

# Chapter 5

## Adjectives

The final case study of arbitrariness that I will address involves adjectives. Baker's Paradox has two instantiations in this domain, corresponding respectively to two productive patterns: The use of adjectives as *prenominal* or *attributive* modifiers, as in (1a), and their *predicative* use, as in (1b):<sup>1</sup>

- (1) a. John is a happy man.  
b. John is happy.

Adjectives used *preminally* precede the noun they modify, as the term suggests.<sup>2</sup> The prenominal adjective construction is productive, as evidenced by the fact that English allows new words to be used in this position when they enter the language. For example, the adjective *Chomskyan* could immediately be used preminally after it was invented. The productivity of prenominal adjective constructions corresponds

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<sup>1</sup>There is another adnominal use in which the adjective follows the noun, as in *the only room available*. This use is subject to different factors than the prenominal use, and will not be the focus of this chapter. See Bolinger (1967), Abney (1987), Larson (1998), i.a.

<sup>2</sup>There are two kinds of prenominal modification: restrictive and non-restrictive. The non-restrictive use would be the primary reading of *my wonderful wife*, where it is assumed that the speaker has only one wife and is not using *wonderful* to restrict the set of referents matching the description. If the speaker wished to distinguish his wonderful wife from his less-than-wonderful wife (or wives), he might use *my wonderful wife* restrictively. In general I will ignore non-restrictive uses.

to the “productivity” premise of one instantiation of Baker’s Paradox.

*Predicative* uses appear as the complement of a copula verb such as *be* or *seem* and are interpreted as being predicated of the subject of that verb. This construction is also productive; *Chomskyan* could also be used predicatively when it was invented. The productivity of the post-copular adjective construction corresponds to the “productivity” premise of another instantiation of Baker’s Paradox in the adjectival domain.

The existence of arbitrary exceptions in both of these domains is defended by Goldberg (2006), who claims that there are certain adjectives whose ability to function in one or the other of these ways is arbitrarily limited. Her examples are *mere*, which cannot be used predicatively, and *aghast*, which cannot be used prenominaly.

- (2) a. She’s a mere imitation.  
 b. \*Don’t worry, she’s only mere.
- (3) a. \*There were several aghast members of the audience.  
 b. Several members of the audience were aghast.

She concludes: “Clearly we must learn the distributional properties of these words and constructions individually. Their distribution does not follow from general facts about adjectives” (Goldberg 2006:50). The claim that “their distribution does not follow from general facts about adjectives” can be cast in the terms of Baker’s Paradox as a claim that these adjectives satisfy the criteria governing the productivity of the patterns in question. If indeed, despite satisfying the criteria, these adjectives simply cannot behave in these ways, then they are the type of arbitrary exception that gives rise to Baker’s Paradox.

Together with the “productivity” and “prbitrariness” premises, the instantiations of Baker’s Paradox in these adjectival domain would include a “no negative evidence”

component, supposing that learners do not make use of negative evidence to learn restrictions on the use of prenominal or predicative uses of adjectives such as those represented by *mere* and *aghast*. Goldberg’s conclusion based on the presumed arbitrariness of such restrictions is that the “distributional properties of these words and constructions must be learned individually,” which suggests either strict lexical conservatism (not extending words beyond the syntactic frames in which they are witnessed) or word-specific negative evidence (using implicit or explicit information that concerns the use of specific words in specific constructions). Since strict lexical conservatism contradicts productivity, Goldberg’s proposal about learning must be interpreted as advocating a specific type of negative evidence (indeed, this is what she later proposes). Arbitrariness, therefore, forces one into a particular view of learning according to Goldberg: that it involves word-specific negative evidence. Because of its potential consequences for learning, the empirical validity of the premise of arbitrariness should be carefully evaluated.

The purpose of this chapter is to argue that the distribution of words such as *mere* and *aghast* does in fact follow from general principles, i.e., that the criteria governing the productivity of prenominal and predicative constructions correctly excludes these words. Furthermore, I investigate a range of other adjectives whose behavior with respect to prenominal and predicative uses is restricted, and show that they fall into classes with predictable syntactic behavior. This removes the empirical argument for the existence of arbitrary negative exceptions in the adjectival domain.

## 5.1 Predicativity

This section addresses adjectives that cannot be used predicatively, like *mere*, as in (2). *Mere* is not alone in its inability to function predicatively, but falls into a very large class of adjectives that are limited to the prenominal position. In this

section, I argue that the crucial characteristic linking these adjectives together (or in some cases, particular senses) is that they do not denote what Beesley (1982) called *semantic predicates*. Denoting a semantic predicate, furthermore, is a general prerequisite for functioning syntactically as a predicative adjective. Any adjective that fails to meet this criterion is not an arbitrary exception, as its behavior indeed follows from a “general fact about adjectives.”

### 5.1.1 The Predicativity Principle

A *semantic predicate* is a semantic type in the sense of Montague grammar (e.g. Montague 1974). In particular, it is a function from the set of individuals to the set of truth values; for example, the predicate **red** applies to individual entities and returns TRUE if the entity is red, and FALSE otherwise. For example, if  $x$  is a red object,  $\mathbf{red}(x) = \text{TRUE}$ . If individual entities are type  $e$ , and truth values are type  $t$ , a semantic predicate is of type  $\langle e, t \rangle$ , because it applies to individuals and returns truth values.

*Absolute* adjectives, following Beesley’s (1982) terminology, like *red*, *fluorescent*, and *deciduous* are the prototypical examples of semantic predicates. Absolute adjectives give rise to *intersective* interpretations (Montague 1974). For example, a *red barn* is a member of the intersection between the set of red things and the set of barns. Set intersection is closely related to logical conjunction. For example, in a phrase like *red barn*, both of the predicates **red** and **barn** apply to the referent of the noun phrase, and combine via logical conjunction to produce a property of the following form:

$$(4) \quad \lambda x . [ \mathbf{red}(x) \ \& \ \mathbf{barn}(x) ]$$

The set of objects satisfying this property is the intersection of the set of red things and the set of barns.

