contents or narrative genres (e.g. *Uhrzeit, Abenteuer*). However, these nouns can easily be interpreted as closely related to nominals which are prototypical objects of *sagen* ('information about the time') and *erzählen* ('the story of one's adventures'). Although *sagen* and *erzählen* denote different kinds of communicative activities, and their respective selection restrictions are not entirely in-

dependent of these differences in meaning, these verbs still have a great deal in common semantically, and on language-internal as well as comparative grounds it appears plausible to assume that what they have not in common are, essentially, the relatively arbitrary (vis-à-vis the common basic meanings of the verbs) restrictions on arguments occurring in the direct-object relation.

2.2. The difference between affected and effected objects, which may also play a marginal role in (5), is often said to be contingent on the governing predicates: some verbs govern affected objects (e.g. *read a book*), others effected objects (e.g. *write a book*). However, there are also verbs that can take affected or effected objects (e.g *cook an apple* vs. *cook a meal*), and the fact that misinterpretations do not usually occur in such cases demonstrates that the respective meanings (affectedness vs. effectedness) are not signalled by the verbs alone but by the verbs in conjunction with their object nominals. Thus, although it is not feasible to set up two semantic classes of inherently affected and effected nouns,[10] there must be aspects of the inherent meaning of some nouns which are responsible for the different relational interpretations of these nouns under certain circumstances. Jespersen (1928 232-4) is one of those who at least mention the indeterminacy of some verbs with regard to the affectedness-effectedness distinction, and it is instructive to compare his (incomplete) list of pertinent English verbs with their translation equivalents in German.

(6)

	EFFECTED	AFFECTED
a	*to dig a grave/a hole/a tunnel* *ein Grab/ein Loch/einen Tunnel graben*	*to dig the ground/potatoes* *den Boden umgraben/Kartoffeln ausgraben*
b.	*to paint a picture/a landscape* *ein Bild/eine Landschaft malen*	*to paint the wall* *die Wand streichen (an-/be-malen)*
c.	*to burn a hole/lime/bricks* *ein Loch/Kalk/Ziegel brennen*	*to burn coal/the meat/one's mouth* *Kohle verbrennen ((mit) Kohle heizen)/ das Essen verbrennen (anbrennen)/sich den Mund verbrennen*
d.	*to conclude a treaty* *einen Vertrag (ab-)schliessen* (but also: *ein Geschäft abschliessen* 'to secure a business')	*to conclude a lecture/a business* *eine Vorlesung beenden ((be-)schliessen)/ ein Geschäft beenden* (also *abschliessen*)
e.	*to force an entry/a confession* *Eintritt/ein Geständnis erzwingen*	*to force someone (into doing something)/ to force war (upon someone)* *jemanden (zu etwas) zwingen/ (jemandem) Krieg aufzwingen*

f. *to answer not a word* — *to answer a question*
kein Wort antworten — *eine Frage beantworten*

Of course there are also verbs that are indeterminate in both languages (*light a fire/a match - ein Feuer/ein Zündholz anzünden, cook - kochen*, etc),[11] and closer scrutiny might also reveal instances where we get the reverse of what we have seen in (6). But is seems to me pretty safe to predict that if translation-equivalent English and German verbs differ with respect to the ability to take affected and effected objects, German is more likely to employ separate verbs, which may be morphologically related, with affected and with effected objects.

2.3. Another example of one-to-many correspondences between English and German verbs, with more specific semantic agreement requirements in German, is provided by the verbs of dressing and also undressing, or, more generally, of putting on and taking off clothing and other articles one wears on one's body. In English one may resort to the stylistically marked verbs *to don* and *to doff*, and there are also available a number of special-purpose verbs depicting the manner of putting on or taking off garments or garment-like kinds of body covering (e.g. *to buckle on, slip on/into, get into, draw on/off, throw on/off, wrap oneself in/around oneself*), some of which seem obligatory if the body covering is not culturally recognized as a standard garment (e.g. *The Indian wrapped himself in/threw over his shoulders/*put on his blanket*, blankets being not typically used as garments by Americans - except Indians, who therefore may disagree with the above grammaticality judgement). However, the cardinal and by far most common English predicates of this semantic domain have already been mentioned, viz. the generic phrasal verbs *to put on* and *to take off*. German parallels English insofar as it also has stylistically marked verbs (in particular *an-/ab-legen*) and numerous verbs focusing primarily on the manner of getting one's body (un)dressed or otherwise (un)covered. Nevertheless, although two further German verbs, viz. *anziehen* and *ausziehen*, may be regarded as the most generic expressions available to denote the activities of putting on and taking off articles of clothing, and in this sense as analogues of English *put on* and *take off*, these verbs cannot be used to translate each and any occurrence of *put on* and *take off*. Rather, one is obliged to choose among a number of more specialized verbs, depending in particular on what kind of article is put on or taken off.

(7) a. *anziehen. Mantel, Handschuhe, Schuhe, Socken, Kleid, Hemd, Hose, Schürze, BH, Pullover, Anzug, Hosenträger, Knieschützer ... (*Hut, *Maske, *Krawatte ...)*
put on. coat, gloves, shoes, socks, dress, shirt, trousers, apron, bra, sweater, suit, braces, kneepads ... (hat, mask, tie ...)

b. *aufsetzen: Hut, Krone, Perücke, Maske, Brille,*[12] *Kapuze, Kopfhörer, Schleier, Stirnband, Hörgerät, Helm ...*
put on hat, crown, wig, mask, glasses, hood, headphones (earphone), veil, headband, hearing aid, helmet ...
c. *anlegen: Robe, Ornat, Rüstung (Panzer), Orden, Schmuck, Ohrringe ...*
put on. robe(s), vestment, armour, medals, jewelry, ear-rings ...
d. *umbinden. Krawatte, Kopftuch, Gürtel, Armbanduhr, Schal*[13] *...*
put on· tie, scarf, belt, wristwatch, scarf (muffler, comforter) ...
e. *umlegen· Stola, Halsband :.*
put on: stole, necklace ...
f. *anstecken: Ring, Brosche ...*
put on: ring, brooch ...

With the German verbs corresponding to the uniformly used *take off* there may be additional complications, at least there is no neat one-to-one relationship to the six putting-on verbs in (7):

(8) a. generally *ausziehen* (but· ??*Hosenträger*), in a few cases also the stylistically slightly marked *ablegen (Mantel,* ?*BH,* ?*Hosenträger,* but **Schuhe, *Socken)*, seldom also *abnehmen (Hosenträger)*
b. generally *abnehmen*, occasionally also *ablegen (Hut, Schleier)* or *absetzen (Helm)*
c. generally *ablegen*, with jewelry perhaps also *abnehmen*
d. *abnehmen* or *ablegen*
e. *abnehmen* or *ablegen*
f. *abnehmen*

Disregarding (8) for the sake of simplicity, what are the criteria for the choice of the different German putting-on verbs listed in (7)? In (7d-f) we have quite transparent descriptions of the actual activities performed (7d: 'to tie round', 7e: 'to lay round', 7f: 'to pin on'), whereas in (7a-c) the choice of the predicate is determined by more general principles. *Aufsetzen* apparently may be used for anything worn on the head if it somehow rests on the head or on some of its prominent parts (e.g. nose, ears). Still partly reflecting the basic meaning of the simplex verb *ziehen* 'pull, draw', *anziehen* is appropriate if the extremities, preferably either both hands or both feet, are, in the process of dressing, put through or into the openings of the garment, and the garment or the appliance for keeping the garment in its position is thus pulled over the extremities.[14] And *anlegen*, finally, seems to be the marked counterpart of *anziehen*, and particularly appropriate for festive and martial attire, although with less strict conditions concerning the manner in which articles are put on the

body. (Its stylistically marked English counterpart *to don* may be used much more liberally as far as kinds of garment or other body covering and manners of putting these on are concerned.) In some respects the relationship between these verbs and their objects in German, thus, seems somewhat different from the situation found in Japanese, where, according to McCawley (1971: 218), "the choice of verb is dictated not by the article of clothing but by the manner in which it is put on".[15] If a shoe were to be put on the head, one would indeed use *aufsetzen* in German, but coats and robes are put on in more or less the same manner, and one still tends to use different verbs. And if articles which are not normally used as garments are put on instead of the appropriate garment, one may still not employ the verb normally used for the proper garment if the substitute garment lacks the criterial formal characteristics (e.g. if a beach towel is used in lieu of a bath-robe, or a blanket in lieu of a coat, *anziehen* would still be inappropriate). It is immaterial to our main point if we nevertheless grant that the verbs in (7), and also (8), have somewhat different inherent meanings and that the differences between them are not entirely a matter of restrictions on the choice of lexical items in the object relation. As a consequence of the greater differentiation of the inventory of verbs of getting dressed and undressed in German there certainly are stronger semantic associations between predicates and their direct-object arguments than in English.

2.4. The well-known case of German *stellen/setzen/legen* corresponding to the single English verb *to put* (perhaps also *place*) is essentially similar insofar as it is not the inherent meaning of the object argument alone that determines the choice of the verb. With certain things, more than one of these German verbs may be used appropriately.

(9) a *das Buch ins Regal stellen/legen* 'to put the book on the shelves'
b. *einen Stein auf den anderen setzen/stellen/legen* 'to put one stone on top of the other'

and the difference may then lie with the position of the object referent, with its orientation in space, with its relationship towards its environment, and perhaps also with the manner in which it is moved. However, there also are nominals which are inherently incompatible with one or the other verb.

(10) a. *ein Tuch auf den Tisch legen/*stellen/*setzen* 'to put a cloth on the table'
b *ein Glas Milch in den Kühlschrank stellen/*legen/*setzen* 'to put a glass of milk in the fridge'

c. *den Hut auf den Kopf setzen/*stellen/??legen* 'to put the hat on the head'

Whatever the correct conditions on the use of *stellen/setzen/legen* may be, we again observe a translation-equivalence between one English verb without semantic-agreement requirements concerning its objects and several German verbs all of which to some extent arbitrarily limit the class of object nominals they may occur with.[16] But this is not yet the whole story. Firstly, English does have a differentiated set of verbs roughly corresponding to German *stellen/setzen/legen,* viz. *to stand/set/lay.* Notice however, that even if we take these verbs into account, we may still conclude that English has less semantic agreement between verb and object, but this time on account of having a richer rather than a poorer inventory of verbs. Relying on the multi-purpose verb *put* in English enables one to disregard the semantics of the object, whereas in German one has to choose between verbs none of which is absolutely neutral as to its objects. Secondly, there is, in fact, also a possibility of evading this decision in German, afforded by the multi-purpose verb *tun* 'to do', that may invariably replace *stellen, setzen, legen* in all relevant contexts, and hence seems a perfect analogue to *put.* Nevertheless, *tun* is more general than *put* by some degrees, because its meaning certainly transcends the semantic domain of moving something to a certain place and position. Within the confines of this domain, due to the availability of *put,* English thus seems better equipped than German for talking about manipulating objects without paying much regard to their dimensional or other properties.

2.5. A rather clear case of an exclusively object-related choice between arbitrarily differentiated verb alternants is the opposition between *schiessen* and *erschiessen* (cf. Leisi 1975 69) If the direct object refers to one of the animals or birds that are hunted for sport or food, *schiessen* is the verb to be used;[17] if the victim is human or another animal (in particular an animal to which humans are in some way emotionally attached), *erschiessen* has to be used. The classification of an animal as ±game is, however, not absolutely invariant, which is reminiscent of semantically transparent systems of nominal classification or gender where particular nouns may be classified differently on different occasions - as, for instance, in Potawatomi, where nouns which are usually members of the inanimate class switch to the animate gender if their referents are somehow personified, as, e.g., if they are addressed by the speaker (cf Hockett 1966). Although partridges, for example, belong among the fair game and accordingly can co-occur with *schiessen,* one may keep a partridge as a pet, and if this pet is then killed by shooting, on purpose or accidentally, it would be perfectly appropriate to use *erschiessen.* Thus, it is really the predicate which signals how the

object referent is intended to be categorized. For the corresponding English verb *to shoot* such categories of semantic agreement are irrelevant. In some varieties of English, it is at best the related phrasal verb *to shoot down* which is comparable to *erschiessen* insofar as it is typically limited to human victims and certain animals close to humans (which must actually be killed rather than only be shot at), apart from being applied to any animate or inanimate objects in flight (and, non-literally, to entities such as arguments). Now, shooting is not the only method of killing where German encodes in the verb which semantic class the victims are supposed to belong to, while such differentiation is neglected in the corresponding English verbs. The following examples illustrate a fairly straightforward opposition between objects referring to people and to animals:

(11) a. *schlachten* animals, *abschlachten/niedermetzeln/massakrieren*. people
slaughter/butcher/pole-axe/massacre. animals or people
b. *abstechen*. animals, *erstechen (niederstechen)*. people
stab (to death): preferably people (?)
c. *ersäufen* preferably animals, *ertränken* preferably people
drown animals or people
d *vertilgen* certain animals (vermin) and plants (weed), *ausrotten/ausmerzen*. more general
exterminate: lower animals (esp. vermin) and people

