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Metonymy as a motivating factor in the system of adjective complementation in English

The present paper is concerned with demonstrating how various types of metonymic mappings can help motivate (i) the morphosyntactic form and (ii) the semantic content of complements of certain sets of English predicative adjectives, thus eliminating a number of apparent idiosyncracies in the complementation system of English adjectives. Two case studies, one on a marginal possessive construction and the other on predications exhibiting MANNER–FOR–ACTIVITY metonymy, are adduced to illustrate some morphosyntactic aspects, while a case study on the predicatively used adjective *compatible*, provides evidence for the latter aspect of motivation.

1. Adjective complementation in English between arbitrariness and motivation

One of the questions most likely to crop up at the very beginning of a systematic description of the complementation system of English adjectives is certainly the following: Why do adjectives take the set of complements they take and not some other? The question could more precisely be phrased as: What determines the number of complements and what makes the complements assume the particular form they exhibit? Why is, e. g., *keen*, found in present–day English with complements that are morphosyntactically realized as prepositional phrases (introduced by *about*, *on*, or *for*), or as *to*–infinitives, but not with complements taking the form of finite *that* clauses?

(1)   a. Curious, he's so **keen about** money.
      b. He was rather **keen on** the theatre.
      c. Although Iraq still has some of the makings of nuclear, chemical and biological weapons, France (like Russia and China on the

Security Council) is **keen for** business as usual with Saddam Hussein.

d. For some reason he was very **keen for** me to believe that about the chain.

Taking a historical perspective, we note that the range of prepositions introducing complements of *keen* is now much more limited than in earlier periods, but again find no attested cases of finite clauses introduced by *that*, there are only nonfinite *to*–infinitive clauses, or *–ing* clauses introduced by one of the above prepositions. Cf. the following set of data from the OED:

(2)   a. 1523 She wyl not holde to it, excepte she be **kene of** horsyng.
      b. 1711 Sir Roger is so **keen at** this Sport.
      c. 1714 Men were not so **keen upon** coming in themselves.
      d. 1768 Still **keen to** listen and to pry.
      e. 1855 Religious professors are just as **keen about** money.
      f. 1874 Who is more **keen for** gain than the modern Jew?
      g. 1889 Is there anything you are particularly **keen on**?

Similarly, we might ask ourselves why *jealous* takes a complement introduced by *of*, and not *on*, as might be expected if we compare it with its counterparts in other languages:

(3)   a. Livia, who was **jealous of** Julia's good looks...
      b. **Of** women, then, Livia had no cause to be **jealous**,...
(4)   Croatian: ljubomoran **na** ('on') nekoga
      German: eifersüchtig **auf** ('on') jemanden
      Hungarian: féltékény valaki**re** ('on')

It would be too optimistic, if not linguistically unfashionable or naïve, to expect to always (if ever) arrive at explicit and comprehensive answers to questions like these. For one thing, modern structural linguistics, especially towards the end of the second half of the twentieth century, dominated by the generative quest for universals and concern with formal issues, has hardly held any interest in such language–particular and construction–based questions.

Secondly, in very many cases, the number and/or the form of complements are in synchronic terms apparently completely arbitrary, i. e. *a priori* quite unpredictable from, and *a posteriori* unrelatable to, what we know about the predicative expression in question.

In some cases, the number, and in particular the form, of complements of derived adjectives seem to be inherited from the corresponding verbs or nouns.

(5)   a. **depend on**
      b. Livingstone realized that until he had collected his supplies from Ujiji he would be **dependent** for everything **on** his Arab friends,...
(6)   a. **defend sth/sb against sth/sb**
      b. Furthermore, national borders that can no longer contain economic flows are even less **defensible against** environmental forces.
(7)   a. **compare sb/sth to sb/sth**

    b. As the House was consigning the contras to a fate **comparable to** that of the Cuban contras in 1961, Miami's Cuban–Americans could ponder this paradox: the Bay of Pigs helped them become proof of the continuing vitality of America's immigrant tradition.

(8)   a. **victory over sb/sth**
    b. In 1722 the most splendid of all had just been completed for Marlborough, the general who had been **victorious over** Voltaire's country:...