*Gradable* (or *degree*, or *measure*) adjectives like *big* and *tall* can be argued not to have an intersective interpretation on the grounds that a *tall midget*, for example, would not generally be considered to be *tall*. The nominal property is entailed, on the other hand; a tall midget is still a midget. Such adjectives are called *subsective* by Montague (1974). Taking adjectives like this into account, Montague (1974) argues that all prenominal adjectives denote functions from the set of properties to the set of properties, rather than being semantic predicates and combining with the noun they modify via logical conjunction. For example, in *tall midget*, the adjective *tall* applies to the property denoted by *midget*, and returns the property denoted by *tall midget*. Since properties are of semantic type  $\langle e, t \rangle$ , and adjectives are functions from properties to properties, such adjectives are of type  $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$  according to Montague (1974). The predicate denoted by *tall* would then apply to the property denoted by *midget* directly, and yield a property that applies to the referent of the noun phrase. This can be represented thus:

$$(5) \quad \lambda x . [[\mathbf{tall}(\mathbf{midget})](x)]$$

In contrast to Montague (1974), Siegel (1976) argues that gradable adjectives should be analyzed in the same way as absolute adjectives in some cases, as functions from individual entities to truth values. According to Siegel, the comparison class (e.g., the set of midgets) can be specified in one of two ways: either by the common noun that the adjective modifies prenominally, or by context, when the adjective appears in predicative constructions. For example, in *He is tall*, the comparison class may be the set of midgets or people, etc., depending on context; in *He is a tall midget*, the comparison class is necessarily the set of midgets. For Siegel, when the comparison class is determined by context, the gradable adjective has type  $\langle e, t \rangle$ , and when it is determined by the common noun, the adjective is of type  $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$ .<sup>3</sup>

<sup>3</sup>Siegel (1976) uses the notation CN/CN, rather than  $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$ , where CN stands for “common noun.”

Beesley (1982) moves further away from Montague's (1974) analysis of gradable adjectives, arguing that the comparison class is *always* determined by context, based on the possibility of non-restrictive modification by relative adjectives such as *short* in dialogues such as (6):

(6) Q: Which of the men over there is Quang?

A: Quang is the short Vietnamese.

In (6), the comparison class is not the set of Vietnamese people, but the set of men. This is evidence that the comparison class is not always determined by the modified common noun, but by context. The idea of a contextually-bound comparison class is an idea also discussed by McConnell-Ginet (1973), Klein (1980), Bartsch (1972), Keenan and Faltz (1985), and Kennedy (1999), among others. Following Siegel (1976) in assuming that a degree adjective is of type  $\langle e, t \rangle$  when the comparison class is given by context, the fact that the comparison class is contextually given implies that degree adjectives are always of type  $\langle e, t \rangle$ , which is to say that they are always semantically predicative.<sup>4</sup>

*Evaluative adjectives* such as *good* also have an interpretation relative to the noun they modify: As Aristotle pointed out, a *good thief* is not usually a *good man*; the property described by *good* depends on the functional criteria that happen to be relevant. For this reason, evaluative adjectives, like degree adjectives, are not intersective modifiers. Another test for intersectivity is Siegel's (1976) *substitution test*: Suppose that the set of dancers is coextensive with the set of singers, so every dancer is a singer and every singer is a dancer. Even under such circumstances, *Olga is a beautiful dancer* does not entail *Olga is a beautiful singer*; this shows that *beautiful* is a

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<sup>4</sup>Another common analysis of gradable adjectives is that they are functions from individuals to degrees – *measure functions* – which take an entity and return a degree on the scale associated with the adjective (Cresswell 1977, von Stechow 1984, i.a.; see also Kennedy 1999, Kennedy and McNally 2005). Gradable adjectives can still broadly be considered “predicative” under this analysis, however. Although gradable adjectives do not have  $\langle e, t \rangle$ -type semantics themselves under this analysis, they do yield such predicates through a silent, default process that absorbs the degree argument.

non-intersective modifier in this case.

Evaluative adjectives differ from degree adjectives, however, in that their interpretation depends not only on the comparison class, but also on the criteria or standard according to which the evaluation is made. Siegel (1976) argues that the evaluation criteria are determined by context only when the adjective is used in predicative position, and necessarily by the common noun when the adjective is used in attributive position, citing the contrast in interpretation between (7a) and (7b):

- (7) a. That is a good lutist.  
       b. That lutist is good.

In both (7a) and (7b), *good* can be used to mean either *good as a lutist* or *absolutely good*, i.e., *good as a person*. The attributive and predicative uses seem to differ with respect to a third potential reading, however: In the context of a chess game between a lutist and, say, an oboist, *good* in (7b) can be used to mean *good at chess*, but this reading seems not to be available in (7a). This leads Siegel (1976) to conclude that preminally, evaluative adjectives are necessarily functions from properties to properties ( $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$ ), but that predicatively, they denote either functions from properties to properties or functions from individual entities to truth values (semantic predicates;  $\langle e, t \rangle$ ). This conclusion is significant because it would mean that not all syntactically predicative adjectives are semantically predicative.

Beesley (1982) challenges Siegel's analysis, arguing that evaluative adjectives can in fact be analyzed as semantically predicative.<sup>5,6</sup> Firstly, he offers a context in which a sentence like (7a) can be used to mean *good at chess*:

Consider the hypothetical case of a chess school which specialises in teaching musicians. When asked how lutists, as opposed to oboists, take

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<sup>5</sup>I am changing the terminology a bit here. Beesley argues for the treatment of evaluative adjectives as "absolute" adjectives, but I find this categorization confusing and slightly inconsistent, because evaluative adjectives are actually relative in meaning.

<sup>6</sup>See Kamp (1975) for a similar claim.

to chess, an instructor might say, ‘We get some good lutists and some bad lutists’. In this context, the goodness will be relative not to lute playing but to chess playing. (Beesley 1982:221)

He moreover offers a range of syntactic tests showing that evaluative adjectives pattern with degree adjectives and absolute adjectives, against adjectives like *mere*, which are truly semantically non-predicative. For example, absolute (8a), relative (8b), and evaluative adjectives (8c) license *one* anaphora, while semantically non-predicative adjectives like *utter* do not, as shown in (8d) (Beesley 1982:223, exx. 91–94):

- (8) a. That’s a red box, and that’s a blue one.  
 b. That’s a tall man, and that’s a short one.  
 c. That’s a good boxer, and that’s a bad one.  
 d. \*That’s an utter fool, and that’s a fat one.

Beesley also offers his own diagnostic using sentence-level adverbs. Adjectives describing semantic predicates would be predicted to be incompatible with sentence-level adverbs, because sentence-level adverbs describe the status of propositions, not predicates. As Beesley shows, this prediction is borne out: Absolute adjectives like *red* allow sentence-level adverbs like *obviously*, but non-semantically-predicative adjectives like *mere* do not (Beesley 1982:226–227, exx. 111 and 113):

(9) The obviously red barn collapsed.