There are of course many other ways of putting animate beings to death, and most of them appear to be designed especially for humans. There are, accordingly, further German and English verbs of killing which are used exclusively or at least preferably with human objects. We may conclude that the most significant difference between German and English in this semantic area is that English lacks verbs of killing exclusively used with animal objects. The only potential counterexample I was able to find is the phrase *to put to sleep* (German *einschläfern*), but even here some informants accept objects referring to people, although it is perhaps uncommon for people to be killed by being put to sleep. *Destroy*, unlike its German couterpart *zerstören*, is used with animal objects (pets and others) but not with human objects (at least not when referring to individuals); on the other hand, it also combines felicitously with all kinds of inanimate objects, including (though perhaps non-literally) abstract ones - where *destroy* again parallels *zerstören* (e.g. *to destroy towns/hopes - Städte/Hoffnungen zerstören*). *Shoot down*, as mentioned above, is likewise not limited to animal, or rather animate, objects. This general pattern is, incidentally, mirrored by intransitive predicates of dying. English has verbs that are neutral with regard to the humanness of their subject (*die, perish*)

and - often euphemistic or other indirect - predicates that require their subjects to denote humans (e.g. *decease, pass (on/away), depart ((from) this life), go to one's account/Great Reward, peg out, kick the bucket*). German, on the other hand, again provides verbs specifically for the death of animals, viz. *verenden, verrecken* (?) and *eingehen* (which may also be used of plants), in addition to neutral (*sterben*, but more common with people) and exclusively human verbs (*verscheiden, entschlafen, abkratzen*).[18]

2.6. Having dealt with verbs of killing and dying, it is appropriate to consider also verbs relating to putting someone or something underground, as this is a quite usual method of disposing of dead bodies. Disregarding stylistically marked variants such as *inter* (perhaps *inhume*) and *bestatten/beisetzen*, the verbs most commonly used for placing dead human bodies (or their remains) in the ground are *bury* in English and *beerdigen* and *begraben* in German. Unlike *bury, beerdigen* is restricted to (formerly) human objects, which must be actually dead (cf. **jemanden lebendig beerdigen/to bury someone alive*). This agreement requirement of *beerdigen* apparently has to do with the ceremonial connotations of this verb: it seems that *beerdigen* cannot be used if the object is such that it would be inappropriate to perform the Burial Service over it. *Begraben*, on the other hand, is not so restricted, and could therefore seem to be exactly analogous to *bury* with regard to semantic object-agreement. *Begraben*, it is true, can be used with human objects who in fact need not be dead beforehand or even afterwards (cf. *jemanden lebendig begraben*), and it also occurs with objects which are, or were, not human (*den Hund begraben/to bury the dog*, cf. the set phrase *Hier liegt der Hund begraben* 'there's the rub', lit. here is the dog buried), animate (*das Kriegsbeil begraben/to bury the hatchet, das Haus war unter dem Schnee begraben/the house was buried under the snow*), or even concrete (*die Hoffnung begraben* 'to abandon hope', *einen Streit begraben* 'to put an end to a dispute', etc.). Nevertheless, there is reason to believe that *begraben* still differs from *bury* in that it is most typically and productively employed only with human objects. With most animals (except perhaps pets) there is a distinct tendency to resort to other verbs such as *eingraben, vergraben* or *verscharren* devoid of any ceremonial connotations. (*Verscharren* indeed can also be used, depreciatingly, of dead humans *jemanden wie einen Hund verscharren* 'to bury someone like a dog'.) The buried-dog example is certainly idiomatic, and so are the most common uses of *begraben* with concrete inanimate objects at least *begraben* cannot be used to translate standard occurrences of *bury* as in *to bury a treasure (einen Schatz *begraben/vergraben)*, and even *sein Gesicht in den Händen begraben/to bury one's face in one's hands* is now obsolete and sounds

much more natural with *vergraben*, the verb specialized for non-animate, or non-human, objects. (One could say *die Leiche vergraben* 'to bury the corpse', but only with the implication that the corpse is regarded as a mere thing rather than as a former human being.) As to *begraben* in construction with non-concrete objects such as 'hope' or 'dispute', these are clearly instances of non-literal uses of the verb, which are perhaps less characteristic of the English verb *bury*. Thus, we can conclude that German lacks a verb comparable to English *bury* with regard to the absence of agreement requirements, the German verbs most commonly corresponding to *bury*, viz. *beerdigen, begraben vergraben,* and also *verscharren,* all more or less severely restrict the set of (concrete) nouns that may occur in the direct-object relation.

2.7. The lexical field of verbs of teaching/training involves a number of semantic parameters in German as well as in English, see Schenkel (1976) for an attempt to differentiate the conditions of use of the pertinent German verbs *ausbilden* ('educate/train/drill/instruct', to give only some possible translation-equivalents), *unterrichten* ('instruct/teach/train'), *erziehen* ('educate/train/breed'), *aufziehen* ('bring up/rear'), *anleiten* ('instruct'), *anlernen* ('train/teach/break in'), *drillen* ('drill/train'), *abrichten* ('teach/train/break in'). All these German verbs are found to occur with direct objects denoting humans. *Abrichten* has rather negative connotations as a result of the educational process, which especially aims at skills intended to harm others, the trainees are supposed to act in absolute obedience to the orders of their superiors. Although *abrichten* is perhaps more commonly used in the case of certain animals, its object is not restricted to non-human referents (*pace* Leisi 1975: 68). There exists, however, a verb exclusively used with objects referring to animals, viz. *dressieren,* and apart from this semantic-agreement requirement this verb, unlike *abrichten,* has no particular negative connotations or inherent meaning components radically different from educational verbs more commonly used with humans. In this semantic area English again seems to lack comparable agreement restrictions. *To train (up),* as *dressieren* is most commonly translated, may co-occur with objects denoting humans and animals, and even *to break in* does not seem to be restricted to horses.

2.8. The last few sections have demonstrated that animacy or perhaps individuality or personality, i.e. categories such as ±human, ±animal, ±thing, plays a significant role in semantic agreement between verbs and objects, and there are no doubt further verbs or verb groups that could be adduced to illustrate essentially the same point. Consider only the English verb *to employ* and its most common German translation-equivalents Assuming that *employ* basically means something like 'to make

use of', it is not surprising that it can be used with object nouns denoting persons (in which case 'making use of' is tantamount to 'giving work to (usually for payment)'), animals, things (e.g. instruments), and even rather questionable 'things' such as time, methods and the like. If we disregard the more general multi-purpose verb *einsetzen*, closely corresponding to English *use*, there is no single verb in German that can be employed with the same range of object nouns as *employ*. The usual verb for employing persons is *beschäftigen*, for employing animals as well as things *verwenden* or *benutzen*, and with nouns with a questionable thing-status *verwenden*, *benutzen* or *nutzen* would appear to be the most likely choices (e.g. *to employ a certain method/eine bestimmte Methode benutzen or verwenden*, *How do you employ your spare time?/Wie nutzt du deine Freizeit?*). If the animal-or-thing verbs are used with human objects, then it is only with an effect similar to the one we have observed earlier: *Für diese Art von Arbeit verwenden/benutzen wir Sklaven/Gastarbeiter* 'for this kind of work we're employing slaves/foreign workers' suggests that the workers are classified as things rather than as autonomous persons.

The situation is essentially the same with the semantically related verb *to hire* and the corresponding German verbs from the semantic domain of obtaining something or someone in return for fixed payment, normally for an agreed time and purpose. Even if we disregard a number of verbs from this domain that seem to be restricted to quite specific classes of employees (e.g. *(an-)heuern* 'hire sailors', *anwerben* and the old-fashioned *ausheben*, which are particularly common in the military area (*ausheben* was in fact restricted to plural objects referring to soldiers) and thus roughly correspond to *enlist*, *verpflichten* or *engagieren*, which are preferably used in the case of non-permanent employment, especially perhaps in the show business and in professional sport), the more general German verbs corresponding to *hire*, viz. *anstellen* or *einstellen* and *mieten*, again turn out to show semantic-agreement requirements not found with *hire*: *anstellen* and *einstellen* are used for hiring persons, and *mieten* (or perhaps *anmieten*) for hiring animals and things (such as buildings or parts of them, land, cars, horses and other property), thus roughly paralleling English *to rent* and subsuming the more specific verb *chartern/to charter*, which is limited to buses, aircraft, ships and other vehicles not operated and directed by the charterers themselves. The *Wörterbuch der deutschen Gegenwartssprache* in fact still includes some uses of *mieten* with human objects (*einen Knecht/Söldner mieten* 'to hire a farm hand/mercenaries'), but rightly characterizes these as obsolete. What is again significant is the kind of human objects that were and perhaps still are marginally possible with *mieten*: humans who are not exactly paradigm instances of autonomous persons.

2.9. The English verb *to avoid* is most commonly translated as *meiden* or *ausweichen*, irrespective of whether someone or something is being avoided. However, there is a further common translation-equivalent of *avoid*, viz. *vermeiden*, and this verb cannot be used with human objects. As far as I am aware, there is no corresponding semantic - agreement requirement on the more common English verbs meaning roughly 'to keep away from'.

2.10. Under the rubric 'limitations to smallest classes of objects', Leisi (1975 70) mentions English *to crack* and German *knacken*, and claims that only the latter is restricted to objects referring to nuts. Although the conditions on the use of *knacken* are not, in fact, that strict, the English verb is no doubt employed more liberally

(12) a. *to crack nuts/coconuts/a safe/ a code*
Nüsse/Kokosnüsse/einen Safe/einen Kode knacken
b. *to crack the shell of an oyster/ a mussel/an egg/one's skull*
**die Schale einer Auster/*eine Muschel/*ein Ei/*sich den Schädel knacken*
c. *to crack a cup/the window*
**eine Tasse/*das Fenster knacken*

However, I doubt whether this case is entirely on a par with those treated previously. There may be arbitrary object restrictions with *knacken* (cf. 12b), but *crack* and *knacken* would also seem to differ in their basic meanings. *knacken* basically refers to activities of breaking something open, whereas *to crack* is defined as 'to make a crack, i.e. a line of division where something is broken, but not into separate parts' (*Advanced Learner's Dictionary*).[19] German has two stylistically differing nouns and participial adjectives to refer to this same state, viz. *Sprung/Knacks* and *gesprungen/ angeknackst*, but, as far as I know, no verb to denote the activity that produces it *anknacksen* sounds somewhat peculiar (except perhaps with limbs), *sprengen* or *springen* are impossible in this sense, and *(zer-)brechen* would imply that the cup, the window and the like are broken into separate parts. If *to crack* and *knacken* are, thus, dissimilar in basic meaning, this would weaken the argument that these verbs crucially differ only in that the German item has more specific semantic-agreement requirements. But what would still have to be accounted for are the co-occurrence restrictions of the German verb that are illustrated in (12b).

2.11 To stay in the same semantic field, English *break* and German *brechen/zerbrechen* are again clear cases where semantic-agreement requirements are more strict with the German verbs.[20] *Break* and *brechen* can be used, non-literally, with more or less the same range of non-concrete

objects (e.g. strike, heart, will, law, word, record, silence, peace; a noticeable exception, however, is *to break a journey – eine Reise *brechen/unterbrechen*), but as far as literal uses with concrete objects are concerned, *brechen* and *zerbrechen*, unlike *break*, are restricted to things consisting of brittle and rather inflexible material:

(13) a. *to break one's leg/neck/a branch from a tree – sich das Bein/den Hals brechen/einen Zweig von einem Baum brechen*
b. *to break the teapot/the window-pane – die Teekanne/die Fensterscheibe zerbrechen*
c. *to break the rope/a string – *das Seil/*eine Saite (zer-)brechen*

Zerreissen 'to tear in two' is the verb to be used with things like ropes or strings. As to the difference between (13a) and (13b), the prefixed verb *zerbrechen* more strongly than the simple verb *brechen* suggests that the object is actually destroyed, broken to pieces (although, interestingly, *brechen* can occur intransitively with the same implication *die Achse/das Eis/die Teekanne bricht* 'the axle/the ice/the teapot breaks' – *??die Achse/das Eis/die Teekanne brechen* 'to break the axle/the ice/the teapot'). There are a few set phrases with *brechen* where we would accordingly expect *zerbrechen*. *den Stab über jemand brechen* 'to pronounce sentence of death on someone' (lit. break the stick over someone), *eine Lanze für jemand brechen* 'to stand up for someone' (lit. break a lance for someone). *Brechen* in fact also occurs with objects referring to things which do not necessarily qualify as brittle or inflexible. *Blumen brechen* 'to break, i.e. pick, flowers', *Brot brechen* 'break bread', but these are also highly idiomatic expressions and certainly archaisms rather than standard, productive uses of *brechen*, and therefore do not invalidate the assumption that there are stricter verb-object agreement requirements with *brechen/zerbrechen* than with *break*.

2.12. Talking of picking flowers, it seems that there is an English verb that is exclusively used for flower-picking, viz. *to cull*, whereas German lacks a corresponding exclusively floral verb of picking: *pflücken* takes objects denoting flowers as well as fruits (cf. Leisi 1975 69f.). However, if we consider a larger set of verbs of gathering and harvesting, we probably end up with more semantic-agreement restrictions in German than in English. Unlike *pick* or *pluck*, *pflücken* for instance is restricted to flowers and fruits (e.g. apples, tomatoes, beans, strawberries, hops, chestnuts, also cotton and tea, but not plants with the fruit growing underground (such as potatoes) nor vegetables such as lettuce or cauliflower nor plants such as mushrooms, *eine Henne rupfen/*pflücken* 'to pluck a hen', **einen Faden vom Anzug pflücken* 'to pick a thread from one's coat'). *Sammeln*

is much less general than *gather*. they share a large set of possible object nouns (e.g. *gather firewood/Brennholz sammeln, gather followers/Anhänger sammeln,* etc.), but in the area of eatables, *sammeln* is used with little else but mushrooms and wild-growing berries, and with bees getting honey (*die Bienen sammelten Honig*), and it also cannot be used with flowers (unless you are a collector). For gathering hops (cf. **Hopfen sammeln*) there is in addition to *pflücken* another verb, viz. *zupfen,* which does not seem to be used with other plants or fruits. The semantic domain of gathering and harvesting and also the entire area of botanical (folk-)taxonomy are too complicated to be dealt with in sufficient detail in this paper. It is obvious, at any rate, that it would be premature to conclude on the basis of the single verb *cull* that this is an area where semantic verb-object agreement is more characteristic of English than of German.