(9)   a. **to worry that.**
    b. Meanwhile, the air force is **worried that** a project to launch a Brazilian satellite may be cancelled after two recent failed launches.

It is usual for adjectives related from transitive verbs to have complements introduced by *of* as the default preposition, provided the expression that follows (an NP or a clause) corresponds to the object of the transitive verb. Cf.:

(10) a. **appreciate sth**
     b. That statistic makes me doubly **appreciative of** Teddy Roosevelt's celebrated hardihood.

(11) a. **mistrust sb/sth**
     b. It is a sorry situation when a majority of the public is **mistrustful of** the organisation which is supposed to be protecting its interests.

(12) a. **neglect sth/sb**
     b. I had been most **neglectful of** Calpurnia.

In some other cases, the choice of the morphosyntactic form of the complement is the result of analogical pressures. A lexical item partaking of a synonym group will tend to exhibit a similar range of complements as most other items in the group. If any new item is added to the group, either arising through coining, or as a result of metaphorical extension, it will adopt the dominant forms of complements found in the group. Thus, most predicative adjectives meaning 'angry' will take prepositional phrases introduced, among others, by *about* and denoting the immediate cause of the emotion. Any adjective that comes to acquire this meaning is also expected to take the same type of complement:

(13) a. »We're **angry about** the money being spent, the cops, the total stupidity of it all.«
     b. He was **mad about** white tiles.
     c. **Livid about** it, he was!
     d. Mr Cossiga, who would normally continue as president until 1992, is **furious about** the handling of the affair.

It will be seen that while cases of inheritance and analogical pressure exhibit a fairly high degree of regularity, our motivation account is only skin–deep because the whole issue is just shifted to the construction from which a pattern is inherited or to the construction that dominates a synonymic group, if such can be isolated.

In between these two apparently extreme cases, arbitrariness on the one hand, and predictability of whatever sort on the other, we have a range of cases where the number and form of complements are not fully predictable but are nevertheless not entirely arbitrary, since they can be more or less systematically related to some other facts of English grammar and language in general. In fact, it is quite likely that the analogical pressure of the sort we observed above might be the result of reliance on conceptual metaphors and basic image schemas, while the default preposition might be a signal of a fundamental metonymic link between verbal and adjectival predicates. (cf. Brdar & Brdar–Szabó 2000). In the present paper, I demonstrate how various more or less specific types of metonymic mappings can be held accountable for the form and content of the complements of certain sets of English predicative adjectives, thus further eroding the vast territory of the arbitrary in this language.

2. On motivation in grammar

Motivation of linguistic phenomena, although it appears at first blush to be a relatively simple task of searching for meaningful links between linguistic expressions and their contents and contexts of usage, turns out to be largely a matter of ideological position: what is actually meant by motivation is determined by the philosophy of language one adopts.

In a generatively oriented model, the task is reduced to establishing the set of possible constructions (sentences, utterances, etc.), and thus indirectly the set of impossible ones, as well. It could also be the other way round; the model may set itself as its goal the specification of the set of constraints which filter out the unacceptable constructions, as, for example, within the framework of Optimality Theory. The real motivating force in such models resides in the component(s) containing constraints and is therefore internal.

Cognitively and functionally oriented linguists seem to have reached a broad consensus on the issue of motivation with respect to at least two of its aspects (cf. Lakoff 1987, Langacker 1987 and 1991, Haiman 1980, 1983).

Firstly, motivation is a phenomenon exhibited by a range of linguistic structures that are neither wholly arbitrary nor fully predictable. Motivation is also seen as a matter of degree. Cf. Langacker (1987: 48) and Lakoff (1987: 346 and 493), who speak of levels of predictability and relative motivation leading to restricted predictions, respectively.