(10) \*The obviously mere barn collapsed.

In support of the analysis of both degree and evaluative adjectives as semantically predicative, sentence-level adverbs such as *obviously* are compatible with both types (Beesley 1982:129, exx. 129 and 134):

(11) The obviously tall ballerina was rejected.

(12) John is an obviously bad monk.

As Beesley points out, a “relative” meaning for (12), in which John is bad as a monk, rather than in general, or as a person, is “even preferred” (p. 229). The results of this diagnostic support the idea that degree adjectives and evaluative adjectives, despite being relative to some contextually-given comparison class or criterion, are semantically predicative.

Taken together, the evidence reviewed in the preceding paragraphs supports the generalization in (13).

(13) **Predicativity Principle**

An adjective can be syntactically predicative if and only if it is semantically predicative.

In (13), what is meant by *semantically predicative* is not only that the adjective denotes a predicate, but furthermore, that it denotes a predicate that applies to the referent of the noun phrase it modifies when it is used prenominally. This means that it must be of type  $\langle e, t \rangle$ , and furthermore, that the individual to which it applies is the referent of the NP.<sup>7</sup>

As a corollary to (13), any adjective that is not semantically predicative should not function syntactically predicatively. In other words, this is a criterion governing the productivity of this construction. As far as I am aware, this generalization accounts for all of the restrictions on the predicative use of adjectives that have been brought up in the literature. These are discussed in the following subsection.

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<sup>7</sup>If  $\langle e, t \rangle$ -type modifiers should be considered “intersective” by definition, then the Predicativity Principle amounts to saying that predicative adjectives must be intersective. A distinction between intersectivity and predicativity could be maintained, however, such that degree adjectives and evaluative adjectives could be seen as  $\langle e, t \rangle$ -type, but non-intersective. I prefer to leave the possibility of this distinction open, retaining the generalization in (13) rather than stating it in terms of intersectivity.

### 5.1.2 Applying the Predicativity Principle

Quite a few examples of non-predicative adjectives have been brought up in the context of critiques of the transformational analysis of prenominal adjectives. According to this analysis, a structure like (14a) is derived from a structure like (14b) (Chomsky 1957; Smith 1961):

- (14) a. the tall man  
       b. the man who is tall

Arguments against the transformational analysis of prenominal adjectives, by scholars including Bolinger (1967), Jackendoff (1972), Levi (1973, 1978), and Winter (1965), point to cases in which an adjective-noun combination (e.g. *tall man*) cannot be paraphrased by the same noun modified with a relative clause containing the adjective in predicative position following the copula (e.g. *man who is tall*).

Although the literature contains quite a long list of examples like these, the list can be organized into a set of semantic categories, all of which fall under the general heading of non-semantically predicative adjectives. Many of the adjectives in the non-predicative category can be classified as “adverbial,” because they can be paraphrased with an adverb. These include adjectives of veridicality (as in *true king*, *real friend*), the so-called “modal” class of adjectives (as in *alleged criminal*), along with other adjectives of modality (*old school*, *erstwhile friend*), adjectives expressing a degree of veridicality (*perfect ass*, *pure nitwit*), adjectives evaluating the predicate they modify (*mere kid*, *common soldier*), adjectives of selection (*the very man*, *the same reason*), and event-manner adjectives (*hard worker*, *beautiful dancer*). Alongside adverbial adjectives, there are adjectives of psychological experience (as in *sorry sight*) and so-called “nominal adjectives” (as in *criminal lawyer*). I will address each of these classes in turn.

**Modal adjectives.** The *adverbial* class of non-predicative adjectives contains those that can be paraphrased by an adverb. For example, a *true poet* is *truly a poet*. Many of these have to do with veridicality in some way, such as the following examples from Bolinger (1967:18ff):

- (15) a. a true poet; ?The poet is true  
 b. the true king; \*The king is true  
 c. a real friend; \*The friend is real  
 d. an actual fact; \*The fact is actual  
 e. a sure winner; \*The winner is sure  
 f. an honest quart; \*The quart is honest  
 g. the lawful heir; \*The heir is lawful  
 h. the rightful owner; \*The owner is rightful

*Veritable*, mentioned by Siegel (1976), can be added to this list: *a veritable palace*; \**A palace that is veritable*. Adjectives in this category do not describe semantic predicates that apply to the referent of the noun phrase, but rather have a *modal* meaning, in the sense that their meaning applies to propositions. For example, in *it is a veritable palace*, *veritable* characterizes the proposition *it is a palace* as true. The semantic type of these adjectives is not  $\langle e, t \rangle$ , applying to an individual; rather, they apply to a proposition.

Adjectives like *alleged criminal* exemplify what are standardly known as “modal adjectives” (Kamp 1975). These adjectives, when combined with a noun, give rise to a term that is not a subset of the denotation of the noun; they are non-intersective, and furthermore, non-subsective. For example, an *alleged criminal* is not necessarily a *criminal* (Vendler 1968). These adjectives, like *true*, *real*, *actual*, etc., predicate over propositions rather than individuals; for example, in *he is an alleged criminal*,

*alleged* characterizes the proposition *he is a criminal* as something that has been alleged. Thus, adjectives like *alleged* can be seen as a larger class of adjectives related to modality in a broader sense, none of which are of semantic type  $\langle e, t \rangle$ .

A potential counterexample to the generalization that modal adjectives cannot be predicative is that *fake*, an apparent example of a modal adjective, can be syntactically predicative:

(16) This gun is fake.

According to Beesley's (1982) test for semantic predicativity (illustrated in (8)), however, *fake* is in fact semantically predicative:

(17) an obviously fake gun

It could also be argued that a fake gun is in fact a type of gun, i.e., that it is at least a substantive modifier. These considerations support the idea that *fake* is not a genuine modal adjective, and in particular, that it is semantically predicative. Hence, it satisfies the criteria for being syntactically predicative, and is not an arbitrary exception.

Other syntactically non-predicative adjectives in the adverbial class have to do with other kinds of modality (these examples are from Bolinger 1967):

- (18) a. my old school; \*The school is old  
 b. our late President; \*The president is late  
 c. my erstwhile/quondam/whilom/former/budding friend; \*My friend is erstwhile/quondam/whilom/former/coming/budding  
 d. a putative/possible/probable/likely example; \*The example is putative/possible/probable/likely  
 e. the future king; \*The king is future

In all of these cases, the predication denoted by the noun phrase holds in a world or time that is remote from the time of reference. For example, the referent of *my old school* is the speaker's school at a time before the time of reference. This type of adjective is similar to the modal type described above, predicating over a proposition rather than being of type  $\langle e, t \rangle$ . Since these are modal, rather than semantically predicative, their inability to function syntactically as predicative adjectives falls under the Predicativity Principle in (13).