2.13. Verbs of producing form another large semantic field which is not always neatly organized and the boundaries of which are occasionally difficult to determine. There are quite general and roughly corresponding verbs in English and German (e.g. *produce/produzieren* and *herstellen, make/machen*), and there are also corresponding verbs specialized for use with quite specific kinds of products (such as children: *beget* (or *procreate*)*/zeugen*).[21] If we consider one of the more general German production verbs, *erzeugen,* and its English equivalents with various classes of object nouns, it looks like we have found here an area with stricter agreement requirements in English:

(14) a. *Elektrizität/Wärme erzeugen – generate electricity/heat* (also *produce heat*)
b. *Hass/Spannung erzeugen – generate hatred/suspense*
c. *Kriminalität/Armut erzeugen – engender crime/produce poverty*
d. *Milch/Eier/landwirtschaftliche Produkte erzeugen – to produce milk/eggs/agricultural products*
e. *Zellstoff/Stahl ... erzeugen – produce cellulose/steel ...*

(In German, *hervorbringen* or the most general *produzieren* would be alternative options in most of these cases.) Apparently there are kinds of products, especially non-agricultural and non-industrial ones, which are not particularly suitable objects of *produce,* although they are perfectly appropriate with, and in fact paradigm instances of the use of, *erzeugen. Produce,* on the other hand, also takes objects which are likewise not exactly industrial or agricultural products, such as success, sensations (in the sense of surprise and excitement), and films and plays, where *erzeugen* would be altogether inappropriate But this, it seems to me, is only an aspect of a more fundamental difference between English

and German in this semantic area with the exception of the non-native *produzieren*, there is no single German production verb that could be used with a range of objects as wide as that of English *produce* (notwithstanding the gap noted in (14a-c)), instead, there are a small number of high-frequency verbs, viz. *herstellen, erzeugen* (also *hervorbringen*), and *anfertigen* (the prefixless variant *fertigen* is less usual), each of which is preferred or avoided with particular kinds of objects (although there are object nouns compatible with two or more of them). *Herstellen*, for example, is avoided with objects denoting goods or products not undergoing some manufacturing process (**Eier/*Milch/*Öl/*Weizen/*Strom herstellen* 'produce eggs/milk/oil/wheat/electricity (generate)').[22] *Erzeugen* is not used[23] with objects denoting industrially manufactured or handmade goods such as hats, gloves, clothes, furniture, cars, books etc., which are the domain of *herstellen* and partly also *(an-)fertigen*. The objects of *anfertigen* are generally artifacts (e.g. clothes, pieces of furniture jewelry, portraits; cf. also *eine Kopie anfertigen'* 'make a copy', *eine Liste anfertigen* 'draw up a list'), with an emphasis perhaps on the individuality of the products. Clearly, a much more thorough comparative analysis of production verbs would be required to confirm the impression that with respect to this lexical field as a whole semantic verb-object agreement is again more characteristic of German than of English. But I think it has been shown that the object-related restriction on the use of *produce* illustrated in (14), which does not apply to *erzeugen*, is not necessarily representative of this entire field.

2.14. Schliessen (or *zumachen*) is usually translated as *close*, with some objects (cf. 15a), but not with others (cf. 15b), *shut* can be used as well.

(15) a. *die Tür/das Fenster/die Augen/den Mund/die Schublade/das Buch/das Geschäft/das Theater schliessen* (or *zumachen*) - *close/shut the door/the window/the eyes/the mouth/the drawer/the book/the shop/the theatre*

b. *den Stromkreis/die Reihen/die Diskussion schliessen - close/*shut the circuit/the ranks/the discussion*

Now, are we entitled to conclude that object nouns such as those in (15b) are impossible with *shut* because of an object-related agreement requirement on this verb that does not apply to *close* nor to its German equivalent(s)? I think not. Instead I would assume that *shut* on the one hand and *close/schliessen* on the other, although semantically closely related, do not share an important meaning aspect, and that it is this aspect which is responsible for the more or less limited choice of object nouns. *Shut* means roughly 'to move something in order to stop an opening', and its

object identifies the opening or, more specifically, what is moved to stop it. If a box, an eye, a book or a shop is being shut, it is strictly speaking the lid of the box, the eyelids, the book covers or the shutters which are moved, but it seems that such nouns referring to wholes (box, eye, book, shop) simultaneously refer to the constituent parts of these wholes if these are moved from one position (open) to another (not open). Although *close* and *schliessen*, if used literally, may be just as appropriate as *shut* under certain circumstances, their lexical meanings are more general, so that these verbs can also be used for activities where *shut* would not be appropriate. If *close* and *schliessen* can be taken as essentially referring to the activity of stopping (possibly by decree) something from being open, then it should be possible to use these verbs whenever the predicates 'open' and 'not open' are applicable to an entity, irrespective of whether this entity itself is actually being moved in order to stop the opening. 'Open/Not open' may be true of windows and doors as well as of the room or building they are openings of, of gates as well as the level crossing they may block, etc., and whenever the predicate 'not open' is true of windows, doors, gates, it is also true of the rooms, buildings, level crossings of which the windows, doors, and gates are constituent parts (unless of course there are further openings which are still open). Thus, if German lacks a verb corresponding to *shut*, this is presumably no lack in semantic-agreement requirements vis-à-vis English, but rather a lack of a verb to encode the meaning 'to move something in order to stop an opening' in addition to a verb with the more general meaning 'to stop an opening'. (In fact, it seems that *zumachen* is occasionally less appropriate if the object is not actually moved, unless the intended meaning is 'to close/shut down' *die Schranke schliessen/zumachen* 'to close/shut the gate' - *den Bahnübergang schliessen/?zumachen* 'to close/*shut the level crossing', *die Tür schliessen/zumachen* 'to close/shut the door' - *das Haus schliessen/?zumachen* 'to close/*shut the house' (although *zuschliessen/abschliessen* would be preferred in this case if the door is actually locked).)

There are, however, a number of object nouns which are compatible with *close* but not with *schliessen* (or *zumachen*), and this seems to point to a genuine semantic-agreement requirement with no parallel in English

(16) *to close the road/the bridge/a river - *die Strasse/*die Brücke/*den Fluss schliessen*

Sperren is the verb to be used instead with such objects.[24] But what is the common semantic denominator of the nouns that cannot occur with *schliessen*? What these nouns have in common, as opposed to those which may be objects of *schliessen*, is that they refer to spaces which are normally passed through and/or within which someone or something moves in a

certain direction rather than to spaces (such as rooms, theatres, shops, stadiums, harbours, or envelopes, coats) which are entered, occupied, and left, without an emphasis on passing through them or on directed movement within them. Thus, if a noun refers to a space where 'not open' suggests that the passage through it or the directed movement within it is blocked, *sperren* is the appropriate verb of closing, whereas *schliessen* or *zumachen* do not admit objects of this kind. There are nouns which appear to be inherently indeterminate as to whether 'passage through/ directed movement within' or 'entrance into-stay-exit from' is their dominant meaning aspect, and which are therefore reasonably appropriate objects of both verbs. *Tunnel* 'tunnel' is a good example of this category (*einen Tunnel schliessen/sperren*) vehicles and people may pass through tunnels, which, on the other hand, closely resemble caves and similar habitats which are stayed in rather than merely passed through. And there are also nouns which are not really indeterminate or inherently vague (like *Tunnel*), but equally well admit of either classification,[25] with the result that the use of *schliessen* (*zumachen*) or *sperren* correlates with a difference in meaning. Locks and borders are pertinent examples. a lock can be conceived of as a space through which boats pass (*die Schleuse sperren*, accordingly, implies that boats may not pass, i.e. not even enter, the lock), but also as a space where boats are staying after entering and before leaving (*die Schleuse schliessen*, accordingly, suggests that the gate is being closed after a boat has entered or left the lock), analogously, borders can be regarded as points of entrance into or exit from a country where one is going to stay or where one has stayed (*die Grenzen eines Landes schliessen* 'to close the borders of a country') as well as an area one has to pass through on one's way into or out of a country (*die Grenze sperren*).

2.15. We now turn to a case where English and German both seem to have equally well developed lexical fields, viz. to the notorious verbs of cooking.[26] If we can assume that the number of cooking verbs in English and German is approximately the same (English in fact seems to have a few more), we are not likely to encounter a situation similar to those considered before, with a one-to-many correspondence between English and (selectionally more specific) German verbs. Nevertheless, English and German can again be shown to differ with respect to semantic agreement between verbs and direct objects. it is the internal structure of the lexical field of culinary verbs itself which manifests the difference. Presupposing that Lehrer's (1974 61ff.) analysis is essentially correct, these are the parameters required to differentiate the main English verbs denoting ways of preparing food by heating

(17) a. ± use of water or water-based liquid:
+ *boil, simmer, stew, poach, braise, steam*
- *fry, sauté, deep-fry, broil, grill, charcoal, bake, roast*

b. ± use of oil (fat, grease). + *braise, fry, sauté, deep-fry*
- all others

c. ± use of vapour rather than liquid + only *steam*

d. amount of cooking liquid used: large *deep-fry*, small *braise, sauté*

e. cooking action: vigorous *boil*, gentle *simmer, stew, poach*

f. kind of source of heat: radiant *broil, grill, charcoal, roast*
conducted *bake, roast*

g. cooking time long *stew*, short *sauté*

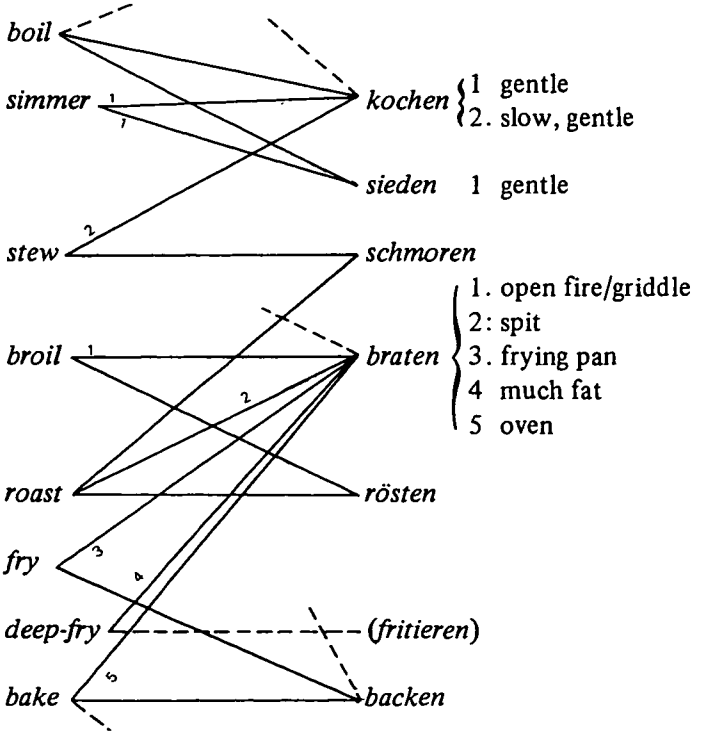
h. special utensil pot with lid *braise*; rack/sieve *steam*,
frying pan *fry*, grill/griddle *grill*, oven *bake*

i. special purpose: to soften *stew*, to preserve shape *poach*

Unless one is a linguist or a gourmet, one may well be surprised that these are the parameters necessary and sufficient to distinguish the English cooking verbs one might naively have expected the kind of food being prepared to play a more prominent role in the choice of the appropriate verb. And there in fact are indications that the nature of the object referents also has to be taken into consideration in order to use some such verbs felicitously. *to poach vegetables* or *to stew eggs* sound odd although these collocations do not obviously contradict the meanings of *poach* and *stew* as specified in (17),[27] considering that both *rice* and *potatoes* are compatible with *fry*, it seems a little surprising that only *potatoes* but not *rice* is compatible with *sauté*, *to toast* is primarily applicable to bread, but also to wheatgerm, sprouts, and perhaps all other kinds of food which get brown and crisp when toasted (although they are also eatable untoasted), according to Lehrer (1974 34), the size and shape of the food are, among other factors, relevant for the choice of *broil* or *roast*; and the choice between *bake* and *roast*, if the cooking is done in an oven, is also to some extent contingent on the kind of food prepared (Lehrer 1974. 182 speculates that *roast* is favoured with juicy or moist foods, hence *to roast meat/duck* but *to bake ham/fish*, but it is still perfectly normal to roast chestnuts, coffee, potatoes etc.). All in all, however, these are still comparatively minor factors in the hierarchical structure of this lexical field, the higher-level differentiations are achieved by means of parameters which are of a more or less instrumental or environmental character. If some cooking verbs are associated with particular kinds of food, then this is only derivatively so, in cases where the criteria of how and where something is being cooked would already seem to exclude foods of a certain kind.

