1. Introduction

Published as the 19th volume of the Human Cognitive Processing series, Réka Benczes’ Creative Compounding in English is a cognitive linguistic study of the semantics of English N-N (Noun-Noun) compounding. One of the main themes of compounding research is the interpretation problem (Lieber and Štekauer (2009: 17–18)), in which the most fundamental observation to be addressed is that this subtype of compound exhibits a very wide semantic latitude. Various attempts have been made to capture the semantic interpretation of N-N compounds in traditional grammar, generative linguistics, and cognitive linguistics. Benczes’ book, however, is unprecedented in focusing on metaphor and metonymy in compounding and in giving an elaborate and comprehensive cognitive-linguistic analysis. Benczes’ main claims can be summarised as follows:

* I have benefited from discussions with the participants in my 2013 graduate class at Tohoku University and the members of the Lexicon Study Circle. I would like to express my deep gratitude to Masaharu Shimada and two anonymous EL reviewers for their very careful reading and informative comments, which not only contributed to the improvement of the first draft but also saved me from making embarrassing mistakes. I am also grateful to Kazuya Nishimaki and Tatsuhiro Okubo for informing me of related studies. Needless to say, the responsibility for this paper is entirely my own. A part of this study is supported by the Ministry of Education, Culture, Sports, Science and Technology (Grant-in-Aid for Scientific Research (C), No. 24520417).
(1) a. The cognitive processes of metaphor and metonymy are actively and systematically involved in the interpretation of English N-N compounds.

b. Metaphorical/metonymical compounds are based on the same regular, productive patterns as non-metaphorical/metonymical compounds but differ from them in terms of the semantic creativity. In Benczes’ words, “[n]oun-noun compounds that utilise metaphor and metonymy make use of the creative associations that exist between concepts; associations based on similarity, analogy or contiguity. It is these associations that I wish to emphasise with the term ‘creative compound’” (p. 7).

c. “The main difference between endocentric compounds such as apple tree and exocentric compounds such as hammer-head is […] creativity […]” (p. 184). The so-called exocentric compounds result from the semantic creativity, i.e. the working of metonymy/metaphor.

Let me first state my viewpoint as a reviewer and my overall conclusions. As a morphologist, I will review this book as a study of compounding rather than as a study of the cognitive processes of metaphor and metonymy. The book has fully convinced me of the claim in (1a) but less so of the claim in (1c); as will be discussed later, I find (1c) to be too strongly stated. Nonetheless, (1c) is insightful and offers interesting research possibilities. As for the claim in (1b), I would find it preferable if the author could provide a clearer definition of creativity, independent of metaphor and metonymy. It is clear that she distinguishes creativity from productivity, i.e. “the possibility for language users to create a new word” (p. 5, fn. 7), characterizing the former by semantic properties such as “imaginative” and “associative” (p. 6) and also by non-rule-governed novelty (p. 7). However, it remains unclear how this traditional distinction is related to the ubiquity and systematicity of metaphor and metonymy. Ultimately, the most important contribution of this study to the compounding research lies in proving claim (1a) in a well-organised and focused manner and concretely depicting how the involvement of metonymy/metaphor increases the semantic latitude of N-N compounds.

This review is organised as follows. Section 2 is a summary of Benczes’ discussion focusing mainly on her claims in (1a–c). In section 3, I will elaborate on the views stated in the above paragraph and make additional comments. Section 4 concludes this review.
2. Summary

The book under review consists of nine chapters and a data appendix. Part 1 (Chapters 2–4) is basically a literature review and theoretical assessment in which traditional, generative, and cognitive approaches to the topic are evaluated and the superiority of the third approach is advocated. Part 2 (Chapters 5–9) applies the cognitive framework to 78 creative compounds listed in the appendix.