Another class of adverbial non-predicative adjectives expresses degree of veridicality. Like other modal adjectives, the following adjectives apply to propositions, and express the degree to which a predication is being asserted (again, the examples are from Bolinger 1967):

- (19) a. a perfect ass; \*The ass is perfect  
 b. a pure nitwit; \*The nitwit is pure  
 c. an unadulterated jackass; \*The jackass is unadulterated  
 d. an unmitigated liar; \*The liar is unmitigated  
 e. a total stranger; \*The stranger is total  
 f. a sheer fraud; \*The fraud is sheer  
 g. a regular champion; \*The champion is regular  
 h. a plain fool; \*The fool is plain  
 i. an utter incompetent; \*The incompetent is utter  
 j. straight whiskey; \*The whiskey is straight

Although predications are not normally thought of as holding to various degrees (i.e., either they hold or do not), speakers can modulate the degree to which they are committed to making an assertion, or the strength with which they make it.<sup>8</sup>

<sup>8</sup>This idea may be formalizable in terms of Kamp and Partee's (1995) idea of *supervaluations*.

Assertions can be strengthened or mitigated through the use of this type of adjective. These adjectives therefore apply to propositions rather than individuals; they are not semantically predicative. The unacceptability of their syntactically predicative uses therefore falls under the Predicativity Principle.

**Predicate-evaluating adjectives.** *Mere* falls into another class of adjectives that do not function predicatively in syntax, along with *common*:

- (20) a. a mere kid; \*The kid is mere  
 b. a common soldier; \*The soldier is common

Evidence for the non-semantic-predicativity of this type comes from (10), repeated here, which shows that *mere* fails the sentence adverb test for semantic predicativity, as does *common*:

- (21) \*The obviously mere barn collapsed.  
 (22) \*The obviously common soldier collapsed.

Rather than applying to the individual denoted by the referent of the noun phrase, an adjective like *mere* characterizes the predicate denoted by the common noun. For example, in *mere kid*, *mere* characterizes the property of being a kid as being low in status or importance. Since adjectives like *mere* do not apply to individuals, but rather, properties, they are also not of type  $\langle e, t \rangle$ . Their inability to function predicatively in the syntax, therefore, follows from the Predicativity Principle.

**Adjectives of selection.** Another set of adverbial-type syntactically non-predicative adjectives has to do with picking something out from a list (examples from Bolinger 1967):

- (23) a. the very man; \*The man is very

- b. the particular spot; \*The spot is particular
- c. the precise reason; \*The reason is precise
- d. the same/selfsame/identical/exact/specific reason; \*The reason is same/selfsame/identical/exact/specific
- e. their main faults; \*Their faults are main
- f. our prime suspect; \*The suspect is prime
- g. the first citizen; \*The citizen was first
- h. the principal/chief/topmost cause; \*The cause was principal/chief/topmost
- i. the sole survivors; \*The survivors were sole
- j. the right (wrong) book; \*The book is right (wrong)

Siegel (1976) provides the following examples of non-predicative adjectives, which can be placed in this list: *chief*, *top*, *initial*, *ultimate*. By the sentence-adverb test, such adjectives are not semantically predicative:

(24) \*the obviously very man

(25) \*the obviously particular spot

These adjectives uniquely specify a particular entity, rather than classifying it. One interpretation of this feature of their meaning is that they are functions from properties to individuals, rather than functions from individuals to truth values. Under this interpretation, their inability to function predicatively in the syntax, again, follows from the Predicativity Principle.

**Event-manner adjectives.** Another class of adverbial-type adjective uses describes the manner of the action described by the nominal, as in the well-known *beautiful dancer* example, and examples such as the following, from Bolinger (1967):

- (26) a. a hard worker; \*The worker is hard  
 b. a clean fighter; \*The fighters are clean

These examples are analyzed by Larson (1998) as functions from individuals to truth values, which apply to an event variable contained within the meaning of the noun rather than the referent of the noun itself. These adjectives are not semantically predicative of the referent of the noun, so their behavior also follows from the Predicativity Principle.

**Psychological experience adjectives.** Yet another class of non-predicative adjectives that Bolinger (1967) points to contains adjectives describing the psychological experience of an experiencer of the event denoted by the noun:

- (27) a. a sorry sight; ?The sight is sorry  
 b. a happy coincidence; ?The coincidence is happy  
 c. a brave sight; ?The sight was brave  
 d. a proud moment; ?The moment was proud

For example, with a *sorry sight*, it is not the sight itself that is sorry, but some experiencer of the sight. Again, these adjectives are not semantically predicative of the referent.

**Nominal adjectives.** Some of the cases listed by Bolinger (1967) are analyzed by Levi (1973, 1978) as “nominal adjectives,” because they function semantically in the same way that nominal modifiers in noun-noun compounds function. Examples of this type include the following:

- (28) a. a criminal lawyer; ?The lawyer is criminal  
 b. a rural policeman; ?The policeman is rural

- c. a medical man; \*The man is medical
- d. a subterranean explorer; \*The explorer is subterranean
- e. an electrical worker; \*The worker is electrical
- f. nervous system; \*The system is nervous
- g. alimentary canal; \*The canal is alimentary
- h. adhesive tape; \*The tape is adhesive
- i. industrial machinery; \*The machinery is industrial
- j. maritime law; \*The law is maritime

These adjective-noun combinations are similar to noun-noun compounds: A *criminal lawyer* is a lawyer who deals with issues of crime, and this is the same relation that holds in the noun compound *tax lawyer*: a tax lawyer is a lawyer who deals with tax issues. As another illustration, the *nervous system* is another way of saying the *nerve system*; the relation between *nervous* and *system* is just what it would be if *nervous* were a nominal modifier of *system* rather than an adjectival one (cf. *a nervous mother*). Further evidence for the analysis of such adjective uses as nominal comes from the fact that these adjectives exhibit several properties of nouns, including the inability to receive degree modification, the ability to conjoin only with other nominal adjectives, countability, and bearing case roles (Levi 1978). The modifier noun in a noun-noun compound is not a semantic predicate applying to the referent of the noun phrase, as evidenced by Beesley's (1982) sentence-adverb test:

(29) \*the obviously tax lawyer

This property is shared by nominal adjectives:

(30) \*the obviously criminal lawyer

The inability of nominal adjectives to function predicatively in the syntax follows from the Predicativity Principle as well.