In her discussion of tentative cooking term universals, Lehrer (1974. 166) points out that languages may tend to use certain verbs for certain foods, although, interestingly, the shape of the food is unlikely to be employed as a criterion of classification And she also presents data from languages where the kind of food being cooked is relevant for the choice of a cooking verb on a much less peripheral level than in English. In Amharic, for example, the five cooking verbs, disregarding the general verb 'to cook', may only be used in connection with specific food categories, viz. with liquid food ('boil'), solid food ('boil'), bread ('bake'), meat ('fry, roast'), and grain ('parch'). Lehrer (1974. 157f.) also briefly analyses the lexical field of cooking in German, and employs essentially the same environmental and instrumental criteria as in English. She mentions, however, that *dünsten/schmoren/dämpfen* 'stew/steam/braise' (her translations) are only applicable to solid food (hence **Suppe dünsten/schmoren/dämpfen*). Anyone who has ever had to rely on bilingual dictionaries in order to translate culinary verbs from German to English or in the reverse direction has presumably made two observations: firstly, there are hardly any one-to-one correspondences (apart from *poach-pochieren, sauté-sautieren,* if German dictionaries happen to include these verbs), and secondly, it often seems that in German one explicitly has to add instrumental or manner specifications, which in English appear to be part of the meaning of the verbs themselves. To present only some of the correspondences that I have encountered in some dictionaries

(18)



Confronted with this fuzzy picture, one begins to wonder whether German really organizes this lexical field by means of semantic parameters similar to those found in English To be sure, in German just as in English (and apparently all other languages - see Lehrer 1974 164f.) the major distinction is between boiling and non-boiling (although *schmoren* probably shows up on both sides); but on the next lower levels contrast may be established by somewhat different criteria. And this is exactly what Leisi (1975 67, 83) suggests the condition of the food being cooked is more important for the internal structure of the lexical field in German than it is in English, where this parameter referring to object (or subject, if the verbs are used intransitively, i.e. with only one argument) nominal classes is dominated by instrumental, environmental, and manner contrasts. Even our simplified schema (18) points to a similar conclusion. It does not seem completely accidental that *braten,* for example, neutralizes a whole number of contrasts which crucially define part of the lexical field in English. And in the overall structure of the entire lexical field, the following feature weightings would seem appropriate for German, but not for English

(19) *braten* SOLID FOOD outranks -WATER, FAT, DIRECT HEAT
e.g. ?*Eier*/??*Pfannkuchen*/**Pfannkuchenteig braten - fry eggs/pancakes/pancake batter* (thus, *braten* seems to combine, though rather uneasily, with food that is transformed from a fluid to a solid state in the proces of frying)

backen FOOD CONSISTING OF/COVERED BY DOUGH (but perhaps also chicken, fish, fruit) outranks -WATER, -OIL/-FAT, CONDUCTED HEAT
e.g. **Würste backen - bake sausages,* ?*einen Apfel backen - bake an apple*

sieden LIQUIDS outranks +WATER, -OIL/-FAT, -VAPOUR, VIGOROUS
e g **Kartoffeln sieden - boil potatoes*

rösten. SOLID FOOD outranks -WATER, ±FAT, FRYING PAN
e.g. **ein Ei rösten - roast/fry an egg*

Thus, it may turn out that German has perhaps more in common with Amharic than with English concerning the relevance of semantic agreement between verbs of cooking and classes of foods cooked.

2.16 Consider, finally, another lexical field with an equally intricate structure, viz. verbs denoting certain kinds of activities of moving substances from one place, preferably from inside a container, onto the surface of another place. For syntactic and semantic reasons the field at issue is not easy to delimit appropriately, the list of verbs given by Leisi (1975 66f.) covers at best its core. *sprinkle, pour - spritzen, giessen,*

schütten, streuen. If further verbs are included, the semantic features suggested by Leisi no longer suffice to distinguish the items in this field. My aim, however, is not to offer a more exhaustive analysis of the relevant semantic contrasts, nor to improve upon the characterization of the semantic features proposed by Leisi, vz. substance moved ±liquid, larger or smaller quantity (perhaps rather: surface covered ±completely), ±relatively quick movement. I only wish to support with a somewhat longer list of verbs Leisi's conjecture that, as in the case of cooking verbs, the condition of the substances referred to by the objects of these verbs is more important in German than in English. This is to say that in German liquid and non-liquid substances are more likely to require different verbs, whereas in English more verbs tend to be neutral with regard to this parameter of nominal classification. In the following lists, the possible translations provided for the German verbs are not exhaustive and, in particular, are not necessarily equivalent with respect to semantic agreement. Non-literal meanings are to be excluded as far as this is feasible.[28]

(20) a. +liquid object.
giessen 'pour/shed/cast', *träufeln/tröpfeln* 'drop/drip/trickle', *tropfen* 'drop/drip', *sprühen* 'spray/sprinkle', *spritzen* 'spout/splash/squirt/spray/sprinkle', *schwappen* 'spill/slop', *fluten* 'flood'
splash, slop, drip, flood, spurt, spout, decant, trickle (?)

b. -liquid object:
streuen 'strew/scatter/spread/dust', *stäuben* 'dust', *werfen* 'cast/throw'[29]/*fallen lassen* 'drop'[30]
scatter (?), *dust, strew*

c. ±liquid object:
schütten 'shed/cast/throw/poor', *füllen* 'fill', *(aus-)spucken* 'spurt/spit out'
pour, fill, spray, sprinkle, spit (out), spill, shed, drop, spread, squirt, spatter, throw, shower, cast

An attempt to establish translation equivalences in a more precise manner would show that the English and German verbs which most closely corresponds to each other according to the above-mentioned criteria of quantity of substance and speed of movement, and perhaps further parameters differentiating manners of movement, very often differ with regard to the criterion of liquidness: the number of verbs in the neutral class (20c) is proportionately much higher in English than in German. Thus, although Leisi's choice of *sprinkle* and *pour* as his only examples may lead to a somewhat exaggerated view of the actual differences, his claim, if interpreted in relative rather than absolute terms, would seem basically correct. This lexical field is another instance where German exceeds English in semantic-agreement requirements on verbs and their objects.

3. ON THE SYSTEMATICITY OF SEMANTIC AGREEMENT

Let me summarize what has been shown in the preceding sections. In about fifteen instances of individual verbs or verb groups the semantic classification of direct-object arguments turned out to be relevant for the selection of particular verbs in German but not, or perhaps less so, in English. We can distinguish three manifestations of this difference in semantic-agreement requirements: firstly, two or more verbs in German may correspond to a single English verb lacking the object-oriented meaning component found with its German counterparts (cf. §§ 2.1, 2.2, 2.3, 2.5, 2.6, 2.7, 2.8, 2.9, 2.11, 2.14, perhaps 2.10, 2.16), secondly, English may have verbs with object-agreement requirements similar to those of their German counterparts, but may have additional, and perhaps more commonly used, verbs which neutralize this object-oriented meaning opposition (cf. §§ 2.4, 2.12, perhaps 2.3, 2.13), and thirdly, parameters referring to semantic classes of objects may have a more prominent status in the structure of lexical fields of predicates in German than in the corresponding fields in English (cf. §§ 2.15, 2.16, perhaps 2.13).

3.1. On the basis of this still rather limited set of data I should like to advance the hypothesis that German in general has more instances of semantic verb-object agreement than English. Note that this hypothesis is quantitative in nature. it does not predict that there will be no cases where English has verb-object agreement but German lacks it (*carry* esp. loads/*wear* esp. garments vs. *tragen* 'carry/wear' might be a pertinent example, *breed* esp. animals/*cultivate* esp. plants vs. *zuchten* 'breed/cultivate/rear', and *prune/lop* trees and bushes vs. *stutzen* 'cut back trees/bushes as well as hair and feathers' certainly are); the claim is only that on aggregate German numerically outranks English in instances of this kind of agreement. In principle it should be easy to find out whether this hypothesis is valid or not one would only have to survey the verbs, or the semantically coherent groups of verbs, which take objects in both languages and which are approximately translation-equivalent, and calculate and compare the proportions of verbs with agreement requirements. Of course there will be a number of practical difficulties; to mention only one, the notion of semantic agreement itself may have to be further clarified before we can distinguish more reliably between verbs differing in basic meaning and verbs with the same basic meaning but differing in agreement requirements (cf. *crack–knacken* discussed in § 2.10). However, there should be no insurmountable obstacles to a more extensive empirical analysis along the lines of our case studies in § 2, which would eventually provide a reasonably secure basis for the evaluation of our hypothesis. In carrying out this survey it would be an advantage if a qualitative dimension could be

added to our statistical prediction, not least because one would thereby avoid having to occupy oneself with large parts of the vocabulary of English and German which upon comparison may turn out to be irrelevant for this hypothesis. Are there, for instance, reasons to expect some semantic classes of two-or-more-place predicates to be more promising areas of comparison? And are some categories of argument classification more likely than others to be involved in the choice between particular predicates? My impression is that both questions can be answered in the affirmative.

As to predicate classes, it is probably no coincidence that all cases analysed in § 2 involved only verbs of activity. If the generalization turns out to be valid that direct objects of verbs of activity are more likely to require semantically agreeing verbs than objects of verbs of experience or perception,[31] the obvious question is. why should this be so? Given that agent-patient and experiencer/perceiver-stimulus role configurations are both construed syntactically as subject-(direct) object configurations, we would first of all have to observe that semantic agreement cannot be accounted for sufficiently in terms of grammatical relations as such, the relational-semantic content of the direct-object relation apparently has to be taken into consideration as well.[32] I do not know whether it suffices to say that predicates are more likely to manifest semantic agreement with more patient-like objects than with more stimulus-like objects, or whether additional factors appropriately subsumed under the notion of semantic transitivity (e.g. aspectual or rather 'Aktionsart' differentiations of predicates such as ±perfective, ±punctual, individuation of arguments) or even finer distinctions of predicate classes (e.g. achievement, accomplishment, activity predicates) may also, and perhaps more crucially, influence the likelihood of the occurrence of agreement.[33] But I think the examples considered tend to support the view that predicates where the object referents are prototypical patients, i.e. are under the influence/control of their actively involved co-participant and are thoroughly affected/effected by what is happening to them, are the preferred domain of semantic agreement. Pointing out the relational-semantic conditions of verb-object agreement is not sufficient as an answer to the question raised above, what remains to be explained is why predicates should tend to agree with patient-objects (in highly transitive clauses) rather than with stimulus-objects. If pressed for an answer, I would speculate that what verbs of activity refer to, viz. particular kinds of activities, may vary considerably depending on what kind of entity is involved as a patient, whereas what verbs of experiencing and perceiving refer to as such would seem to be relatively constant and independent of who or what is the stimulus. For example, all acts which can be considered as instances of killing have no doubt something in common, but what a killer actually does may vary

a lot if he is killing partridges and other fair game, or lice, or human enemies. On the other hand, sensory experiences like hearing, smelling, seeing etc. as such are exactly the same no matter who or what is heard, smelt, and seen (although they may of course differ in intensity and the like). This potentially greater variability of realizations corresponding to generic types of activity could, in my opinion, be responsible for semantic-agreement patterns evincing a higher degree of interdependence of the choices of verbs and nominals in the case of activity-patient relationships than in the case of experience/perception-stimulus relationships - provided such agreement requirements are characteristic of a language at all.

As to relevant categories of argument classification, it is probably no coincidence that none of the cases analysed in § 2 have involved agreement with respect to categories such as the colour, smell, taste, or sound of the object referent I specifically mention these non-attested categories since *a priori* they would seem to be perfectly reasonable categories with which to classify a large number of argument expressions. And although they are perceptual categories, one could expect them to be relevant for semantic agreement regardless of whether the agreeing predicates denote activities or experiences and perceptions. If perceptual salience and classificatory usefulness alone are insufficient criteria for an appropriate delimitation of the range of potential semantic-agreement categories, the question is whether this range can be delimited at all in a principled manner. As an attempt to answer this question in the affirmative I suggest that only those kinds of categories which can be identified in the noun-classifier systems of recognized classifier languages may be relevant for the kind of predicate-object agreement that we are concerned with [34] As has recently been argued by Keith Allan (1977), noun classifiers in these languages fall into seven broad categories material, shape, consistency, size, location, arrangement, and quanta. Allan draws on John Locke's distinction between 'primary' and 'secondary qualities of bodies' in his attempt to explain why only this particular set of categories is employed for purposes of nominal classification. the characteristics referred to by classificational categories must be perceivable by more than one of the senses, and the senses that are especially relevant for the 'primary qualities' appear to be sight and touch. One could take issue with Allan concerning the perceptual basis of the category he labels 'material', which is supposed to include under the rubric 'inanimacy' such particular noun classes as 'tree/wooden object', 'body part', 'food', 'implement', 'boat/vehicle', and 'residual/general class'. However, rather than try to break down this obviously heterogeneous, to some extent functionally rather than perceptually based super-category, let me indicate very roughly how our cases of verb-object agreement fit in with this categorial system

§1 *massacre*. quanta (number), *myt'/stirat'/promyat'*. material (body part ...)
§2.1 *sagen/erzählen*: material (artifacts?)[35]
§2.2 affected/effected objects. material (artifacts)
§2.3 *anziehen/aufsetzen* .... material, shape, location (headwear, bodywear)
§2.4 *stellen/setzen/legen*. size (?), shape (dimensionality)
§2.5 verbs of killing. material (individuality, animacy)
§2.6 *begraben/beerdigen* ...: material (individuality, animacy)
§2.7 *dressieren* .... material (individuality, animacy)
§2.8 *beschäftigen/verwenden* ..., *anstellen/mieten*: material (individuality, animacy)
§2.9 *meiden/ausweichen*· material (individuality, animacy)
§2.10 *knacken*: shape, consistency
§2.11 *brechen/zerreissen* material, consistency
§2.12 verbs of gathering and harvesting. material, shape (?), location (?)
§2.13 verbs of producing· material (artifacts)
§2.14 *schliessen/sperren*: material, shape, arrangement (?)
§2.15 verbs of cooking consistency, material
§2.16 *giessen/streuen* .,.. consistency, size (?), quanta
§3.1 *carry/wear*. material, location; *breed/cultivate*. material (animacy); *prune/lop*. material (trees)

Provided the categories available in principle for the purposes of verb-object agreement can thus be limited, although admittedly not very drastically, we could further ask whether the particular categories with respect to which certain predicates agree with their objects are arbitrarily chosen. Why, for example, are consistency and perhaps material rather than shape, size, or quanta the agreement categories for German verbs of cooking? Such preferences again do not seem to be fortuitous: arguments may be classified according to different categories, but predicates may agree with arguments only with respect to such categories as are particularly salient vis-à-vis the meaning of the predicate. Thus, food-stuff itself may very well be classified as to shape, size, quanta, or consistency, but, in view of our cooking and eating habits, the last mentioned category acquires particular salience in the context of cooking verbs. And from the considerations at the end of the preceding paragraph, concerning the variability of the realizations of particular generic types of activity depending upon the kind of patient involved, further criteria could be derived to limit the set of potential agreement categories