2.1. Part 1: Theory and Past Approaches

Carefully reviewing representative studies on English compounding in the pre-cognitive linguistic frameworks, Benczes notices a marked skew of the data used by the descriptivists and transformationalists towards transparent endocentric compounds, i.e. compounds that constitute a hyponym of the right-hand constituent, such as apple tree. Other types of compounds are either ignored or touched upon very briefly as idiosyncratic examples unfit for serious study. For example, the compounds given in (2a–d) and (3a–c) below are cited as exocentric compounds and metaphorical/metonymical compounds respectively by some of her predecessors, but Benczes finds their descriptions (or analyses, if any) unsystematic and unsatisfactory.

(2) a. blockhead, hunchback, spoonbill; bighead, redhead, redcoat, highbrow
   b. pickpocket, scarecrow, spoilsport, cutthroat
   c. runabout, runaway, sit-in; dugout, left-over; blackout
   d. secretary-treasurer, sofa-bed

(3) a. moon-fish, trumpet plant, clubfoot
   b. banana skin “something that causes embarrassment,” beach ball “a sphere for transporting astronauts,” ladyfinger “a finger-shaped sponge cake”
   c. desktop

The data in (2) and (3) are my re-arrangement of a part of the data from the literature discussed in Chapter 2. Exocentric compounds in (2a) are called bahuvrihi compounds and have the structure of N+N or A+N. Those in (2b) consist of verbs and their object nouns, whereas those in (2c) are combinations of predicative elements and particles; (2d) are examples of a type of coordinate compounds. As for (3), metaphor is working on the first constituent in (3a) and on the compound as a whole in (3b), whereas (3c) is a metonymical use of the N-N compound.

Benczes’ claim in (1c) is a strong hypothesis concerning the relation be-
tween these two unduly neglected classes of compounds. Her essential idea is that exocentric compounding can be analysed as a type of metaphorical/metonymical compounding, or creative compounding. This idea can be seen as an expansion of the fairly common, metonymy-based explanation of the semantics of the bahuvrihi compounds in (2a); their semantic excentricity has been ascribed to the PART FOR WHOLE metonymy by many researchers (e.g. Booij (2002: 143–144)). In addition, some speak of the (3b) type as exocentric compounds. However, no researchers, not only among those reviewed by Benczes in Chapter 2 but also in general, have ever advocated the inclusion relation or even a wide overlap between exocentric and metaphorical/metonymical compounds. Therefore, the claim in (1c) is highly original and highly controversial in the area of compounding research.

As for the claim in (1a), earlier studies have noted the involvement of metaphor/metonymy in N-N compounds. In Benczes’ view, however, a full exploration of the interpretation of N-N compounds such as (3a–c) requires recourse to the cognitive linguistic framework. Thus, in Chapters 3 and 4, she presents an overview of the basic principles and assumptions of cognitive linguistics and examines the preceding analyses of English N-N compounds proposed in this framework. The groundwork was laid by Ryder (1994), Coulson (2000), and Fauconnier and Turner (2002), the first one and the latter two applying schema theory and blending theory to N-N compounding, respectively. Dirven and Verspoor (1998) raise the issue of the compositionality of compounds. In the end, the examination of this research history leads Benczes to adopt the integrated approach advocated by Sweetser (1999), who claims that the analysis of compounding requires the full “regalia” of cognitive linguistics. Thus, Benczes analyses the semantics of N-N compounding using the standard theories of metaphor/metonymy (Kövecses (2002), among others) and blending. To address its formal aspects, particularly the process of compounding itself and the modifier/head structure, she employs the notion of schema. Compositionality and idiomaticity are claimed to be a matter of degree not only in compounding but also in general.

2.2. Part 2: Analysing Creative Compounds

Chapters 5–8 present Benczes’ analyses of 78 creative compounds. The dictionary data, which Benczes regards as established words, account for approximately 36% of the data set, whereas the Internet data, which she counts as neologisms, account for 50%.