In summary, the Predicativity Principle (13) accounts for a wide range of restrictions on the ability of adjectives to function syntactically as predicative adjectives. The behavior of *mere* is not at all idiosyncratic, but is governed by a broad generalization. It is not necessary to learn *mere* as an arbitrary exception; rather, what must be acquired is the notion that only semantically predicative adjectives can be syntactically predicative.

## 5.2 Prenominality

The previous section dealt with adjectives that are unable to function syntactically as predicative adjectives. In this section, I address adjectives that are unable to function prenominally, such as *aghast* (e.g. *\*the aghast man*). Whereas a single principle seems to account for all of the observed restrictions on the ability of an adjective to function predicatively, there appear to be multiple principles at work in the domain of adjectives that fail to function prenominally.

### 5.2.1 *a-* adjectives

#### 5.2.1.1 Morphological generalization

Goldberg's (2006) example of an adjective with an idiosyncratic inability to function prenominally is *aghast*. *Aghast* falls into a class of words beginning with *a-*, including *alive*, *asleep*, *awake*, *afraid*, *alone*, *akimbo*, *asunder*, *agape*, *agog*, *afloat* (see also Marchand 1966:92, Salkoff 1983, and Jacobsson 1996 for dozens of other examples). I argue that the morphological make-up of these adjectives is implicated in their inability to function prenominally.

All of these *a-* adjectives begin with an initial, unstressed schwa vowel, so it could be hypothesized that their phonological shape is responsible for their syntactic behavior. There are some adjectives with an initial, unstressed schwa vowel that can be used prenominal, however: *an astute remark*, *an aloof air*, *an adroit politician* (Quirk et al. 1985:409). The correct generalization does not seem to be phonological (but see §5.2.1.4 for further discussion of this issue).

It could also be hypothesized that the inability of *a-* adjectives to be used prenominal is etymological. In particular, their behavior could be imagined to be a consequence of their “prepositional unit origin,” as suggested by Long (1961:286).<sup>9</sup> The prefix *a-* is related to *on*, so adjectives like *alive* derive from prepositional phrases. Since prepositional phrases cannot function prenominal, (e.g. *\*the on the boat man*), this property of *a-* adjectives could be seen as a historical relic of their original status as prepositional phrases. Although this historical observation may form part of the story, it suffers from several limitations as an explanation for the syntactic behavior of *a-* adjectives. First, it is not the case that every single adjective with a prepositional origin is unusable prenominal: Although *a-* derives from *on* in *afloat*, *alive*, and *asleep*, it also derives from *on* in *aloof*, which is usable prenominal. Moreover, several of the predicative-only adjectives beginning with *a-* do not have this origin. *Afraid*, *aghast*, and *awake* derive from participles and *alone* derives from *all+one*.

Although the etymological origin of the *a-* adjectives as entire prepositional phrases cannot be used as an explanation for their behavior, the etymological origin of the *a-* prefix itself provides a viable explanation, because the following generalization holds: *All adjectives containing a- followed by a recognizable stem are blocked from prenominal position.* In other words, perhaps adjectives like *afraid*, which do not contain *a-* historically, nonetheless contain it synchronically (perhaps due to diachronic

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<sup>9</sup>In a similar claim, Bolinger (1967) attributes the behavior of *a-* adjectives to their “adverbial origin” (p. 12).

| Word          | Prenominal? | Remainder    | Morphological status      |
|---------------|-------------|--------------|---------------------------|
| <i>abed</i>   | No          | <i>bed</i>   | Free                      |
| <i>afraid</i> | No          | <i>fraid</i> | No, but cf. <i>feared</i> |
| <i>aghast</i> | No          | <i>ghast</i> | Bound, cf. <i>ghastly</i> |
| <i>alive</i>  | No          | <i>live</i>  | Free                      |
| <i>alone</i>  | No          | <i>lone</i>  | Free                      |
| <i>asleep</i> | No          | <i>sleep</i> | Free                      |
| <i>awake</i>  | No          | <i>wake</i>  | Free                      |
| <i>adroit</i> | Yes         | <i>droit</i> | No                        |
| <i>aloof</i>  | Yes         | <i>loof</i>  | No                        |
| <i>astute</i> | Yes         | <i>stute</i> | No                        |

Table 5.1: Properties of selected *a-* adjective stems

reanalysis). Table 5.1 provides a sampling of *a-* adjectives, and illustrates that in the adjectives beginning with *a-* that do not function prenominally, *a-* attaches to a recognizable morpheme. In every case where the adjective is not usable prenominally (where there is a “No” in the “Prenominal?” column), the remainder of the adjective, when *a-* is deleted from the initial part of the adjective, is a free morpheme (*live*, *lone*, etc.), except for two cases: *\*fraid* and *\*ghast*. In these cases, however, the remainder can still be identified as a morpheme: *\*ghast* is a bound stem, also found in the semantically related word *ghastly*; *\*fraid* may be cognitively related to *feared*, so *afraid* is seen as a variant of *afeared* that has arisen through sound change. The non-attributive *a-* adjectives (*adroit*, *aloof*, *astute*) do not contain any stem that can be recognized as meaningful: *\*droit*, *\*loof*, and *\*stute* are meaningless and do not occur elsewhere.

If this generalization constrains productivity, then new adjectives that are coined with the *a-* prefix should not be usable prenominally. This prediction is borne out: The *a-* prefix is productive (Salkoff 1983, Jakobsson 1996; *pace* Kuiper 1987), and when new adjectives using this prefix are coined, they are unacceptable as attributives. For example, Salkoff (1983:299) cites *abud* as an example “not to be found in any

dictionary,” as in:

(31) The tree is *abud* (with green shoots).

Like other *a*- adjectives, *abud* cannot be used prenominally:

(32) \*An *abud* tree is a beautiful thing to see.

Another example Salkoff gives is *afizz*:

(33) The water is *afizz* (with bubbles).

It behaves similarly to other *a*- adjectives as well:

(34) \**Afizz* water was everywhere.

This is an important point, because it means that there are constraints on the productivity of the use of adjectives as prenominal modifiers that rule out cases like *aghost*. The constraints on *a*- adjectives do not need to be learned individually for each adjective; their behavior follows from a general limit on productivity.