If the categories available for semantic verb-object agreement are essentially similar in kind to those likely to be found in genuine noun-

classifier systems, one must ask on what grounds recognized classifier systems are distinguished from the kind of agreement we have been considering here. The obvious criterion for classifier languages would seem to be that they possess a set of overt markers of noun classification, rather than simply a number of basic verbs with semantic co-occurrence constraints possibly involving the same classificational categories (cf. Allan 1977. 289). Thus far we have been talking of semantic verb-object agreement as if its covert, purely lexical nature could be taken for granted. Although this is sometimes appropriate, notice that in several instances in German the choice was not between two (or more) completely different verbs, but between prefixed and prefix-less variants of the same lexical item:

(21) *graben - um-/aus-graben, malen - an-/be-malen, brennen - an-/ver-brennen, schliessen - ab-schliessen, zwingen - er-zwingen, ant-worten - be-antworten* (§2.2), *schiessen - er-schiessen, schlachten - ab-schlachten, (tilgen) - ver-tilgen* (§2.5), *nutzen - be-nutzen* (§2.8), *meiden - ver-meiden* (§2.9); *brechen - zer-brechen* (§2.11), *zeugen - er-zeugen, fertigen - an-fertigen* (§2.13)

And even if there is no straightforward alternation between prefixed and basic verb, we often find prefixed verbs in cases of agreement:

(22) *er-zählen* (§2.1), *be-enden* (§2.2); *an-ziehen, auf-setzen* (§2.3), *ab-stechen - er-stechen* (§2 5), *ver-scharren, be-/ver-/ein-graben, be-erdigen* (§2.6), *be-schäftigen, ver-wenden, an-/ein-stellen* (§2.8), *aus-weichen* (§2.9); *zer-reissen* (§2.11), *her-stellen* (§2.13)

In fact one could easily multiply German examples where prefixed or basic verbs are chosen in accordance with the semantic class of the object, with animacy being a factor of particular importance

(23) *stören* 'disturb someone/something' - *verstören* 'disconcert someone', *drosseln/abdrosseln* (inanimates) 'throttle (down), slow down (e.g. engines)' - *erdrosseln* (animates) 'throttle, choke, strangle', *drücken* (animate and inanimate objects) 'press, squeeze' - *bedrücken* (only animates) 'afflict, depress, oppress', *merken* 'notice something' - *bemerken* 'notice something or someone'

Thus, verb prefixes in German could be analysed as forming at least a residual system of overt noun classification. These verbs-cum-classifiers are reminiscent of, in particular, classificatory-verb constructions that are perhaps best known from the Athapascan languages, where a set of formatives in the verbal group varies with the class membership of, among

others, direct-object arguments (cf. again Allan 1977, with further references). Disregarding genuinely morphosyntactic gender agreement, comparable systems of noun classification by means of formatives placed in the verbal group have also been reported from Arawakan languages such as Palikur, Terêna and Waurá (Derbyshire 1982) and from Iroquoian languages such as Mohawk or Onondaga (Bonvillain 1974, Woodbury 1975), where the classifying formatives are analysable (synchronically in Iroquoian and at least diachronically in Arawakan) as incorporated nouns specifying the general class intended to subsume the referent of the autonomous noun-phrase argument (e.g. 'I vehicle-bought a bike'). Also comparable to German verb prefixes are the preverbs of the South Caucasian language Georgian, which, although usually encoding perfectivity, direction, orientation etc., sometimes function as number classifiers (singularity vs. plurality) of 'goal' or 'patient' arguments (cf. Schmidt 1957).

One need not go so far as to claim that German really has a sufficiently productive verb-prefixal system of overt noun classification to find it highly significant that this particular type of verb-related formatives, which to a considerable extent participate in the encoding of aspectual or 'Aktionsart' categories (cf., for example, *schlafen* 'sleep' - *einschlafen* (ingressive) 'fall asleep', *blühen* 'be blooming' - *auf-/er-blühen* (ingressive) 'blossom' - *verblühen* (terminative) 'wither', *schneiden* 'cut' - *zerschneiden* (completive) 'cut up') and of variations of object selection and transitivity (cf. examples such as *hören* with accusative 'hear' - *gehören* 'belong to'/*gehorchen* 'obey' with dative, *dienen* dat. 'serve' - *bedienen* acc. 'serve', *folgen* dat. 'follow, obey' - *verfolgen* acc. 'pursue'/*befolgen* acc. 'obey', *wohnen in* 'live in, reside in/at' - *bewohnen* acc. 'inhabit'), should also be able to help encode contrasts pertaining to the agreement between verbs and semantic classes of objects.[36] It will become clearer in the following section that these multiple functions of verb prefixes are not entirely coincidental.

3.2. Having put forward the hypothesis that semantic agreement between verb and direct object in general is less characteristic of English than of German, and having briefly considered which predicate classes and which categories of argument classification are most likely to be involved in semantic agreement, we are still left with the question of whether or not the differences between English and German are fortuitous, in the sense that no universal or typological theory of grammar and lexicon should be able to predict which languages are likely to manifest more such agreement than others. In the case that our quantitative hypothesis should prove correct, we could still do no more than conclude that a whole lot of minor lexical (plus word-formational) differences between English

and German are mysteriously following the same pattern, should we not succeed in finding additional properties of the grammar or lexicon of English and German which can be shown to correlate with an aversion or a propensity to semantic agreement in a cross-linguistically significant manner. Without such correlates, incidentally, it would seem rather difficult for language learners to figure out the agreement requirements of predicates: in principle, a learner may always assume that any verb-object collocations that (s)he has not happened to come across so far in the speech of his/her models are nevertheless potentially well-formed, as long as (s)he lacks explicit evidence to the contrary. In other words, (s)he is hardly likely to hypothesize relatively specific constraints on the use of verb-object combinations unless (s)he already expects that there must be such constraints in the first place, having been alerted to them by individual features or the overall structure of the language to be acquired.

Apart from offering many acute observations, Leisi (1975: 77-9) in fact also comments on semantic agreement as a characteristic feature of particular languages, and on the possible forces behind this overall preference for linking verbs and objects through common classification. Leisi calls those verbs 'expressive' which may only be used in combination with subjects or objects of particular semantic classes, and those verbs 'rational' which are independent of any arbitrary semantic conditions referring to subject or object. Verbs may be expressive to varying degrees, depending on the specificity of their agreement conditions. In accordance with the predominance of expressive or rational verbs, whole languages may be characterized as expressive or rational, and Basic English and French are adduced as paradigm cases of rational languages, whereas Modern English and German are claimed to be more on the expressive side. That in Leisi's opinion the preference for rationality or expressivity is not an entirely arbitrary choice becomes obvious if one takes his view of the properties, of the advantages and disadvantages, of rational and expressive verbs seriously. Leisi holds that the separation of argument and predicate expressions, of argument-specific and predicate-specific classificational categories, is in part an artifact of linguistic representations; what is perceptually given are events or states as a whole. But since this linguistic distinction of autonomous argument and predicate expressions is to some extent arbitrary to begin with, different linguistic representations may also differ in the ways in which, consequently, they carry out this separation. Expressive verbs, then, are the result of an inconsistent, non-rational (vis-à-vis the logic of linguistic representation) association of conditions on the use of arguments with predicates. But there are some factors which, according to Leisi, favour this inconsistent attitude: expressive verbs, emphasizing the unity of predicate and argument, provide a more adequate, sensuous, poetic expression of the basic perceptual unity,[37] and

also allow for the creation of 'indirect' metaphors (e.g. *The bike capsized*). Rational verbs have their advantages too: they are more logical concerning the functional separation of predicate and argument, and they are useful from the viewpoint of economy since one can make do with fewer verbs if these can be employed without regard for the semantics of their arguments. Given these properties, the choice of rational or expressive verbs may also involve quite subjective stylistic considerations, and thus may be an area of interindividual variation. If one language in its entirety, then, is more rational than another, this must be due to the fact that its speakers, for whatever reason, value logic, rationality, economy higher than expressivity, sensuousness, poeticality.

I doubt that Leisi's account, here briefly summarized, can be taken seriously as an explanatory theory. What at first sight may look like a somewhat impressionistic characterization of different 'cognitive styles' (Hymes 1961) motivating a well-defined difference in linguistic structure, quickly turns out to hinge entirely on the labelling of the two kinds of verbs. The whole psychological motivation of the predominance of one or the other of these verb types is convincing only to the extent that the labels 'rational' and 'expressive' are appropriate for the two verb types. Leisi in fact adds two further labels for the expressive type, viz. 'primitive' and 'archaic'. Quoting once more the thirteen or so different verbs for washing in one primitive language, he concludes that in our own languages there are agreement requirements in the case of expressive verbs which are equally primitive. The manifestation of cognitive styles in language is certainly an important question, and it may indeed be appropriate to treat the linguistic phenomenon at issue, semantic agreement between predicates and arguments, under this heading. Leisi's psychological notions of rationality and expressivity per se, however, would not seem to be able to contribute a lot to an explanatory account of why the incidence of verb-object agreement differs in two languages such as English and German. Thus, rather than speculate about the possibility that the English (and not only the speakers of Basic English) might be more rational than the Germans, I suggest we ought to look at relations between predicates and arguments from a wider perspective in order to explore whether the frequency of verb-object agreement is an independent variable or rather a concomitant feature of other cross-linguistic differences in this area.

I contend that verb-object agreement does not in fact belong to the realm of minor, fortuitous, and cross-linguistically unpredictable differences between individual languages, but correlates with the typological parameters of subjectivity and, in particular, of object-differentiation. Since these parameters, although occasionally employed in typological research past and present, are not necessarily self-explanatory, I shall briefly outline how languages may differ in the manifestation of the

grammatical core relations of subject, direct, and indirect object.[38] Typologically, the essential point is that the notions of grammatical subject and direct and indirect object cannot be supposed to be equally relevant for all human languages: some languages manifest such genuinely grammatical categories, some more prominently, some less so; others do not manifest them at all. An important determinant of this kind of typological variation seems to be the lexicon, viz. particular aspects of the meaning of predicate expressions.

An argument of a predicate may have various statuses, which can be distinguished as relational-semantic and pragmatic. The semantic relations of arguments can be characterized on various levels of abstractness there are relatively abstract role types such as agent, patient, experiencer, stimulus, instrument, less abstract, i.e. more intimately tied up with individual predicates, are role specifications such as killer - victim (associated with a predicate meaning 'to kill'), lover - beloved ('to love') and the like Interrelated but not necessarily coincident with such statuses are such (again more abstract) relational-semantic notions as 'more/less/least influential participant', 'primarily responsible participant', 'participant initiating an event', 'participant in control of what is happening', 'more/less thoroughly affected (or effected) participant'. Whereas the agent - patient and killer - victim role-type configurations may not vary with a given predicate, the last-mentioned kinds of relations are not uniquely determined by predicates but are to some extent variable, e g the participants playing the roles of agent/killer and of patient/victim with a predicate denoting a relationship of killing may alternatively be regarded as responsible for what happened (compare *A lorry killed five pedestrians/Five pedestrians were killed by a lorry* and *Five pedestrians got killed by a lorry*) The pragmatic statuses may be distinguished as indexical and informational To mention only the most straightforward aspect of indexical-pragmatic structure arguments may not only refer to entities external to the speech-event (third 'persons'), but the speech-event participants themselves, viz speaker and addressee(s), may simultaneously be involved as participants in the event, process, state etc. denoted by the predicate The informational-pragmatic organization of utterances includes statuses such as old/new information (i.e. already/newly activated referent), definiteness (uniquely identifiable referent), focus of attention (topic)/comment, and probably focus of contrast and frame of predication (background/foreground information). These pragmatic distinctions all constitute inherently asymmetric oppositions. arguments with the statuses of speech-event indexicals (speaker/addressee reference), already activated referents, definiteness, focus of attention, and probably frame and focus of contrast, regardless of their semantic relations, are in some sense primary constituents of discourse, arguments

not having one of these statuses are in this respect secondary constituents. Since the various pragmatic statuses need not necessarily coincide, different arguments of a predicate may be primaries in different respects; nevertheless, largely on account of the obviously egocentric, or at least speaker/addressee-centric, bias of human discourse (speaker and addressees are prototypically already activated, definite, the focus of attention), there is a tendency for single arguments to assume the status of pragmatic primaries in general. Now, grammatical rules and regularities may be stated with reference to all these argument statuses including all possible combinations of semantic and pragmatic statuses, and the (empirical) question then is under which circumstances an additional structural level, that of genuinely grammatical relations such as subject and direct and indirect objects, has to be assumed. Of course there is no logical or empirical necessity to recognize such additional relational concepts, but it seems that for certain languages at least some grammatical rules and regularities can be formulated more perspicuously in terms of grammatical relations. These, even if they can be shown to be empirically necessary, have to be defined in terms of the patterning of relational-semantic and pragmatic statuses rather than be considered basic and undefined categories only coincidentally related to semantic roles and pragmatic primaries.