Secondly, linguistic structures seem to be chiefly motivated by an interplay of external factors such as cognitive structures and communicative needs. As Lakoff (1987: 539) puts it:

»People seem to learn and remember highly motivated expressions better than unmotivated expressions. We thus hypothesize that the degree of motivation of a grammatical system is a measure of the cognitive efficiency of that system relative to the concepts the system expresses.«

In the present paper I attempt to show how a number of apparent idiosyncracies in the complementation system of English adjectives disapear as such if a basic cognitive process such as metonymy is admitted into grammatical description. I will show that these same metonymic processes can be invoked in some cases to motivate the form of the complements of predicative adjectives, as well as some of their semantic pecularities. For example, the choice of prepositions after predicative adjectives in the following examples may at first appear quite arbitrary:

(14) a. At least, I've been **open about** it.
b. The witness wasn't very **definite on** the point.

but we shall see below that their systematic appearance in such contexts is motivated by an underlying metonymic model.

3. On metonymy

A fairly frequent way of defining metonymy has been to contrast it with metaphor (and occasionally with synecdoche) and focus on two central points of difference. On the one hand, metonymy is based on contiguity, whereas metaphor is based on similarity (cf. Ullmann 1962: 212). The other important point of contrast concerns the number of conceptual domains involved. Unlike metaphoric mapping, which takes place across two discrete domains, metonymy is »a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain, or ICM [Idealized Cognitive Model]« (cf. Kövecses and Radden 1998: 39). This is illustrated by the following set of examples in which parts of ICMs are involved, i. e. both, the vehicle and the target are parts of the same ICM. It is, of course possible for a part to stand for the whole ICM, or the other way round, for the whole ICM to stand for one of its parts:

(15) a. He flew to Amsterdam expecting the IKEA reps to be »**corporate suits,**«.
b. Activists were emboldened by **Seattle**, and are no longer wary of taking on complex industries.
c. He hired pollsters to study the sweatshop controversy, and says the results so far show that while »many« consumers do associate Nike with sweatshops, a »negligible« few care enough to stop buying **Nikes**.

In the first example, exhibiting OBJECT–FOR–USER–OF–THE–OBJECT metonymy (cf. Lakoff and Johnson 1980), which is a very common subtype of a more general PART–FOR–WHOLE metonymy, the property of wearing a certain type of suits is such a salient feature of businessmen that it functions almost as a stereotype identifying the type of people who would wear them. The conceptual domain within which the mapping takes place is explicitly named in the nominal expression *IKEA reps*. In (15) b. we have what Radden & Kövecses (1999: 41f) PLACE–FOR–EVENT metonymy based on a Location

45

ICM. The complex package of encyclopedic knowledge, viz. the events both at and around one of the meetings of the world's most influential businenessmen and politicians that took place in Seattle in 1999, and especially the violent demonstrations against globalization, is compressed by means of metonymy into a single proper noun. Finally, (15) c. illustrates the ubiquitous PRODU-CER–FOR–PRODUCT metonymy based on Production ICM.

According to Panther and Thornburg (1999), propositional metonymies come in two subtypes. In referential metonymy one referring expression, chiefly a noun phrase, is the vehicle for an implied target that is also a refer-ring expression normally realized as a noun phrase. All the examples in (15) are of this type. In predicational metonymy one propositional content stands for another propositional content. This possibility is illustrated in (14) a. and b. I will demonstrate below that predicative expressions *be open* and *be definite* act as vehicles for some other, implied target predicative expressions, i. e., by referring to a manner of an implied activity as part of the ICM, they refer to the whole ICM of the activity in question.

In terms of its function, metonymy is seen as »naturally suited for focuss-ing« (Lakoff and Johnson 1980: 37ff). It maximizes economy (because no new expressions are created or needed), but it also enhances expressiveness because it can provide very direct access to that part of the whole which is in focus.

4. Metonymic processes in the complementation system of English adjectives: Three case studies

In what follows I consider how conceptual metonymies can help motivate: (i) the morphosyntactic form of the complement, and (ii) the range of possible complements in semantic terms, i. e., how they can help extend or relax the semantic compatibility requirements on the choice of complements. The first two case studies, one on a marginal possessive construction and the other on predications exhibiting MANNER–FOR–ACTIVITY metonymy illustrate both points, but I will concentrate primarily on the former. The remaining case stu-dy, on the predicatively used adjective *compatible*, is primarily expected to sup-ply evidence for the latter aspect of motivation.