Benczes’ most interesting finding from the data is that metaphor and
metonymy can be seen to apply separately or in tandem to the compound constituent in one of the following five patterns: affecting the modifier only, affecting the head only, affecting the compound as a whole, affecting the modifier and the head individually, or affecting the relation between the two constituents. Specifically, the 78 creative compounds consist of the 14 subtypes in the following table, in which the numbers in brackets show the number of examples of each subtype:

| Process Affectee | Metaphor | Metonymy | Metaphor and Metonymy |
|------------------|----------|----------|-----------------------|
| Modifier         | 1. puppy love [6] | 6. Lexus lane [19] |
| Head             | 2. belly button [3] | 7. gas light [2] |
| Compound as a whole | 3. birdcage [4] | 8. humpback [4] |
| Modifier and head separately | 4. flame sandwich [2] | 9. phone neck [4] |
| Modifier-head relation | 5. trophy child [18] | 10. lamppost [1] |
|                  | 11. <metonymy + metaphor> firedog [4] |
|                  | 12. <metaphor + metonymy> acidhead [1] |
|                  | 13. <metaphorical relation, metonymical modifier> waitress mom [7] |
|                  | 14. <metaphorical relation, metonymical head> bell-bottoms [3] |
| Total            | [33] | [30] |

Table 1. 14 subtypes of Benczes’ creative compounds

Metaphor-based, metonymy-based, and metaphor-and-metonymy-based compounds each have four or five subtypes (1–5, 6–10, and 11–14, respectively) depending on where and how the cognitive processes affect them. I will refer to these subtypes by the numbers 1–14 assigned in Table 1.

Let us start with metaphor-based compounds. The conceptual metaphor, which is fundamentally a mapping between distinct conceptual domains, uses a statement (e.g., “PEOPLE ARE ANIMALS”), a schema, or an image, whereas the blending of the domains involved can give rise to a simplex, mirror, single-scope, double-scope, or multiple-scope network. If Benczes’ analyses are correct, it appears safe to conclude that the subtypes 1 to 5 are independent of the type of metaphor involved. Thus, the PEOPLE ARE ANI-
MALS metaphor is used in puppy love “the love of a very young, immature person” (Type 1) and chicken hawk “a person who now advocates war but who avoided military service” (Type 4). Some Type 4 compounds involve blending (e.g. flame sandwich “a note consisting of a negative comment surrounded by two positive comments”), but others do not (e.g. chicken hawk).

To illustrate the process of blending, flame sandwich is interpreted based on a multiple-scope network in which three input spaces are blended, the sandwich domain, the line of comments domain, and the argument/fire domain. The first and second input spaces show the following mappings: the <slices of bread> correspond to the <first and third (positive) comments>, whereas the <filling> maps onto the <middle (negative) comment>. The interpretation of the middle comment as negative comes from the third input space based on the argument is fire metaphor, which is evoked by flame.1 Benczes also notes that the choice of sandwich as the profile determinant of this compound is logical given the ideas are food metaphor.

Chapter 6 shows that metaphor-based compounds are particularly prolific in Type 5. This type of compound is interpreted by mapping to the head concept an image evoked by the modifier (e.g. submarine sandwich “a sandwich shaped like a submarine”) or a schema evoked by the modifier (e.g. shuttle diplomacy “the movement of diplomats between countries whose leaders refuse to talk directly to each other,” in which the SHUTTLE MOTION schema is evoked). In semantically more elaborate cases, the modifier and head are blended into a single-scope blend (e.g. sandwich generation “people who must care for both their children and their parents”) or a double-scope blend (e.g. trophy child “a child used to impress other people and enhance the parents’ status”). Benczes claims that the latter type is semantically more elaborate than the first type because of the lack of a generic space, a space in blending that emerges from the common property of the input spaces. Thus, in sandwich generation, the generic space of “horizontal layers” guarantees systematic mappings between the two input spaces (SANDWICH and GENERATION), which leads to the emergence of a blend that inherits the structure of one of the input spaces. The mapping in trophy child, however, is not as systematic because it depends entirely on language users’ creative association. Trophy and child evoke the competition and

1 It is unclear how the interpretation of the first and third comments as positive is derived.
the RAISING A CHILD domains as input spaces, respectively, and the mapping between these spaces results in a blend constituted of selective components of the two domains.