There is no need to recognize subjects if the choices of semantic-role configurations and the assignment of pragmatic primehood statuses according to the requirements of discourse are in principle independent of one another, i.e. if the choice of a role configuration associated with a particular predicate has no implications, other than perhaps statistical ones (experiencers and probably agents are frequently speech-event indexicals and the focus of attention etc.), for the distribution of pragmatic statuses among the referents in these roles. A primary grammatical relation, or subject, has to be recognized only if pragmatic primehood is integrated with relational-semantic structures in a particular way. there must be preferences for the distribution of pragmatic primehood statuses determined by individual predicates. That is, given a particular predicate and the corresponding semantic-role configuration, there must be one argument which is designated as the preferred candidate for the assignment of pragmatic primehood irrespective of discourse considerations, so that the relations holding between argument(s) and predicate are no longer purely semantic but an amalgam of relational-semantic content and pragmatic-primehood privileges. An argument with these lexically predetermined constant pragmatic privileges need not be chosen as actual primary on each occurrence of the respective predicate in discourse. Any assignment of actual primehood to an argument in a semantic role without these lexical privileges is, however, marked vis-à-vis the choice of pragmatic primary in accordance with the lexical preferences stipulated by a

basic predicate. Marked constructions such as passives and antipassives are, accordingly, not found with predicates where all arguments (and even terms not holding a predicate-determined argument relation) are equally eligible for pragmatic primehood statuses. Thus, predicates can be called subjective if their semantic argument roles are not equivalent as to the availability for pragmatic-primehood statuses; and (syntactic) subjects are those arguments which are chosen as actual pragmatic primaries with such predicates,[39] basic or unmarked (lexical) subjects being those arguments with lexical primehood privileges. Languages can also be characterized *in toto* as more or less subjective depending on the proportion of subjective predicates and perhaps also on the number of grammatical rules and regularities referring to subjects rather than to relational-semantic or pragmatic statuses as such.

For the present purpose we need not go into the question of the generalizations underlying the selection of basic subjects in different types of languages (such as the ergative and accusative types). What ought to be mentioned, however, is the possibility of marked subject choice without also employing a marked, non-basic (passive, antipassive) form of the predicate, which seems to be available to different degrees in different subjective languages. There are a great number of predicates in Modern English which nicely illustrate this possibility of second-option subjects.

(24) a. *He opened the door with a key*
b. *A key opened the door (*by him)*
c. *The door opened (*by him)*

(25) a. *He sold the book*
b. *The book sold well*

(26) a. *He hung pictures on the walls*
b. *Pictures were hanging on the walls (*by him)*
c. *The walls were hanging with pictures (*by him)*

(27) a. *In 1979 we witnessed twenty big firms go bankrupt*
b. *1979 witnessed twenty big firms go bankrupt (*by/*to us)*

There are, or at least were, a number of predicates in English which do not qualify as subjective, all of their arguments being equally eligible for pragmatic primehood and the alternative choices of primary, therefore, not being conditional upon semantic or other constraints (cf. e.g. *This dress becomes her/She'd better become her dress if she ..., This theory faces some problems/Some problems face this theory, A minister edified*

them/A minister ... by whom they can edifie (1657), *He dwarfs great Pompey/By him great Pompey dwarfs* (1833)). However, predicates such as *open, sell, hang, witness* would still seem to differ from such non-subjective verbs, insofar as they designate one argument role as lexically preferred pragmatic primary (cf. the unmarked constructions 24a–27a): the alternative choices of primary in conjunction with an unmarked, basic verb-form (cf. the *b*- and *c*-constructions in 24–27) are all subject to more severe semantic and/or configurational constraints than the lexically preferred distribution of primehood statuses In some of these cases, one argument role (the second-option subject) can only be chosen as primary if another argument role (the basic subject) has no overt representation and is at best semantically implied by the predicate (cf. 24b, 26b, 27b), and in some, if not in all, cases the alternative constructions of a basic predicate also differ semantically in that the second-option subject role, unlike the same role in an unmarked basic-subject construction, must be filled by an argument with particular semantic-role properties such as those mentioned above, viz. responsibility or capability (cf. 25b and perhaps 24b,c) and thorough or total involvement (cf. 26c, 27b). Although it seems justifiable, in view of such considerations of semantic and configurational markedness, to regard predicates admitting of second-option subjectivization as still subjective, it ought to be noted that the relational-semantic content of the grammatical relation of subject decreases in specificity to the extent that arguments in various role-relationships (rather than, say, only agents) may assume the subject relation with basic predicates.

Turning to objects, we must again ask under which circumstances we are entitled to recognize direct and indirect objects (and only these will concern us here) as distinct grammatical relations rather than as merely semantically and perhaps pragmatically differentiated argument roles. Objects may be distinguished according to a variety of parameters all of which, independently or in combination, may be reflected in the patterning of grammatical rules and regularities. To mention only some of these potential distinctions, there are separate abstract role types such as patient-objects and recipient- or beneficiary- or also experiencer-objects, provided such distinctions actually correspond to different kinds of participation in situations rather than being dependent on the syntactic rendering of situations (as examples like *She dealt him (recipient?) a blow/She hit him (patient?)* could seem to suggest). There are distinctions of objects according to semantic properties of the respective referents such as animacy (e.g. person-objects vs. thing-objects), or according to informational-pragmatic statuses such as definiteness, or according to some syntactic feature of the respective arguments (such as nominal vs. pronominal character). Objects may also be distinguished according to semantic factors

such as degree of involvement (cf. *I drank the wine* vs. *I drank of the wine*), or - and this is a more comprehensive parameter - according to the degree of semantic transitivity of the clause in which they occur (cf. especially Hopper & Thompson 1980). Clausal transitivity in this sense is a complex property referring to factors such as kind of predicate (action predicates being more transitive than, say, experience or state predicates), number of participant roles, wilfully responsible participation of an agent, thorough affectedness or effectedness of its opposite number, individuated referents, aspect and 'Aktionsart' (perfective aspect and punctual verbs being more transitive than imperfective aspect and non-punctual verbs), affirmation of propositional content, and mode (realis being more transitive than irrealis).

There is a further quite general basis for differentiating types of objects both paradigmatically (i.e. as objects of different single-object clauses) and syntagmatically (i.e. in clauses with two or more objects), and, although not unrelated to some of the other factors just mentioned, this general differentiation of objects according to the degree of opposedness of the arguments of a predicate is in my opinion crucial for an eventual distinction of direct and indirect objects. The arguments of many two-place verbs of activity, for example, almost by necessity refer to participants that are diametrically opposed to one another with regard to the relationship denoted by the predicate. one referent is most actively involved, the other least actively, the latter is most thoroughly affected/effected by what is happening to him, and is thus seen as being completely under the control and influence of the former. Typical instances of polar opposedness are activities such as killing an enemy, destroying a building, building a house, writing a letter, throwing a stone, chasing rabbits, or eating haggis. The successful performance of such activities as digesting or chewing haggis, on the other hand, may already involve the food in a slightly less uninfluential, less 'passive' or inert capacity, at least in comparison with simply eating food. In general, in activities with two participants which are less than diametrically opposed, there again is a most active participant, but its opposite number is more appropriately characterized as less active vis-à-vis the least active participant of the polar opposites, as less completely under the influence and control of the agent. Answering, obeying, following (as opposed to pursuing or persecuting), helping, thanking, meeting (with), avoiding or giving way to someone are typical examples of activities where one would not normally think of the participants as polarly opposed to one another. In the case of syntagmatic differentiation, the relative differences in meaning are the same, viz. 'less active, less completely under the control/influence' vs. 'least active, completely under the control/influence', only the polar and non-polar opposites occur in one and the same participant configuration.

For example, with activities such as sending someone a letter, telling someone a story, stealing someone a horse, giving someone an apple etc., the speaker has to make a choice as to which of the two object-referents present is to be rendered as the polar opposite of the most active participant. Although in most situations it could seem that this will not be the person involved as addressee, recipient, beneficiary, or victim, this is by no means a foregone conclusion: in principle, either choice appears to be possible in such cases, given the appropriate circumstances (e.g. if an addressee is literally flooded with letters, he rather than the letters could appropriately be represented as the polar opposite of the sender(s), as most completely under the influence of his/their activity). Now, presupposing that objects can be differentiated in this manner in a particular language, what are the additional conditions under which polar-opposite and nonpolar-opposite objects may acquire the grammatical status of direct and indirect objects?

Although we have so far avoided the notion of government, this is not to say that predicates can be entirely disregarded as determinants of the (semantic/pragmatic) status of objects; the suggestion merely is that predicates alone do not, or do not necessarily, determine this status. I have mentioned examples of predicates implying argument relationships which are almost by necessity and unalterably either of the polar or of the nonpolar opposedness type; but these object statuses in such cases are not due to arbitrary lexical properties of the predicates: the relational meanings encoded by such predicates simply are compatible only with polarly or with non-polarly opposed arguments. However, predicates can also encode relational meanings which do not uniquely require the argument relationships compatible with them to be of the polar or of the nonpolar opposedness type. The lexical meaning of the German verb *rufen*, for example, is such that its two arguments may either be polar or nonpolar opposites, and it would therefore be inappropriate to assume that this verb inherently governs a particular type of object:

(28) polar. *jemanden rufen* 'to call/summon someone (acc.)' – non-polar: *jemandem rufen* 'to call/shout to someone (dat.)'

As far as German is concerned, this is clearly the minority pattern: most German verbs, unlike *rufen*, lexically stipulate that their objects can only be of one particular type, and in this sense they can be said to govern polar-opposite and nonpolar-opposite objects, which are encoded with the accusative and dative respectively (just as in the case of non-governed objects of the appropriate semantic type). There frequently are pairs of verbs with a common basic meaning but differing with respect to the lexical determination of their objects as polar or non-polar opposites. The

members of such verb pairs may be formally unrelated (cf. 29a), but more often they turn out to be morphologically transparent variants involving verb prefixes, which were seen to be employed also for purposes of verb-object agreement and of aspectual or 'Aktionsart' differentiation (cf. 29b, c)

(29) a. *jemanden/etwas unterstützen* 'to support someone/something (acc)' - *jemandem helfen* 'to help/give help to s.o. (dat)', *jemanden/etwas meiden* 'to avoid s.o./s.th. (acc.)' - *jemandem/etwas ausweichen* 'to give way to s.o./s.th., parry s.th. (dat.)'

b. *jemanden/etwas bedienen* 'to serve/wait on/attend on s.o. (acc.), operate/manipulate/handle s.th. (acc.)' - *jemandem dienen* 'to serve/be a servant to/perform duties for/be of service to s.o. (dat.)', *jemanden/etwas verfolgen* 'to pursue/persecute/prosecute/trace/trail s.o./s.th. (acc.)' - *jemandem folgen* 'to follow/succeed/obey s.o. (dat.)'

c. *jemandem etwas liefern* 'to deliver s.th. (acc.) to s.o. (dat.)' - *jemanden mit etwas beliefern* 'to supply s.o. (acc.) with s.th.', *jemandem etwas rauben* 'to rob s.th. (acc.) from s.o. (dat.)' - *jemanden um etwas berauben* 'to rob s.o. (acc.) of s.th.'

The English translations are intended to bring out the semantic differences between the members of such pairs; but of course in order fully to justify the contention that the essential distinctive feature is that accusative objects are invariably more polar opposites than dative objects, a much closer analysis of these verbs would be required, focusing attention in particular on their typical contexts (including the kinds of nominals they typically occur with, etc.). But this illustration must suffice for the present purpose, and we can now attempt to characterize the grammatical relations of direct and indirect object: given that a language differentiates objects as polar and non-polar opposites, an argument is in the grammatical relation of direct object if it is predetermined by the predicate to be a polar opposite, and in that of indirect object if the predicate requires it to assume the status of a non-polar opposite.

It is also impossible here to discuss in detail the generalizations potentially underlying the selection of direct and indirect objects. Although these selections always depend on the meaning of individual predicates (e.g with a predicate meaning roughly 'use-for-killing' the instrument is a much better candidate for the status of polar opposite than with a predicate like English *to kill*), there are no doubt certain factors, such as 'referent undergoing a change of state or location' or 'total involvement', which in general increase the likelihood of an argument being chosen as polar opposite/direct object. For instance, the relationship between a person

and the place where he happens to live is not normally regarded as one of polar opposedness; but if the relationship of 'living-in' holds between a set of persons and the domicile they fully occupy, it is much likelier to count as one of polar opposites. Given the contextual variability of such factors increasing the degree of opposedness of an argument configuration, it seems reasonable to assume, just as in the case of predicate-determined subject selection, that with particular predicates the statuses of polar and non-polar opposite may not necessarily be assigned to individual arguments once and for all, but may be assignable to different arguments at different times – to the arguments, that is, which under the given circumstances are the best candidates for the statuses of polar and non-polar opposite (e.g. which denote the referents undergoing a change of state/location or being totally involved). This variability may be reminiscent of the situation where we have a purely semantic differentiation of types of objects independent in principle of the predicate, but it is in fact not like this situation as long as we can draw a distinction between unmarked (basic, lexical) and marked object selection. If a language is grammatically object-differentiating, its predicates cannot be neutral with regard to the opposedness value of their arguments. They would not be neutral, however, if they designated particular arguments merely as lexically preferred rather than as absolutely obligatory polar or non-polar opposites, allowing for the possibility that other arguments not so preferred may assume these statuses in their stead in a marked construction, provided they have the appropriate semantic properties (e.g. change of state/location, total involvement). Since the choices of direct and indirect object would then still be governed by predicates, on a preferential rather than categorical basis, we could expect the markedness of a construction, i.e. the choice of an argument as direct/indirect object which is not the lexically preferred candidate for the respective relations, to be registered by the predicate. If we recall the German examples presented above, where arguments are alternatively construed as direct or indirect objects, we notice that in many cases (29b, c) there are not entirely different verbs corresponding to the choices of direct/indirect object but rather basic and morphologically marked, i.e. prefixed, verbs.