4.1. Marginal possessive constructions

Among the adjectival predicates in English which exhibit semantic and syn-tactic traits that are very unusual we find some marginal possessive construc-tions:

(16) a. Seeing how self–deformed he was, fat but elegant; ***short** of leg and ham*, on platform shoes.
    b. He was so amiable, **reddish** *of hair*, and **ruddy** *of skin*,...
    c. He was already **dry** *of throat* and **hot** *of eye*.
    d. Owing to the vision of the pink light I was **firm** ***of** purpose.*
    e. and because I am **hard** *of hearing* on the right side.
    f. Her clothes are not for the **faint** *of heart*.

At first sight, these look just like ordinary copular constructions with predicative adjectives followed by prepositional complements introduced by *of*. However, a closer look reveals that these constructions are peculiar in that the prepositional phrases in question are very poor candidates for complements of adjectives and, even more significantly, that the adjectival predicates refer here in fact to some qualities that characterize NPs that are introduced by the preposition and cannot be always directly predicated of their subject NPs. Subject NPs are possessors of what is denoted in the PP. The possessed items are more or less inalienable, either concrete nouns referring to body parts, or parts of certain objects, or, on the other hand, abstract nouns denoting physical bodily abilities, such as senses, or some inherent and fairly stable aspects of one's personality. The predicate that primarily characterizes the possessed undergoes a metonymic shift (an instance of a more general metonymic model according to which a whole stands for a part) and is now applied to the possessor with which it may have been semantically more or less incompatible. This metonymy POSSESSOR–FOR–THE–POSSESSED, is in fact the reverse of the metonymy illustrated in (15) a. above.

Consider now the case of *heavy*, which can be predicated of animate subjects, but then has a meaning utterly different from the one intended in the following examples:

(17) a. Tomorrow, **heavy** *of heart*, I was going to the Prado.

b. At first he was rather **heavy** *of expression* and I thought he might be looking for trouble,...

We note that the active zone, i. e. the intended target of the metonymic shift, is here obligatorily specified by means of prepositional phrases. Otherwise, ambiguity, or even obscurity of expression, might ensue. A similar phenomenon of specification of active zones by means of noun–incorporation is discussed in Tuggy (1986). This obligatory specification of the active zone is of crucial relevance for my central claim in the present study. *Of* as the preposition chosen to do the job is naturally suitable for the task. Firstly, it appears in the nominal possessive constructions of the type the X of Y. Secondly, it is found in some other marginal possessive constructions focussing on partitivity, e. g., in constructions of the type *short of* 'lacking sth', as well in ascriptive possessive constructions (e. g., *to be of no value*, *to be of importance*, etc.).

It is tempting to think of the specification of the active zone we found in (16–17) as a result of interplay of metonymy with another basic conceptual process, i. e. as a result of blending a simple ascriptive construction (*X is faint*) with a possessive construction (*X is of Y*, and possibly with something like *X is of faint heart*). This would then further support the claim that the choice of the most frequent preposition *of* is motivated, but it would require a careful examination of the interplay of blending with metonymy, for which more synchronic as well as diachronic data would be needed (e. g., the historical development of the two constructions should be plotted against each other).

As for the semantic and pragmatic import of the construction under discussion, there can be no doubt that this being a marginal possessive construction

it cannot be expected to compete with the more usual ones. So it does not simply express the fact that someone possesses something. Bearing in mind that metonymy is seen as »naturally suited for focussing« (Lakoff and Johnson 1980: 37ff) and as a means of maximizing economy, we realize that it survives in an ecological niche neighbouring other stronger, more central relatives, because it does more than a double job here. It simultaneously combines the effects of both ascriptive and possessive construction at the processing and production cost of a single construction. It predicates two things at the same time, ascribing one and the same property to two entities, explicitly to the possessor and implicitly to the possessed.