Next, metonymy is a conceptual process in which we use a salient entity as a reference point to gain mental access to another entity, the target, within the same cognitive domain. Types 6–10 in Benczes’ data show that metonymy affects N-N compounding in the same structural patterns as metaphor; however, as far as her analyses are concerned, the involvement of blending is much more limited. She uses blending only in a few instances of Type 6 (e.g. *Lexus lane* “a highway lane set aside for multi-passenger vehicles but which can also be used by single-passenger vehicles for a fee”) in which the modifier evokes a closely related concept, which then acts as an input space to be blended with the input space provided by the head. Rather, for the majority of her metonymy-based compounds, Benczes stresses that their internal semantic relations are based on common schemas of English compounding such as *<cause-effect>* (e.g. *hay fever*) and *<source-result>* (e.g. *student group*).

Types 6, 7, and 9 exhibit various metonymical relations. In Type 7, the head of *handwriting* is interpreted by the ACTION FOR RESULT metonymy, whereas *gaslight* can mean “gas lamp” because of the working of the PRODUCT FOR PRODUCER metonymy on the head. *Phone neck* “neck and shoulder pain caused by holding a phone for long periods” belongs to Type 9 because *phone* refers to an action (INSTRUMENT FOR ACTION), and *neck* refers to pain (THING FOR PERCEPTION). These metonymical interpretations are then combined in a cause-effect relation with each other. Conversely, Types 8 and 10 make intensive use of metonymical relations between part and whole. Benczes’ examples of the former type (e.g. *humpback* “a large whale with a curved back”) are uniformly based on the PART FOR WHOLE metonymy.2

Finally, both metaphor and metonymy can affect a single N-N comp-

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2 We must be careful regarding Type 10. First, although Benczes claims that there are plenty of examples of this type in English (p. 160), she has detected only one instance in her data, *lamppost* “a tall post in the street with a lamp at the top.” Second, the analysis of *lamppost* as Type 10 itself is dubious because it is unclear what type of metonymy is working between *lamp* and *post*. If *lamp* and *post* are components that “together stand for the whole” (p. 161), *lamppost* should belong to Type 8 or 9. My analysis, which means giving up Type 10 because of the absence of instances, renders Table 1 more “logical” because in metaphor-and-metonymy-based compounds, the modifier-head relation can be metaphorical but not metonymical, as shown in Types 13 and 14.
pound. Geeraerts (2002) attempts to classify this type in terms of the sequence of metaphor and metonymy into cases in which the two processes work consecutively, in parallel, or interchangeably. Benczes, however, avoids this approach in light of the difficulty of unequivocally deciding the sequence. Instead, she calls readers’ attention to the four patterns in which metaphor and metonymy act simultaneously upon N-N compounds: Types 11 to 14. In Types 11 and 12, the two cognitive processes affect the compound constituents complementarily. For example, firedog “one of pairs of iron supports for burning logs in a fireplace” is a combination of a metonymical modifier and a metaphorical head whereas acidhead “an LSD user” exhibits the opposite combination. In Types 13 and 14, metaphor affects the relation between the modifier and head, either of which is additionally affected by metonymy. Thus, the constituents of waitress mom “a mother who works in a low-income job and has little formal education” and bell-bottoms “trousers that are very wide at the bottom” are in the “like” relation; however, waitress and bottoms here refer to the entire social class and the entire trousers, respectively.\(^3\)

Although Benczes does not discuss the relation between Types 1 to 10 and Types 11 to 14, Table 1 makes it clear that Types 11 and 12 are combinations of \(<\text{Type } 6 + \text{ Type } 2>\) and \(<\text{Type } 1 + \text{ Type } 7>\), respectively. Types 13 and 14 are Type 5 modified by Types 6 and 7, respectively. Note that Benczes’ data have no examples of the reverse patterns of Types 13 and 14, that is, compounds with the metonymical internal relation and the metaphorical modifier or head (or Type 10 modified by Type 1 or Type 2). This contrast can be accounted for in terms of the difference in productivity between Types 5 and 10; examples of Type 5 account for approximately one fourth of the data, whereas Type 10 has only one example.