### 5.2.1.2 Phrasality

The previous sub-subsection (§5.2.1.1) established the most important point for the purposes of this dissertation: that *aghost* is not an arbitrary exception, but an adjective whose inability to function prenominally falls under a larger generalization. It remains an interesting question, however, whether and how this generalization falls out from even larger generalizations.

It has been suggested (Sadler and Arnold 1994; Larson and Marušič 2004) that the behavior of *a*- adjectives is related to the fact that adjectives do not license complements in prenominal position, as illustrated in (35):

(35) a. a student keen on jazz

- b. \*a keen on jazz student

Adjective phrases like *keen on jazz* are similar to *a-* adjectives in the respect that they are head-initial: *keen on jazz* is headed by *keen* (syntactically) and *aghast* is headed by *a-* (morphologically). Whether head-complement constructions are ruled out directly via Williams's (1982) Head Final Filter or via more general principles about adjective syntax such as Sadler and Arnold's (1994) proposal that prenominal adjectives are non-phrasal ( $X^0$  projections), these two cases could be seen as analogous and subject to the same principle.

Such an explanation would rely on the idea that words, like syntactic phrases, have heads (Williams 1981; Selkirk 1982). A reasonable understanding of what it means to be the head of a morphologically complex word is based on feature projection: The morpheme whose features match the features of the adjective-plus-noun combination is the head (Selkirk 1982). For example, the compound *parts supplier* is singular despite the plurality of the first noun (*parts*). The second noun (*supplier*) determines the plurality of the compound as a whole; if it were pluralized, then the compound would be plural (Williams 1981). The syntactic category of a morphologically complex word is another feature projected by the morphological head.

In English, it is generally the right-hand member of a morphologically complex word that determines the category of the word, and hence, is the head. This generalization is stated in Williams's (1981:248) *Right Hand Head Rule*, which implies that suffixes can "alter" the syntactic category of a word, but prefixes cannot. For example, the prefix *pre-* attaches to adjectives (*premature*, *premodern*, *prenatal*), nouns (*precondition*, *prehistory*, *preschool*) and verbs (*preheat*, *prepay*, *prerecord*, *prewash*), and the resulting word always matches the syntactic category of the stem. In contrast, suffixes regularly alter the syntactic category of the word. Adding *-ly*, for example, to an adjective such as *mature* creates an adverb: *maturely*. If *a-* adjectives are, as suggested above, headed by the prefix *a-*, then they are counterexamples to the Right

Hand Head rule.

Other potential counterexamples to the Right Hand Head rule, namely *be-*, *de-*, and *en-*, are discussed by Olsen (1993). These prefixes create verbs from adjectival stems (*becalm*, *debase*, *embitter*), nominal stems (*bedevil*, *debone*, *embed*), and verbal stems (*bedazzle*, *decompress*, *endazzle*). Using a wide range of attested forms, Olsen (1993) demonstrates that these prefixes do not, in fact, counterexemplify the Right Hand Head rule. She argues that *be-*, *de-*, and *en-* attach only to verbal stems. When they appear to attach to adjectival and nominal stems, she argues, the stem is actually a verb formed by zero-derivation (deriving the verb without adding an overt morpheme). Strong evidence for this analysis comes from the fact that the prefixes *be-*, *de-*, and *en-* do not attach to non-verbal stems whose verbal forms are created through overt suffixation. The verbal form of *light*, for example, is *lighten*, and the *en-* form is, correspondingly, *enlighten*, rather than \**enlight*; the verbal form of *live* is *liven*, and the *en-* form is *enliven*, rather than \**enlive*.

The *a-* prefix, like *be-*, *de-*, and *en-*, creates adjectives from stems of a variety of syntactic categories, as Kuiper (1987:55) observes:

1. noun stems: *astern*, *ashore*, *afield*, *aboard*
2. verb stems: *adrift*, *aglow*, *asleep*, *aflutter*, *awake*, *afloat*
3. adjective stems: *alone*, *alike*, *alive*

Since *a-* determines the category of the word as a whole, rather than the stem to which it attaches, *a-* appears to be the morphological head of the word. However, Olsen's zero-derivation analysis does not carry over to *a-* adjectives. Unlike prefixes like *em-*, *a-* prefixation is possible with adjectives whose verbal form contains an overt suffix: *alive* (cf. *liven*); *alight* (cf. *lighten*). This shows that the stem in *a-* adjectives does not undergo a zero-derivation process creating a verb stem prior to affixation by

*a-*. There is no other plausible zero-derivation process that could feed *a-* prefixation. This class of adjectives appears to be a genuine counterexample to the Right Hand Head rule.

One possible way of utilizing the head-initial nature of *a-* adjectives to explain their inability to function prenominally is to extend Williams's (1982) *Head Final Filter*,<sup>10</sup> which requires that the head of a prenominal modifier aligns with the right edge of the modifier. This principle rules out examples like (35), in which the complement of an adjective occurs following the adjective in a prenominal modifier. If the Head Final Filter were extended "below" the level of the word, as it were, then words that are not morphologically head-final, such as *a-* adjectives, would be ruled out as prenominal modifiers. This version of the Head Final Filter would require that the morphological head of a prenominal modifier must be final.

One immediately puzzling piece of evidence under this proposal is that there do appear to be morphologically complex, non-head-final prenominal modifiers. The following examples suggest that the Head Final Filter is "inactive in the lexicon" (Escribano 2004:5):

- (36) a. a higher-than-average (basic) salary  
 b. a tongue-in-cheek (snide) remark

In the examples in (36), the final element (*average* or *cheek*) is not the the head, yet the examples are acceptable. (The intervening adjectives *basic* and *snide* show that the examples are genuine adjective-noun constructions, rather than compounds.) Such examples do not pose a serious threat to the idea of extending the Head Final Filter to account for the behavior of *a-* adjectives, however, because it can be argued that complex modifiers like *higher-than-average* are not derived through a morphological

<sup>10</sup>Not to be confused with Williams's (1981) Right Hand Head rule despite their interestingly confusable names.

process of affixation, but rather a process converting syntactic phrases into lexical items.

A more pernicious problem with the approach under consideration is that the Head Final Filter does not appear to be the best way of explaining the restriction against complement-taking prenominal modifiers shown in (35). As Abeillé and Godard (2000) point out, there are several problems with an account of the contrast in (35) based on the Head Final Filter. One major problem is that it falsely rules out post-adjectival uses of *enough*, as in:

(37) a big enough shirt

Since *big* is the head of the phrase *big enough*, the prenominal modifier in *a big enough shirt* is not head-final. The Head Final Filter also fails to account for the apparently related fact that both conjuncts in a conjoined prenominal modifier are subject to the same constraint, as Abeillé and Godard point out:

(38) \*a proud of his son and happy man

The Head Final Filter is an overly superficial way of capturing the contrast in (35).