The ascriptive construction is capable of only one of these, it focuses on the bearer of a property, and since there are two such candidate entitities, they can be in the focus only alternatively, i. e. either the possessed entity is faint, or the possessor is faint, but there is no way in which the possessive relationship can be brought to expression. What is more, in the latter case the natural interpretation is one in which the state of faintness obtains only temporarily, but this is not what our marginal possessive construction expresses. It is a state of affairs obtaining in a more prolonged period of time. With some other predicative adjectives the effect of the simple ascriptive construction could be to refer to a permanent property of the subject in an absolute degree, e. g., a person said to be reddish is probably reddish all the time and it could be the case that the person is reddish all over his/her body, or at least as far as several body parts are concerned such that the overall impression is one of reddishness. Again, our possessive construction has a different effect; it relativizes and limits the property of reddishness to the body part specified, but still conveys the idea that the property of this body part is a salient enough feature of the whole subject, either locally or globally.

The ordinary possessive construction with *have*, on the other hand, can focus only on the possessor. Note that the converse perspective is conveyed by the *of*–construction, *Y of X*, where Y is figure, in the profile, and X serves as the ground, i. e. as the base. The property is here formally predicated only of the possessed entity (*X has such and such Y*) and the whole thus gives an impression of being a neutral statement of fact, not necessarily implying how salient the property is for the whole.

In sum, our marginal possessive construction, by shifting the focus away from the possessor, but not the whole way, allows both entities to be construed as exhibiting the property. Although the focus is formally on the possessor, it is relativized and distributed.

4.2. MANNER–FOR–ACTIVITY metonymy and adjective complements

The second type of English adjectival predicate constructions exhibiting similar metonymy effects are cases where manner (or circumstance) stands for action. Predicative adjectives refer here to the manner in which various activities are performed, referred to explicitly in PP complements of adjectives, but

48

more frequently only inferable from the PP. For example, the adjective *clear*, as in:

(18)   ...one should be as **clear** as possible about historical facts.

may refer to the manner of the understood cognitive activity of understanding or to the manner of some understood linguistic activity such as, for example, speaking. These actions range from rather physical ones to cognitive and linguistic actions (but are frequently extremely difficult to keep apart, as illustrated in the following set of examples):

(19) a. Arthur was *brief* about his other teachers in his recollections.
   b. Sheila wasn't very *definite* on the point.
   c. Yes — and be *direct* about the effect of his work.
   d. At least, I've been *open* about it.
   e. The Italian was *energetic* in examining his rings,...
   f. Be *firm* about turning down invitations if beating deadlines.
   g. The English aristocracy was always *ruthless* in letting its members gently decline.

The MANNER–FOR–LINGUISTIC–ACTION type of metonymy, exemplified in the first few examples in (19) has been discussed in detail in Brdar & Brdar–Szabó (2000). It will be seen that subjects of these predicative adjectives are typically animate. The predicative adjectives are not always inherently compatible with such subjects since they refer primarily to the aspects of activities. In other words, these conventionalized metonymies result in some additional polysemy of the predicative expressions in question.

A series of arguments can be offered to show that constructions like the ones above are indeed based on metonymy. On a most general level, we note that an essential formal exponent of these metonymies is the ascriptive construction of the form NP COPULA ADJPhr. Most adjectives used here as vehicles of metonymies refer to basic–level properties (*clear, firm, open*, etc.). On the other hand, the targets of metonymies appear to be non–basic–level, i. e., actions too specific to be expressed by compact lexical items. To give just one example, while there are numerous verbs of speaking in most languages, some of which make reference to the manner of speaking, they are mostly concerned with the more physical (acoustic) properties of the speech or with the intended and/or achieved speech act status/effect of reported utterances. Many more subtle differences cannot be expressed by such non–basic–level verbal predicates, e. g., there are hardly verbs denoting simultaneously that an utterance was made and that one's speech was internally coherent, or its opposite, etc. Our MANNER–FOR–ACTIVITY metonymy is thus a way of providing access to non–basic–level concepts via basic–level ones, and thus a means of maximizing economy in language.