After this very summary account of two fundamental parameters of relational typology, viz. subjectivity and (direct/indirect) object-differentiation, the next question to ask is whether English and German indeed differ with respect to these typological criteria. As to subjectivity, English and German both have grammatical subjects, but English much more liberally admits what we have called above second-option subjects. Where English subjective predicates can be freely construed with second-option subjects without any formal verb-marking (cf. 24–27), the corresponding German verbs often appear in a marked (pseudo-reflexive) form (compare

with 25b. *Das Buch verkaufte sich gut* lit. 'the book sold itself well'), or an entirely different verb or a modal construction has to be chosen (compare *Five cars park in this garage/This garage parks five cars* with *Fünf Wagen parken in dieser Garage/Diese Garage fasst (*parkt) fünf Wagen* 'this garage holds five cars' or *In dieser Garage können fünf Wagen parken* 'in this garage may park five cars'), or the second-option subjectivization is at best marginally acceptable (compare with 27b: *?1979 sah zwanzig grosse Firmen pleite gehen*). Thus, compared with German, the grammatical subject relation in English is semantically not very specific but instead approaches what V Mathesius has called 'subjects with a purely thematic function'.[40]

As to object-differentiation, since German examples were used to illustrate this typological parameter, what remains to be determined is whether English predicates can likewise be claimed to govern direct and/or indirect objects That this is no easy task as far as verbs like *give, sell, send,* etc. are concerned, ought to be obvious considering the perennial controversies about the 'correct' relational analysis of the two kinds of constructions exemplified in (30):

(30) a. *They sent letters to the President*
b *They sent the President letters*

Different people have held quite different views about the relational status of the prepositional phrase in (30a) (indirect object or non-direct, oblique object), the immediately postverbal noun-phrase in (30b) (indirect object or direct object or none of these), and the sentence-final bare noun-phrase in (30b) (direct object or non-direct, oblique object or none of these)[41] – which suggests that there must be considerable terminological or conceptual confusion, or else it would be difficult to understand this profusion of seemingly contradictory analyses of what looks like a relatively straightforward set of data Although I sympathize with those who deny that there are any rules in the grammar of English which have to refer to a non-subject argument in constructions like (30) in terms of indirect-objecthood, this issue is too complex to be settled in this paper. But what ought to be pointed out here is that if verbs like *send* should eventually turn out to govern an indirect object, they would still differ from the translation-equivalent German verbs, many of which have a three-way contrast in the construction of the argument which is potentially analysable as an indirect object, rather than only a two-way contrast as in English.[42]

(31) a. *Sie schickten Briefe an den Präsidenten* (=30a)
b *Sie schickten dem Präsidenten Briefe* (=30b, with dative object)
c *Sie beschickten den Präsidenten mit Briefen* 'They *be*-sent the President (acc) with letters'

In (31b)-(31c) we have clearly a contrast between a basic verb governing a nonpolar-opposite indirect object (in addition to a polar-opposite direct object) and a marked verb with the same argument now in polar opposition (thoroughly affected) to the subject. The two-way contrast found in English, on the other hand, does not seem to involve such variation of an object as to its degree of opposedness,[43] but rather seems to be entirely a matter of variable informational-pragmatic status. But setting aside the question of syntagmatic object-differentiation in English, it is much less controversial to conclude that English lacks paradigmatic object-differentiation, or at least has considerably fewer two-place verbs potentially analysable as governing an indirect object than German. One might wish to claim that verbs such as *belong (to), listen (to), object (to), reply (to), agree (to/with)* indeed govern an object which is non-polarly opposed to the subject. Even here it could be argued, however, that these objects after all do not behave any differently than *bona fide* direct objects, on account of the 'preposition' marking these objects being (re-)analysed as proper constituent part of the verbs. In other cases objects do seem to be encoded differently depending on their status as polar or non-polar opposites: *He swam across the Channel - He swam the Channel, He fled from the city - He fled the city,* etc.; but note that it is not the verbs per se which govern one (polar) or the other (non-polar) status of the objects. It is true, there are some verbs which are only compatible with one or the other object-status (cf. *The Eskimos live in the Arctic/The Eskimos inhabit the Arctic*), but on the whole this situation is again more likely to be found in German (cf. *Er schwamm über den Kanal/*Er schwamm den Kanal/Er überschwamm den Kanal* 'he swam (across) the Channel', *Er floh aus der Stadt/Er entfloh der Stadt*, but also *Er floh die Stadt* 'he fled (from) the city').

In general there is thus almost no lexical basis for claiming that English has grammaticalized (i.e. lexicalized) a paradigmatic object-differentiation as we find it in German. Rather we may recognize at best one uniform grammatical core-object relation in two-argument configurations, and on account of the lack of a systemic opposition with an indirect object, this general object relation is semantically much less specific than the direct-object relation in German: an argument need not be in a relationship of polar opposedness in order to be eligible for objecthood. And this, I think, has implications even for the primary grammatical relation of subject. Recall that we observed above that the availability of second-option subjects with many predicates is much more restricted in German than in English. We can now see that this seeming difference in the grammar of subjects is presumably related to differences in the semantic constraints on the selection of direct objects. Here are a few examples of 'secondary' subjectivization in English without a German equivalent.[44]

(32) a. *The car burst a tyre* - **Der Wagen (zer-)platzte einen Reifen* (instead: *Dem Wagen (dat.) platzte ein Reifen (nom.)*)
b. *The roof was leaking water* - **Das Dach tropfte Wasser* (instead: *Vom Dach tropfte Wasser* 'from the roof was leaking water')
c. *This caravan sleeps five persons* - **Dieser Wohnwagen schläft fünf Leute* (instead: *In diesem Wohnwagen können fünf Leute schlafen* 'in this caravan may sleep five persons' or *Dieser Wohnwagen fasst fünf Leute* 'this caravan holds five persons')
d. *The latest edition of the bible has added a chapter* - **Die jüngste Ausgabe der Bibel hat ein Kapitel hinzugefügt* (instead: *Der jüngsten Ausgabe wurde ein Kapitel hinzugefügt* 'to the latest edition was added a chapter')
e. *Keegan's second goal ended the match* - **Keegans zweites Tor beendete das Spiel*[45] (instead: *Mit Keegans zweitem Tor endete das Spiel* 'with Keegan's second goal the match ended')

It seems that the absence of such second-option subject constructions in German is not entirely due to lexical constraints on subject selection per se, but is due to lexical constraints on direct-object selection: the predicates concerned (or, where appropriate, their non-basic variants, such as *zerplatzen* (32a), *vertropfen* (32b) *beenden* (32e)) require polar opposites as direct objects, and the direct objects which would correspond to those found in the English second-option subject constructions, where direct-objecthood is not restricted to polar opposites, simply do not qualify for this status for semantic reasons. In conclusion, I think it is safe to assume that English and German differ significantly with respect to object-differentiation unlike German, English almost certainly lacks (at least paradigmatically differentiated) indirect objects, and correspondingly has a (direct) object relation lacking in semantic specificity.

This result, then, clearly suggests that the existence, or at least the frequency, of semantic agreement between verbs and (direct) objects[46] is not the only difference between English and German as far as the relations between predicates and their arguments are concerned: we find more agreement in the language, German, where the grammatical differentiation of direct and indirect objects is certainly better developed and where the grammatical relation of subject is also semantically more specific. Too little is known really about the phenomena at issue, in particular about semantic agreement, in a sufficiently wide range of languages to be able to conclude with some degree of certainty that this co-occurrence of verb-object agreement and object-differentiation (and perhaps also semantic specificity of subject) ought to be elevated to the status of a universally valid typological correlation. Pending further empirical examination of this typological hypothesis, it nevertheless seems quite reasonable

to suspect that this correlation will eventually turn out to be typologically significant and that the differences found between English and German, therefore, are more than language-particular accidents.

The correlation suggested here should indeed not be too surprising, in view of our emphasis on the lexical determinants of relational typology. I have argued that it is a matter of the lexical entries of predicates whether arguments can be said to bear the grammatical relations of subject and of direct and indirect object, subjectivity and object-differentiation thus have their roots in the meaning of predicates. The grammatical relation of direct object, where it can be defined with particular predicates, has a specific semantic content ('polar opposedness') by virtue of being in contrast with the likewise semantically specific indirect-object relation ('non-polar opposedness'), and of course with further non-direct or oblique relations.

The important point is that in direct/indirect-object differentiating languages there are thus strong semantic constraints on the choice of direct objects. only arguments in relationships of polar opposedness qualify as candidates for direct-objecthood. On the other hand, if the semantic differentiation of degrees of opposedness is not systematically relevant in a language, or if it is not lexically governed by individual predicates, arguments can assume the core object relation (which may still be labelled 'direct' for the purpose of contrasting it with non-direct, oblique, less verb-dependent objects) even if they are not in a relationship of polar opposedness. In the absence of a systemic contrast between direct- and indirect-objecthood the semantic content of this kind of 'direct' object relation is correspondingly less specific. But why should predicates taking 'direct' objects of this latter kind be rather unlikely to agree semantically with them, and why should predicates governing direct and indirect objects tend to agree with these governed objects, at least with the direct ones (under the conditions outlined in §3 1)? The answer could be that governing polar-opposite (direct-object) and non-polar-opposite (indirect-object) arguments and requiring (direct-)object arguments to be members of particular semantic classes ultimately are not entirely different properties of predicates. If predicates actually govern direct and indirect objects, they indeed require the respective arguments to be of a particular kind. arguments, and the relationships among them, must meet certain semantic conditions in order to qualify as polar or non-polar opposites.

This classificational aspect of object-government is particularly obvious with a factor that has often been regarded as essential for the differentiation of direct and indirect objects, viz. animacy. Although it would be wrong to simply define direct and indirect objects as thing- and person-objects respectively, animacy plays a considerable role in

determining the degree of opposedness of an argument configuration: animate beings, and especially persons, are the prototypical instances of non-polar opposites, whereas inanimates (things) are more easily conceived of as being under the influence and control of an agent and as least actively involved in activities, and thus are prototypical polar opposites. In general, with predicates whose lexical meaning is specific enough for them to be able to govern semantically specific kinds of objects, the predicate-object syntagm is thus semantically more cohesive than in the case of predicates whose valencies may be filled irrespective of finer semantic properties of arguments and argument relationships. And even if nominal classes are involved which are not, or not directly, exploited for the purpose of object-differentiation, the classificational agreement of predicates and object arguments would seem to be another manifestation of this same semantic coherence of the parts of verb-object syntagms, where the construction of cohesive wholes is oriented towards, and lexically controlled by, verbs. It may be appropriate, therefore, to characterize languages as verb-centred if relational clause structures are fundamentally determined by verbs, with verbal constituents in fact incorporating large parts of the relational frame of clauses including at least partial categorizations of the referents in relation. Object-differentiation and classificational agreement thus attest to a high degree of verb-centredness.

Interestingly, overt systems of nominal classification associated with the verb group have been claimed to be particularly common in languages of the 'active' (rather than accusative or ergative) type, whose hallmark is the differential coding of intransitive arguments depending on their active/dynamic or inactive/static involvement, as e g in 'He/Him fell down', meaning 'he threw himself down' or 'he fell down inadvertently' (cf. Klimov 1977). In §3.1 Athapascan, Arawakan, Iroquoian and Georgian were mentioned as languages or language families exhibiting such classification or functionally equivalent noun incorporation; and precisely these languages, families, or the stocks or phyla containing them (Na-Dene and Equatorial in the cases of Athapascan and Arawakan respectively) are among the favourite, if not always uncontroversial, examples of the active type If the active type were defined exhaustively in terms of the intransitive alternation just illustrated, it would deserve but little interest in the development of holistic typologies. There are indications, however, that this intransitive alternation is merely a diagnostic, pointing to a more fundamental typological determinant in fact all relationships between predicates and arguments that are morphosyntactically recognized in active-type languages appear to be semantically very specific, even more so than in subjective and object-differentiating languages, with semantically relatively opaque grammatical relations such as subject and core object,

à la English, playing no significant role. To the extent that this characterization proves correct, the pervasively semantic nature of relational clause structures would, thus, be a trait active-type languages share with a language such as German,[47] which otherwise prefers accusative patterns although it also shows traces of the active-style intransitive alternation (*Ich laufe/protestiere/hungere* etc - *Mich friert/hungert* etc. 'I (nom.) run/disagree/don't eat - I (acc.) am cold/hungry'). Certainly it is not implausible to expect that semantic specificity of relations might ultimately turn out to be more crucial than grammatical object-differentiation (and subjectivity) per se as a common trait of all languages that may be described as verb-centred· the more relational and referential meaning components the verbal group incorporates, the narrower is the range of its applicability, hence the basis for generalizations of semantically unspecific relations from semantically diverse relations contracted by a verb in its various occurrences.

Active-type languages are not noted for an abundance of case marking. if not entirely innocent of nominal cases, they typically appear to get along with no more than two cases, active and inactive (cf. again Klimov 1977). The present notion of verb-centredness may in fact provide a functional rationale for the scarcity of relational coding directly associated with the expressions holding the relations to be encoded, viz. the arguments of a predicate. If the functional goal is to avoid relational ambiguities, and if predicates incorporate at least partial categorizations of the referents of their arguments, as they typically do in verb-centred languages, further encoding of the relations of arguments on the arguments themselves is actually superfluous from a functional point of view. For example, encountering a predicate meaning 'to kill a human victim', rather than simply and more generally 'to kill', in construction with two arguments one of which refers to a person and the other to a wild animal, one can unambiguously compute the meaning of the whole clause ('the wild animal killed the person' rather than 'the person killed the wild animal') without the assistance of further indications of the grammatical relations or semantic roles of either argument. On the other hand, the case of German demonstrates that some degree of verb-centredness (manifested in predicate-governed object-differentiation, semantically relatively specific grammatical relations, and an inclination to verb-incorporated noun classification) is not absolutely incompatible with relational coding on arguments themselves either. Rather than going on to speculate that this German state of affairs, with semantically relatively specific relational coding distributed among verbs and their arguments, might reflect an uncertainty of typological allegiance, deviating from the pure (or ideal) type characterized by semantic and morphosyntactic agreement marking gravitating towards predicates, I prefer to wind up with a largely un-

annotated list of further differences between German and English. All of them seem to me to deserve to be taken into account as potential correlates of the high or low incidence of semantic verb-object agreement, or of the more fundamental typological parameter implying the agreement differences.