3. Discussion

One of the basic tenets of the theories of metaphor and metonymy is that these processes are ubiquitous and systematic, similar patterns tran-

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\(^3\) *Waitress mom* attests to social stereotypes as cases of metonymy; Benczes claims that American culture takes the waitress as a stereotype of the class of women who work in a poorly paid job and have little formal education. Notably, the author also suggests that *waitress mom* is based on another stereotype, the stereotype of the housewife mother. Thus, in this culture, *mother* refers to a housewife mother, whereas non-stereotypical mothers are designated in a qualified manner.
scending individual lexemes, distinct linguistic units, grammatical modules, and the linguistic-nonlinguistic boundary. Benczes also claims that the metaphorical and metonymical patterns discussed in her book are not unique to N-N compounding but are shared by other linguistic as well as non-linguistic phenomena, repeatedly stressing their conventionality and systematicity.

Concerning the claim in (1a), Benczes has successfully shown the ubiquity of metaphor and metonymy. As summarised in section 2.2, Part 2 of her book reveals that the common metaphorical/metonymical patterns are actively and systematically involved in the interpretation of N-N compounds.

Benczes’ conception of creativity in (1b), however, strikes me as contradictory to the supposed nature of metaphor and metonymy. In Chapter 1 (p. 7), Benczes adopts Lamb’s (1998) view, according to which linguistic creativity lies not in regular combinatorial processes like Merge but in the “invention” of new concepts, new lexemes, new metaphors, and non-standard syntax. Although she does not discuss creativity per se any further, it is clear that she follows the traditional distinction between productivity and creativity; productivity involves regularity and is related to the use of an established pattern (captured by notions such as a rule or schema), whereas creativity features non-regularity, novelty, consciousness, playfulness, and analogy (Bauer (2000: 62–99)). However, if metaphor and metonymy are everyday phenomena, systematic and conventional enough to merit pattern-based description, can we call their employment “creative” in the above sense? As long as creativity is interpreted as the freedom from regular patterns, metaphorical/metonymical compounds cannot be called creative compounds in the framework of cognitive linguistics.

As mentioned in section 2.1, Benczes’ most controversial claim is (1c), the analysis of exocentric compounds as metaphorical/metonymical compounds. The observation that compounds such as (3b, c) do not conform to the hyponymy criterion easily leads the author to conclude that the exocentricity of compounds is a consequence of the working of metaphor/metonymy. She apparently uses this conclusion to advance the hypothesis in (1c); compounds traditionally called exocentric such as (2a–d), or their exocentricity, should also result from the working of metaphor/metonymy. *Birdcage* “airspace for planes” in Table 1 is exocentric because it is not a type of cage, and this exocentricity is a consequence of the workings of metaphor. If so, the exocentricity of *hammerhead* “a stubborn person,” a bahuvrihi compound of the (2a) type, should also be reducible to a similar cause.

The greatest difficulty in maintaining (1c) is that in the standard view,
the head of a word is a primitive structural notion that is not to be reduced to something else. A complex word is structured around the head element, which occurs in the right-hand position of the word in English and determines the categorial, morphological, syntactic, and semantic properties of the word. This view is not confined to generative linguistics. Cognitive linguists who take the Langackerian approach, including Benczes, also employ the notion of a profile determinant. In this view, the exocentricity of compounds is equal to the lack of such a structural core element; exocentric compounds, including (2a–c), are so called because of this property. What Benczes calls the exocentricity of the (3) type of compounds, however, has nothing to do with the structure of compounds. A similar metaphorical/metonymical semantic extension occurs in monomorphemic words as well. For example, the noun head metonymically refers to a person (e.g. dinner at 20 dollars a head) and metaphorically refers to a leader (Booij (2005: 220–221)). To the extent that the semantic extension by metaphor/metonymy is deemed to be ubiquitous, it should, therefore, be distinguished from the structural and local notion of headedness.