The existence of multi–tiered chained metonymies at different levels of generality, involving both referential and predicational metonymies or a combination of these, may be seen as providing us with another piece of evidence that the constructions under consideration are indeed the result of metonymic processes. There are a number of conventional metonymies in many languages

that conform to the folk model of language (cf. Radden 2001). In English, which is no exception in this respect, names of parts of the body functioning as speech organs, such as *tongue*, *lips, ears*, or *teeth*, are used as vehicles to refer to speaking, or in a more abstract manner to *langue*. Some of these nouns can appear as constituents of complex *–ed* adjectives, forming what Goossens (1990) calls metaphtonymies, combinations of metaphors and metonymies, e. g. *close–lipped, tight–lipped, sharp–tongued, tongue–tied*, etc. In these examples, the speech organ, refers metonymically to one's ability to speak, i. e., we witness a SPEECH–ORGAN–FOR–LANGUE metonymy, while the other constituent is claimed to metaphorically contribute the idea of inability to use language (e. g. in *tongue–tied*), or the idea of the way in which the language faculty is habitually put to use. Consider the following sets of examples:

(20) a. All parties are keeping *tight–lipped*. A spokesman for DTR issued a firm 'no comment'.

  b. The Federal Reserve Board was a little *tight–lipped* in explaining its move to suspend controls on hire purchase, or what is known here as instalment credit.

  c. Greta Garbo was notoriously *tight–lipped* about her private life, so the unveiling of a cache of her letters (.) offered a glimpse into her secretive existence.

Examples (20) b. and c. are more complex because the attachment of a complement to the adjective sets the stage for another metonymic tier which keeps the manner element in the fore: we get the MANNER–FOR–LINGUISTIC–ACTION (i. e. FOR–SPEAKING) metonymy. We note a similar situation in the domain of cognitive action, where *mind* metonymically refers to cognitive ability, and *open* is used metaphorically to refer to the flexible nature of the ability, i. e., a general manner in which the ability functions:

(21) a. The Leeds constituency parties are *open–minded* about their candidates, not reserving places for some trade union's favourite son.

  b. To keep open the lines of communication, it's essential to be *open–minded* about the different preferences and attitudes that exist,...

Another type of evidence that the constructions under investigation are really MANNER–FOR–ACTION metonymies concerns the way the targets of the predicational metonymies surface in the context. They are frequently found in a neighbouring sentence or clause:

(22) a. Reichenbach is not very *specific* about what R is; all he *says* is that R is the time of some other event.

  b. Children hear what parents *are saying* about each other, and if parents are being extremely *negative* about the other parent the children will hear that.

Now that I have shown that these are indeed constructions involving the predicational type of metonymy, I turn to the issue of the motivation of the

form of the complements of predicative adjectives. It is evident from the representative examples above that most of the adjectives allowing the MANNER–FOR–LINGUISTIC–ACTION subtype of metonymy take prepositional complements introduced by *about*, occasionally *on, with* or *in*. The choice of the preposition in the case of MANNER–FOR–COGNITIVE–ACTIVITY and the MANNER–FOR–EMOTIVE–PROCESS subtypes of metonymy is very similar, *about* again being predominant. I would like to claim that the choice of the most frequent prepositions, *about*, and *on*, is motivated by the fact that the most prominent verbs of linguistic action, such as *speak* and *talk,* as well as the basic verb of cognition, *think*, also take prepositional complements of the same form. The central verb in the domain of emotions, *feel*, also takes prepositional complements introduced by *about*. Thus it turns out that by recognizing an underlying conceptual metonymy, things fall into place because the situation now appears parallel to the vanilla–type of argument inheritance exhibited in (5–9) above.

4.3. Extending semantic compatibility through metonymy

In this last case study I consider how metonymy can be invoked to motivate an otherwise more or less anomalous range of complements in semantic terms, i. e. how metonymy can help extend or relax the semantic compatibility requirements on the choice of complements. Cf. first the following sets of relevant examples containing the predicative adjective *compatible* followed by a prepositional complement introduced by *with*:

(23) a. Depending on the bird species, plants can usually be chosen that are **compatible with** captive birds, the density and type of birds being critical factors.

b. These dates are **compatible with** the dates of the major upheavals in human populations of the New World, evident all the way to Central America.

c. Even if he holds that an action is not free if it has causes that eventually lie outside the agent, his view will be **compatible with** the various views of action unless he holds the version of (1) — that an action is an event produced by volitions or beliefs and desires — and also holds the additional thesis (2) — that volitions or beliefs and desires themselves have causes that lie outside the agent.