First there is the 'indirect' passive (*He was sent many letters*), which construction is rather untypical for languages with semantically specific object relations such as German (**Er wurde viele Briefe geschrieben*). In these latter languages object distinctions tend not to be neutralized in the passive, by means of employing differential case marking (*Ihm wurden viele Briefe geschrieben* 'him were written many letters'), differential verb marking in direct and indirect passives (*Er bekam viele Briefe geschrieben* 'he got written many letters'), or resumptive pronouns (approximately as in 'He had many letters sent to him').[48] Second, Raising-to-Subject/Object is more common if the relations lower-clause arguments are to be raised to are semantically not very specific (e.g. *Bloggs is likely to come/*Bloggs ist wahrscheinlich zu kommen, I expect him to come/*Ich erwarte ihn (zu kommen).* Instead of argument raising one tends to find lowering of attitudinal, epistemic etc higher-clause predicates to the rank of non-subordinating adverbs, particles or parentheticals. Third, there appear to be stronger constraints on the movement of core arguments out of and/or into finite clauses if the language has semantically specific verb-governed relations (cf. *The hat which I believe that he is always wearing is red/*Der Hut, den ich glaube, dass er stets trägt, ist rot*), the closest analogue one tends to get to such argument shifts are constructions with the argument concerned in a peripheral relation in the superordinate clause and with a resumptive pronoun in the subordinate clause (*Der Hut, von dem ich glaube, dass er ihn stets trägt, ist rot* 'the hat of which I believe that he is always wearing it is red'). Fourth, pronominal objects appear to delete more easily, under pragmatic or syntactic control, if the language has a semantically unspecific core object relation (cf. *He knows that the earth is flat but she doesn't know (it)/Er weiss, dass die Erde flach ist, aber sie weiss *(es) nicht, I bet he's forgotten/Ich wette, er hat ??(es/darauf) vergessen*) Fifth, if two-place predicates are used with only one argument, i.e. intransitively, languages with semantically specific grammatical relations tend to require pro-forms, which often resemble reflexives (cf. *The door opened/Die Tür öffnete *(sich), He and she met/Er und sie trafen *(sich), He shaved/Er rasierte *(sich), He behaved/Er benahm *(sich)*[49]) Sixth, instrumental objects tend to be less common in languages with semantically specific object relations - but this may simply be one manifestation of the polar-opposedness constraint on subject/direct-object configurations (cf *to wag one's tail* vs. *mit dem Schwanz wedeln* 'wag with the tail', *She played the grand piano/*Sie spielte (den) Flügel*

(...auf dem Flügel 'on the grand piano'); *This was the first time she played on a piano/a piano/piano* vs. *Sie spielte zum erstenmal auf einem Klavier/*ein Klavier/Klavier*). And, for the time being finally, if the core grammatical relations of a language are semantically specific, their encoding seems likelier to be synthetic, and prototypically perhaps polysynthetic, rather than analytic Thus, the semantically rather unspecific subject and object relations in English are encoded without much morphological assistance, whereas German employs both nominal (case) as well as verbal (prefix) morphology to take care of its subjects and objects.

As most of these differences involve rules or regularities governed by individual predicates or classes of predicates, it is not so surprising that they should correlate with subjectivity and object-differentiation, or with the semantic specificity of grammatical relations these latter properties themselves are contingent on predicate conceptualizations. However plausible they are in principle, all of these correlations, and especially those linking traditional morphological typology to more fundamental syntactic and lexical typologies (as suggested in our last correlation), still need to be empirically examined in a much wider range of languages, before we can rule out the possibility that we are faced after all with an arbitrary set of minor and accidental differences between German and English, rather than with a system "où tout se tient".[50]

Fachgruppe Sprachwissenschaft
Universität Konstanz
Postfach 5560
D-7750 Konstanz 1
West Germany

NOTES

1 A bolder generalization would be to associate spatial categories with arguments, and temporal categories with predicates in general Probably this is what Leisi's (1975: 58) distinction between static and dynamic properties ultimately amounts to

2 Compare Sapir & Swadesh's interpretation with Lyons' (1968: 281) assertion that number is necessarily a category of the noun

3 Cf e g Friedrich (1970) for some discussion of inherent vs arbitrary classification, or Viehweger et al (1977: 353) on 'semic' vs 'sememic' compatibility, or also Coseriu's (1967) distinction of "Affinität" and "Selektion" (arbitrary) vs "Implikation" (inherent) I agree with the critics of McCawley's (1971) view that there are no lexical items with identical meanings but differing only in selection restrictions, although I recognize that it is often difficult to motivate one's decision one way or the other. See also Lehrer (1974: 180ff) on these issues

4 Although the distinction may to some extent be a matter of the integration of such categories into a system of obligatorily signalling syntagmatic relatedness, the way particular categories are utilized would still seem to depend at least partly on their conceptual structure (cf Plank 1981: ch 2)

5 Notice, incidentally, that this is not the original meaning of this verb in Germanic; it acquired this specific meaning after it had previously denoted a more general kind of movement

6 But I wonder whether one should also be prepared to exclude in principle that *ride/reiten* could ever be restricted, for instance, to subjects denoting horse-women, or to subjects denoting a whole group of riders

7 This universally ergative pattern has been recognized e g. by Gak (1972) and Moravcsik (1978, 1984) Although dealing specifically with noun incorporation, Mardirussian (1975: 387) also mentions the possibility that such patterns have a semantic rather than genuinely syntactic rationale

8 Cf Plank (1980b), in particular on ergative patterning in word formation Concerning explanations, Leisi (1975: 65) speculates that transitive subjects (agents), referring almost exclusively to humans and perhaps animals, are less likely than are objects to vary a lot in material, shape, and weight, and that objects (patients) therefore play a more crucial role in semantic verb-agreement Cf also §3 1

9 Cf Ludwig (1979), who, drawing on notions suggested by Labov and Waletzky, argues that the constituent parts 'complication' and 'resolution' are necessary for a narrative to count as an *Erzählung*; if this is correct, my 'creative effort' should be interpreted accordingly Some of Taylor's (1980) remarks on telling vs saying are also relevant here

10 Although a noun class 'artifacts' would properly delimit the set of nouns likely to be used as effected objects Human, or animate, nouns are likely to occur as effected objects, except with subjects referring to some superhuman creator and the appropriate verbs of (pro)creation (on problems attending these see Plank 1982)

11 Cf Paul (1959: 239ff) for an almost exhaustive list of German verbs whose objects may be affected or effected

12 Interestingly, my German and English informants could not make up their mind about which verb would be most appropriate with *monocle/Monokel to put on/aufsetzen* was usually rejected, which may point to a different categorial status of glasses and monocles One informant tells me that the verb to use with *monocle* is *insert*

13 If a *Schal* is not exactly tied around the neck, it is rather difficult to find an appropirate verb; most informants did not accept *einen Schal anziehen Pace* Stern (1968: 380), *anziehen* is not used with ties and belts, unless they are pre-tied or prefastened so that one can actually slip on these appliances

14 Accordingly one ought to be able to use *anziehen* with *Muff* 'muff'; but this is another one of the few garments (or is it not considered a garment?) where German seems to lack appropriate verbs of putting on and taking off

15. More detailed accounts of Japanese dressing verbs may be found in McCawley (1978), Backhouse (1981), and Kameyama (1983)

16 Cf also the corresponding intransitive verbs *stehen/sitzen/liegen*, of which at least *sitzen* would seem even more specific than its causative counterpart (cf with (9b): ??*Ein Stein sitzt auf dem anderen*)

17 Or of course the slightly more technical *erlegen*, which is also restricted to animals but does not necessarily imply shooting (at least for many native speakers)

18 In English, incidentally, *die* and *perish* are used with plants as well, although there also are specifically botanical verbs German *absterben* also has interesting agreement requirements: it seems to be used with plants, limbs, and perhaps certain lower animals

19 Nevertheless, there are similar extended meanings in German and English pertaining to the mental sphere: *crack-brained, crackers - beknackt, Knacks*

20 Cf also Leisi (1975: 64), who ignores, however, the difference between *brechen* and *zerbrechen*

21 *Kinder erzeugen* used to be possible, but is now definitely obsolete

22 There are indeed further uses of *herstellen* where *produce* would be inappropriate, cf. *eine Verbundung/das Gleichgewicht herstellen* 'to establish a connection/the equilibrium'

23. At least not in Standard German In Austrian German, *erzeugen* seems to be used more liberally

24. *Sperren* again seems to be used more liberally in Austrian German; *den Laden sperren* 'to close the shop (temporarily)' is the Austrian equivalent of Standard German *den Laden schliessen*

25 This is of course reminiscent of dual classifications such as those considered in earlier sections (cf *partridge* game/pet - *schiessen/erschiessen*)

26 On these cf Leisi (1975: 65,83), Lehrer (1974), Newman (1975), to cite but a few pertinent references

27 If the meaning of *poach,* however, is as given in the *Advanced Learner's Dictionary,* viz 'cook by cracking the shell and dropping the contents into boiling water', it is not surprising that this verb is not applicable to vegetables

28 This means that *spurt flames/Flammen spucken,* for example, is to be excluded as non-literal Some of these decisions are surely debatable, but I do not think this affects the point being made here

29 I thus do not agree with Leisi (1975: 100f), who holds that *werfen,* unlike *throw,* is necessarily "akt-bedingt"; for throwing dice on the table, using a dicebox, *werfen* seems to me perfectly appropriate Notice, incidentally, that in spite of the complex nominal *Wasserwerfer* 'water-cannon' (lit. 'water-thrower'), **Wasser werfen* is definitely impossible

30 *Eine Träne auf den Brief fallen lassen* 'to drop a tear on the letter' looks like a counterexample since tears are obviously +liquid That a tear is an individuated unit of liquid cannot be the explanation because *einen Tropfen Wasser fallen lassen* 'to drop a drop of water .' is still odd

31 There were also no verbs of possession among those with object-agreement, which may be an accidental gap in our data In general, verbs of possession may shade off into the domain of activity as well as into the domain of experience and existence, and since most languages have more than one way of expressing possessor-possession relationships, it seems reasonable to expect that different kinds of possessions may require different kinds of expression (e g different possessive verbs)

32 Cf the introduction to §2 concerning other patterns (idiom formation, derivation, noun incorporation) which may also have to be stated in semantic terms

33 On semantic transitivity see especially Hopper & Thompson (1980), and Plank (1980a: §2 2) for problems this conception encounters with grammatical object-differentiation

34 Probably semantic agreement in other types of constructions is subject to similar restrictions

35 In fact noun classifiers are on record which distinguish specific literary forms or forms of oral or written presentation (cf Adams & Conklin 1973) in a manner that is reminiscent of the *sagen/erzählen* distinction

36 An affinity between aspect (or 'Aktionsart') and object-agreement-like encoding is by no means a German idiosyncrasy. Since the Athapascan languages have been mentioned as an example of a particular kind of noun-classifier languages, it is worth mentioning that classificatory verb stems in Navajo have been assumed to be actually bi-morphemic, consisting of an aspectual and a classificatory element (cf

Landar 1965) And the Georgian verb prefixes also attest to the naturalness of the association of aspectual and classificational functions

37. Recall what was said above about the relative semantic coherence of verbs of activity and their patient-objects

38 My views on subjects and objects are presented in more detail, including comparisons to other views, in Plank (1979, 1980a, 1982, 1983, 1985) Fuller treatment of the attendant typological correlations has to be deferred to a forthcoming monograph

39 Being a subject can then still be a matter of degree, depending on the number of pragmatic-primary statuses assigned to an argument

40. Cf. Mathesius (1929, 1975) Nevertheless, subject in English is still not a purely thematic notion according to our conception of subjectivity; if it were, the notion of a grammatical subject would actually be superfluous, and all pertinent regularities would have to be stated with reference to the informational-pragmatic status of theme (old information, focus of attention)

41 To mention only some recent studies reaching quite different conclusions: Perlmutter & Postal (1977), J. Anderson (1977, 1978, 1984), DeArmond (1978), Ziv & Sheintuch (1979)

42. Cf also the examples in (29c); the third, prepositional, alternative in these cases is: *etwas an jemanden liefern, etwas von jemandem rauben*

43 It does, however, in the case of constructional alternatives such as *load hay on the wagon/load the wagon with hay*

44 For detailed empirical analysis of these and other pertinent cases see Rohdenburg (1974)

45 This example is not strictly ungrammatical, but its only interpretation is that Keegan's second goal was somehow responsible for the end of the match, rather than merely coinciding with it - and this is an instance of polar opposedness!

46 We have not considered the possibility of semantic agreement with indirect objects Since only particular classes of nominals are suitable for this relation anyway (essentially humans), I doubt that there will ever be much agreement variability with predicates governing indirect objects

47 Aronson (1977) tries to associate Modern English, as opposed to Old English, with languages of the active type, on account of the common lack of a classification of verbs as transitive or intransitive With regard to many other typologically significant features, including classificational agreement between predicates and arguments, this characterization of Modern English seems to me rather unfortunate But then Aronson modifies the traditional concept of the active type (due especially to Klimov 1977) considerably, so that his alignment of English with this type may not really mean much

48 Cf Givón (1979: ch 4) for a similar interpretation of such passive variants

49 It is perhaps somewhat inappropriate to include absolute reflexives among two-place predicates, but the point is that translation-equivalent verbs of this kind tend to differ, just like the other verbs mentioned, as to whether they require an overt 'reflexive' marker Note also that the correlation in the case of object pro-forms may primarily be with subjectivity rather than with object-differentiation as such.

50 This paper, based on Chapter 3 of my M Litt thesis (Plank 1980a), dates from August 1980, and underwent some minor cosmetic surgery in September 1984 Over the last five years, the manuscript has been used for numerous oral presentations and has been circulated among various colleagues, by myself and others Some of the reactions to it were sympathetic and/or helpful (those of Johanna Nichols, Edith Moravcsik and the editor and referee of this Journal, for example), others were neither

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