The claim in (1c), however, brings to light an interesting research possibility if it is reversed: the exocentricity of a complex word leads to its metaphorical/metonymical interpretation. Thus, hammerhead is metonymical because it is headless. Although headedness cannot be reduced to semantics, it appears to be empirically correct that exocentric word-formations, i.e. complex words without a head element, are much more amenable to the metaphorical/metonymic interpretation than their endocentric analogues. For example, the morphological blending of two lexemes (e.g. Spanish + English > Spanglish) produces an exocentric word whose interpretation is much less compositional than a compound counterpart (e.g. Spanish English) and can best be analysed by means of conceptual blending. Second, conversion produces exocentric words, and converted

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4 I appreciate one of the reviewers’ comments on this point.
5 As will be discussed shortly, (2d) should be seen as an endocentric appositive compound.
6 To put this in the words of Bauer (2010: 174), “[j]ust as we do not say that ass is exocentric if someone says My teacher is an ass, so we should not call compounds like dust bowl [‘an area with no vegetation’] exocentric.”
7 This problem is a part of the larger problem common to both Benczes’ study and the earlier cognitive linguistic approaches to compounding in general (Heyvaert (2009: 253–254)), namely, the too optimistic ignorance of formal aspects in the study of morphology, literally a science of forms.
words exhibit a much wider semantic latitude than suffixed (hence headed) counterparts (Nagano (2008: ch. 3)). Specifically, conversion, but not suffixation, produces denominal verbs with the ACT LIKE interpretation (e.g. *to parrot, to Nixon*), whereas the metonymic interpretation based on the ACTION FOR ENTITY pattern is primary for nominalisations by conversion (e.g. *a fold, a cut, a wreck*).

A similar contrast is also found between size-denoting prefixation and diminutive/augmentative suffixation. As Ungerer (2007: sec. 3.1) points out, while both *mini-kitchen* and *kitchenette* denote a small-size kitchen, only the latter evokes positive emotional associations. The evaluative nuances that diminutive and augmentative suffixations often take on are based on the SMALL/BIG IS GOOD/BAD metaphors (Nesset (2001: 210)). In the present discussion, it is crucial to recall Scalise’ (1988) argument that diminutive/augmentative suffixes do not qualify as heads.

Finally, compare Japanese-type and English-type co-compounds (Shimada (2013)). The Japanese type (e.g. *oya-ko* “parent and child”) produces a true morphological coordination in which neither of the coordinates is the head and that denotes the set of two entities. This type of co-compound allows a metonymic interpretation. For example, *inu-cho* “dog and cat” denotes animals in general, and *dai-shoo* “big and/or small” can mean “size.” The English-type co-compound (e.g. (2d)) is not the set of two entities but rather the apposition of two aspects of one entity. Although its headedness has been a matter of debate, the present hypothesis supports the endocentric analysis because the English-type rarely allows metaphorical or metonymical interpretation.

The present hypothesis strongly suggests that the ubiquity of metaphor and metonymy should be quantitatively modified with respect to the structural aspect of language. That is, even if it is true that the same quality of metaphor/metonymy is observed across linguistic units, those units may not allow them to the same extent. Of course, it is not true that any case of metaphorical/metonymical interpretation stems from structural non-headedness, yet the structural-semantic interrelation is solid. Notice that a quantitative implication of the metaphor/metonymy ubiquity is also called for by Benczes’ vindication of (1a) if it means that the working of metaphor/metonymy is active *particularly* in (N-N) compounding. Here, we must consider the size effect of linguistic units because semantic non-compositionality is interrelated with the size of the unit (Di Sciullo and Williams (1987: ch. 1)), and according to Benczes, the working of metaphor/metonymy is interrelated with semantic non-compositionality.
4. Conclusion

Benczes’ study has greatly contributed to one of the main research themes of compounding, the semantic latitude of N-N compounding, by focusing on hitherto neglected subtypes of N-N compounds and using various analytical devices of cognitive linguistics. Her discussion of exocentricity in terms of metaphor and metonymy may have been a bit hasty; however, it represents a valid scientific attempt to provide a significant step for elaborating on the relation between form and meaning in morphology.

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[received July 13 2013, revised and accepted December 10 2013]

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