(24) a. The question of whether philosophy is **compatible with** religious law (the answer being sometimes negative) constituted the main theme of the foremost medieval Jewish thinkers.

b. Organic farming uses less petroleum than does conventional farming and is most **compatible with** diversified, small–scale, labour–intensive cultivation.

c. To be sure, Classical Theism holds to the freedom of man but insists that this freedom is **compatible with** a divine omniscience that includes his knowledge of the total future.

(25) a. »Nuclear waste isn't **compatible with** tourism,« insists Rep. Harry Reid.

b. Further treatment of the triacetate in solution in the presence of sulfuric acid splits off some acetic acid giving diacetate, soluble in acetone, and **compatible with** a range of plasticizers that can be incorporated in a rugged type of mixer without solvent to yield molding powders especially suited to injection molding.

(26) a. The great depth of these submerged valleys, extending thousands of feet below sea level, is **compatible** only **with** a glacial origin.

b. Subsequent analysis of the hand bones from Swartkrans — which are presumed to be australopithecine — has demonstrated that they are **compatible with** tool use.

c. Skulls and teeth **compatible with** early bats are known from the Paleocene (about 60,000,000 years ago), but these fossils may equally well have been from insectivores, from which bats are clearly separable only on the basis of adaptations for flight.

The first set of examples is relatively straightforward and conforms to the most frequent dictionary entries for *compatible*. The adjective is usually said to mean 'able to exist, live together, or work successfully with (something or someone else)' (Cambridge International Dictionary of English), 'able to exist, live together, or be used together or with (another thing)' (Longman Dictionary of Contemporary English). One aspect of these is described as follows by the COBUILD Dictionary: 'People who are **compatible** are able to live or work together in a friendly and peaceful way.' Notice that entities that are compatible are normally taken to be of the same rank, type, or belong to the same category, etc., and that a symmetrical relationship obtains between them. In sum, only likes, in the broadest sense, can be compatible. It is telling that the subject and the prepositional complement in (23) b. and c. contain the same head noun, *dates* and *views*, respectively. Not infrequently, the subject is in the plural and the prepositional complement contains a reciprocal pronoun, an explicit indication of a symmetrical relationship. The complement can be left out altogether, as in (27) c.:

(27) a. These distributions are **compatible with** each other, a property that ensures that there exists some probability space and some family of random variables defined on the space that realizes the original stochastic process.

b. Individuals usually occupy several positions, which may or may not be **compatible with** one another: one person may be husband, father, artist, and patient, with each role entailing certain obligations, duties, privileges, and rights vis–à–vis other persons.

c. They are **compatible**.

The prepositional phrase complementing *compatible* in (24) a–c. belong, broadly speaking, to the same domain or to similar and related domains: philosophy — religion, farming — cultivation, freedom — divine omniscience, and should therefore again be unproblematic. However, these examples illustrate

another important aspect of the meaning of *compatible*, in addition to the symmetrical nature of the relationship. This element is not sufficiently highlighted by the COBUILD Dictionary in the statement that 'Two things, systems of belief, ideas, etc. that are **compatible** can exist in the same place and at the same time without harming each other.' I would like to stipulate that compatible has an inherently very narrow range of collocates, i. e. imposes fairly strict selectional restrictions on their choice. The relationship of compatibility can inherently obtain only between abstract entities, and that the first part of COBUILD's statement reflects some facts of usage based on metonymic extension. All the concrete nouns in the subjects or complements of *compatible* in examples in (25), such as *nuclear waste* and *plasticizers*, and particularly those in (26), *hand bones*, *skulls and teeth*, and *early bats*, do not make much sense in these contexts. Some of the subject–complement pairings are so disparate that they can logically hardly be seen as exhibiting any compatibility in an ordinary sense of the concept. But if we assume that there is some sort of hidden logical compatibility, not expressed explicitly in these words but which speakers apparently establish very quickly and largely subconsciously, these data can only lead us to adopt a metonymic interpretation, such that all these concrete nouns explicitly named are elements of different ICMs or domains which also exhibit one prominent abstract element that is not named but is actually the target of the metonymic mapping. This targeted element is in fact referred to in the second part of COBUILD's definition — systems of belief such as theories, scientific or folk ones, religious systems, and also single ideas. *Skulls and teeth* and *early bats* in (26) c. are shortcuts for something more general, like *the results of an analysis*, *assumption about*, *hypothesis*, *idea* or *theory on /about*. Similarly, *nuclear waste* and *tourism* in (25) a. stand for more general concepts, *disposal or treatment of waste* and *engagement in the industrial activity of tourism*, respectively. In (26) a. it is the fact of exhibiting great depth that is compatible with the hypothesis/assumption that the valleys in question are of glacial origin.