Another way of capturing the restriction against complement-taking prenominal modifiers is to posit that prenominal modifiers are not phrasal projections, in the  $X'$ -theoretic sense (Stowell 1981). According to Sadler and Arnold's (1994) analysis of phenomena like (35), prenominal adjective modifiers are "weakly lexical" constructions, i.e., "constructions whose root is a zero level projection, and which contain only zero level projections" (Sadler and Arnold 1994:213). As Sadler and Arnold (1994:216) suggest in passing, the idea that prenominal modifiers are weakly lexical in their sense could potentially be used in conjunction with the observation that *a-* adjectives are head-initial and the Right Hand Head rule to explain why *a-* adjectives cannot function prenominally. Suppose that the Right Hand Head rule is exceptionless: words must be headed by their right hand member, in English. Any

combination in which the head is not the right hand member must then be phrasal. *A-* adjectives (which, in fact, have origins in prepositional phrases) are therefore phrasal, and thus cannot be used prenominal. I leave it for future research to verify Sadler and Arnold's (1994) analysis and to show that *a-* adjectives are phrasal, but an explanation along these lines may be viable.

### 5.2.1.3 Characterization

According to Bolinger (1967:12), *a-* adjectives “have been restricted to predicative and post-adjunct position both by their adverbial origin and their sense of temporariness.” The idea that *temporariness* is at work is the question of interest in this sub-subsection.

Bolinger (1967) argues that in general, prenominal adjectives must be *characterizing* rather than temporary, and brings a wide range of evidence to bear in support of this notion. Bolinger does not really define the property of being “characterizing,” but it has been likened to the property of being an individual-level predicate (Svenonius 1994). One type of evidence comes from contrasts in interpretation between prenominal and postnominal adjectives. For example, compare *the only river navigable* and *the only navigable river*: the former has an ‘occasion’ reading in which “the temporary states of rivers are referred to,” and the latter has a ‘characteristic’ reading, referring to “classes of rivers” (Bolinger 1967:3–4). Another contrast in support of the idea that prenominal adjectives must be characterizing is that deverbal adjectives related to verbs describing processes that leave a mark are more acceptable as prenominal adjectives: While we might talk of a *scratched surface*, we would not talk of a *scratched head*. Leaving a mark is “the unhewn side of characterization, the most obvious means of stigmatizing a thing by what appears on its surface” (Bolinger 1967:9).

Bolinger's idea can be cast in terms of *stage* vs. *individual level* predicates (Carlson 1980), as Svenonius (1994) points out.<sup>11</sup> The idea that stage vs. individual level predication is relevant to prenominal predication is found in several other places in the literature as well. DiSciullo and Williams (1987:50) describe a related contrast in meaning between compounds like *bank robber* and phrases like *man who is robbing a bank*: the former describes a permanent property, while the latter describes a temporary property. Words, including compounds, are "generic" in this sense, while phrases are not, according to DiSciullo and Williams (1987). They suggest that the genericity of words comes about because words may contain no references to time, or tense, unlike sentences. According to Kratzer's (1995) analysis of the stage vs. individual level distinction, containing a reference to a spatiotemporal location is exactly what distinguishes stage-level predicates from individual-level predicates, so DiSciullo and Williams's (1987) suggestion foreshadows Kratzer's (1995) analysis of individual-level predicates. Sadler and Arnold (1994), arguing that adjective-noun combinations are word-like, take up DiSciullo and Williams's (1987) suggestion and apply it to adjective-noun combinations, effectively claiming that prenominal adjectives must be stage-level in the Kratzerian sense. In general, Bolinger's idea of the characterizing, generic, or individual-level nature of prenominal adjectives is "quite palpable and pervasive" despite the fact that "it is difficult to put a finger on what [it] amounts to" (DiSciullo and Williams 1987:50).

Several facts clearly temper the applicability of the broad slogan, "prenominal adjectives are individual-level and post-nominal adjectives are stage-level." First,

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<sup>11</sup>Bolinger sometimes describes characterization in terms of *utility* of the concept, rather than temporariness. For example, Bolinger points out that while there are, for example, *fish-eating dinosaurs*, one would never call a secretary who erases mistakes a *mistake-erasing secretary* or a wife who wakes her husband a *husband-waking wife*; "These must wait the day when we have some interest in characterizing secretaries as mistake-erasing or wives as husband-waking" (Bolinger 1967:7). Bolinger also points out the contrast between *deposited money* and *withdrawn money*; the latter would be unusual because "withdrawing money does not put it in a situation that interests us" (op. cit.: 9). This insight is similar to the one developed by Goldberg and Ackerman (2001).

individual-level adjectives can follow indefinite pronouns, as in *something red* (Svenonius 1994), so individual-level adjectives are not excluded from postnominal position across the board. Furthermore, individual-level predicates with complements (e.g. *fond of children*) are not only allowed in post-nominal position, they are restricted to this position, as Sadler and Arnold (1994) point out. With these exceptions, however, it is generally the case that post-nominal adjectives are stage-level.

Prenominal position does not seem to be restricted to individual-level interpretations to the same extent that post-nominal position is restricted to stage-level interpretations. The prenominal construction *navigable river*, in fact, is ambiguous between a ‘temporary’ reading and a ‘characteristic’ reading; although postnominal adjectives do not generally have individual-level readings, prenominal adjectives are capable of receiving either type of interpretation.

Moreover, as Jacobsson (1996:210) points out, it is a “tendency rather than a rule” that prenominal modifiers are not stage-level: There are adjectives describing temporary qualities that are perfectly capable of functioning as prenominal adjectives, such as *naked*, as in *a naked man*. The difference in acceptability as a prenominal modifier between adjectives like *naked* and adjectives like *fine* (on the *How are you?* reading) cannot be explained on the basis of temporariness, because the states described by these two adjectives would seem to be equally temporary. *Naked* can be shown to be a stage-level adjective by application of standard diagnostics, such as the ability to function as the complement of verbs of direct perception like *see* (Carlson 1980), as in *I saw him naked*, and ability to occur in existential *there* sentences (Milsark 1977), as in *there were people naked*. Examples such as *naked* show that it possible for stage-level predicates to function prenominally.

The sense in which prenominal adjectives must be “characterizing” is therefore not entirely clear, although the idea is intuitively compelling. However this is worked out, it may be an additional factor contributing to the unacceptability of *a-* adjectives

as prenominal modifiers.