The fact that it is sometimes difficult to pinpoint a single most appropriate expression is indirect evidence that these are metonymies. As pointed out in section 3, metonymies provide more direct access to concepts that might otherwise be difficult to think and talk about.

Another relevant fact supporting the assumption about metonymic mappings is the observation that some targets, or near–targets are explicitly named in the broader context, and thus invite appropriate inferences, e. g., the words *treatment* and *soluble in water* in (25) b., may evoke the idea of use or processing of chemicals, while the expression *subsequent analysis* in (26) b. prompts us to activate our encyclopedic knowledge that analyses normally produce some findings or results and that these results provide the rationale for performing these analyses in the first place, and further to infer that findings of analyses enable the formation of certain beliefs, which are either compatible or incompatible with the hypothesis about tool use.

In short, we observe here a metonymic mapping of a referential type from a part of an ICM to another part. This sort of analysis could easily be per-

formed on a number of more or less synonymous predicative adjectives expressing the idea of symmetrical relationship, e. g. *comparable with*, *consistent with*, etc. A related type of metonymic mapping could be observed on some other classes of adjectives, e. g. adjectives denoting emotional reactions like *sorry*, *happy*, etc., where a human participant named in some prepositional complements in fact stand metonymically for the whole situation causing the emotion in question (e. g., *I was happy for John* 'I was happy because of something that happened to John').

The nature of the mapping is quite in keeping with the findings of Radden and Kövecses (1999), who note that mappings from concrete to abstract are more natural than the other way round. In the specific case of *compatible*, we see how metonymy effectively broadens the range of possible collocates, and thus significantly determines some semantic aspects of its valency frame.

5. Concluding remarks

I hope to have shown that some apparently arbitrary facts of the complementation system of English constructions with predicative adjectives are amenable to a systematic and principled treatment by assuming that their valency behaviour is, in part at least, shaped by metonymic processes. I have provided evidence that these processes may motivate (i) the morphosyntactic form of complements and (ii) an otherwise more or less anomalous range of complements in semantic terms, i. e., that metonymy can help extend or relax the semantic compatibility requirements on the choice of complements. The data adduced here present, of course, only a small fraction of the whole complementation system of English adjectives, but they are significant indications of the degree of motivation in the system and of the involvement of metonymy. We may hope that further studies on the role of metonymy and other processes, such as metaphor, and conceptual blending, as well as on their interplay with each other and with basic image schemas, will reveal that large portions of this system are, if not predictable, then at least well–motivated, a situation which is expected to obtain elsewhere, too.

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Metonimija kao čimbenik u motivaciji sustava komplementacije engleskih pridjeva

U članku se pokazuje kako različiti tipovi konceptualnih metonimija pridonose motivaciji morfosintaktičkih i semantičkih osobina dopuna engleskim predikatnim pridjevima, čime se unutar tog sustava značajno sužava prostor proizvoljnosti i nepredvidivosti. Prvo se na dva konkretna primjera, marginalnim posvojnim konstrukcijama te predikatnim pridjevskim konstrukcijama koje se temelje na metonimiji tipa NAČIN UMJESTO RADNJE, potkrepljuje tvrdnja o motiviranosti oblika dopune (tj. izbor prijedloga koji uvodi dopunu), a potom se analizom semantike imenskih izraza unutar dopuna pridjevu *compatible* dokazuje da je semantičko širenje skupa prihvatljivih dopuna moguće zbog metonimije kojom se jedan element idealiziranog kognitivnog modela preslikava na drugi, dostupniji element.

Key words: metonymy, adjective forms, English, semantics of nominal phrases
Ključne riječi: metonimija, pridjevski oblici, engleski jezik, semantika imenskih izraza