#### 5.2.1.4 Metrical factors

Another factor that has been proposed to play a role in the unacceptability of *a*-adjectives is their stress pattern (e.g. Schlüter 2005). Because *a*-adjectives consist of an unstressed schwa vowel followed by a stressed syllable, and they typically occur between an unstressed determiner and a stressed noun, they typically violate the general principle that stress should alternate (Chomsky and Halle 1968; Selkirk 1984). Obviously, metrical factors would not account for the contrast between those adjectives that contain *a*- as a prefix and those that happen to begin with an unstressed schwa (*astute*, *aloof*), but metrical factors may still play a role.

Evidence for the role of metrical factors in the domain of *a*-adjectives comes from the amelioration of their prenominal use by preceding modifiers. It appears that, as Quirk et al. (1985:409) claim, “*a*-adjectives can occur attributively when they are modified.” Here are two examples Jacobsson (1996) gives:

- (39) “The bloke got triple-tapped,” a sargeant recounted one day about a luckless but still alive friend near the Zambian border. [*Time*, February 27 1978]
- (40) Sometimes you got to feel sorry for Perry. He must be one of the most alone people there ever was. [Truman Capote, *In Cold Blood*, 335]

Schlüter (2005:84) shows that, although the adjectives *ashamed* and *aware* only rarely occur prenominally, they are much more likely to occur with a preceding modifier when in prenominal position. In non-prenominal position, *ashamed* occurs unmodified in 81% of cases (in British newspaper corpora), and *aware* occurs unmodified 63% of the time. In prenominal position, however, *ashamed* occurs unmodified 2% of the time, being adverbially premodified, compounded, or prefixed in the other 98% of cases; *aware*, similarly, occurs unmodified 7% of the time in prenominal position. Schlüter

suggests that this result can be understood on the basis of metrical considerations, perhaps in the following way: a preceding modifier allows stress to be retracted onto the modifier, allowing stress clash to be avoided.<sup>12</sup>

### 5.3 Conclusion

This chapter has provided an in-depth examination of Goldberg’s (2006) putative examples of arbitrary negative exceptions in the adjectival domain: *aghast* and *mere*. It has been shown that both of these adjectives are subject to “general facts about adjectives” and that the inabilities of these adjectives to function prenominal or predicatively are not idiosyncratic facts that must be memorized.

Examining these cases has led to a fuller understanding of the principles involved. The Predicativity Principle developed in §5.1.1 has sometimes been implicitly assumed, but has not been explicitly stated as a principle. Following the statement of the Predicativity Principle, §5.1.2 shows how it applies, by subclassifying prenominal-only adjectives into types of non-predicative adjectives, and showing, for each subclass, how its syntactic behavior follows from the Predicativity Principle.

In §5.2.1.1, competing explanations for the inability of *a*-adjectives to function prenominal were weighed. One hypothesis that can be ruled out is that their behavior is a consequence of their having originated as prepositional phrases. Under a purely historical explanation, restrictions on *a*-adjectives would be arbitrary exceptions, from the learner’s perspective. Instead, I have argued that adjectives like *aghast* are part of a productive class whose members are systematically restricted from prenominal position, defined morphologically by the inclusion of the *a*-prefix.

Although this generalization is sufficient to make the case against arbitrariness in this domain, I have identified and evaluated several even deeper explanations for the

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<sup>12</sup>This is not the only possible explanation for this result, however; it may have to do with issues of informativity such as those discussed by Goldberg and Ackerman (2001).

behavior of *a-* adjectives. Two approaches based on the observation that *a-* adjectives are head-initial are considered in §5.2.1.2: one based on the Head Final Filter, and one based on a requirement that prenominal adjectives be non-phrasal. Of these two, only the latter hypothesis, based on phrasality, can be shown to be viable. Other factors may also play a role, although these factors have limited explanatory power: Bolinger’s (1967) idea that prenominal adjectives must be “characterizing” (§5.2.1.3), and the principle of metrical phonology that stress should alternate (§5.2.1.4).<sup>13</sup>

Although several more general explanations for the behavior of *a-* adjectives have been considered, it has not been possible to find strong support for the existence of a general principle from which their behavior falls out as a consequence. If such an explanation is not to be found, the restriction on *a-* adjectives could be considered “arbitrary” in a certain sense, but not in the sense that is important for Baker’s Paradox. Whether or not a deeper explanation can be found, it remains the case that *a-* adjectives do not meet the criteria governing the productivity of the use of prenominal adjectives. In this sense, they are not arbitrary exceptions. It is thus possible to conclude that the “arbitrariness” premise of Baker’s Paradox in this domain – the claim that there are arbitrary negative exceptions in the realm of prenominal or predicative uses of adjectives – is not empirically well-founded.

Therefore, it is not necessary to assume that the learner must use word-specific negative evidence in order to acquire the properties of adjectives. Although the learner may initially overgeneralize and need to cut back, this cutting back process may involve learning generalizations, rather than constraints on particular words. For example, (41) shows an example of corrective feedback in response to an overgeneralization of *alive* to prenominal position from the ChiLDES corpus (MacWhinney and Snow 1985) by Mark (age 4;8.07). The dialogue pertains to a possible trip to

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<sup>13</sup>To the extent that these other factors do play a role, there is a smaller acceptability gap between *a-* adjectives and other adjectives to be explained, and the examples can be seen as “less arbitrary” in that sense.

the graveyard at night (Halloween night, it seems), and the ghosts rising from their graves:

- (41) Mark: I'll go [poking motion] then, then they would be dead.  
 Father: they are dead already.  
 Mark: Yeah but, yeah but even more stuff would come out of 'em and then they'll never even want come here and if they come alive again I'll stick my fingers in them again  
 Father: Do you think it'll work?  
 Mark: Um.  
 Father: Sure.  
 Father: Sure it'll work.  
 Mark: because it even ... **alive monsters** that like morning, ah, get, get killed from getting sticked in their tummy.  
 Father: **Live monsters?**  
 Mark: Yeah.  
 Father: What are, what are some **live monsters?**

In this instance, the caretaker provides the child with corrective feedback allowing him to infer that there was something ill-formed about his use of *alive* in *alive monsters*. Although the feedback concerns a specific lexical item, Mark may construe this feedback as indicating a general constraint. For example, after several experiences of this type, Mark may begin to hypothesize that words that begin with *a-* are not acceptable in prenominal position. A more articulated view of this process is developed in the following chapter.